

# Product Selection Guide



- Embedded Computing
- Embedded Systems & Intelligent Platforms
- Automation Devices & Computing
- Vertical Solutions & Applied Computing

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# About Advantech

## Advantech: Enabler of an Intelligent Planet

Founded in 1983, Advantech is a leader in providing trusted innovative embedded and automation products and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, and global logistics support, all backed by industry-leading front and back office e-business solutions. We cooperate closely with our partners to help provide complete solutions for a wide array of applications across a diverse range of industries. Advantech has always been an innovator in the development and manufacture of high-quality, high-performance computing platforms, and our mission is to empower these innovations by offering trustworthy products and services that enable an intelligent planet. With Advantech, there is no limit to the applications and innovations our products make possible.

## Advantech's Good-to-Great 3-Circle Principle

The Advantech 3-Circle Principle is based on the book "Good to Great," by Jim Collins. According to the book, a company looking for long-term success should clearly address these three fundamental principles, and commit to their continuing, solid execution. Advantech is fully committed to this approach and has defined the Advantech "Good to Great 3-Circle Principle" as a means of adhering to it.



## World-Class Recognition

Advantech is an authorized alliance partner of both Intel® and Microsoft®. Our customers find the technologies we use inside our products to be widely compatible with other products in the global marketplace. In 2011, Interbrand, the world renowned brand consulting firm, once again recognized Advantech as one of the Top 10 Taiwanese Global Brands. Advantech appreciates this recognition of our efforts to build a trusted, global brand; it also symbolizes a promise we give to our business partners, which is to keep building a trustworthy brand that is recognized everywhere and improves the lives of all.

## Model Corporate Citizen

Advantech is committed to being a model corporate citizen by helping to preserve the environment and by giving back to society. Our environmental program focuses on reducing, reusing, and recycling materials used in our manufacturing operations. Advantech's environmental compliance effort includes the following:

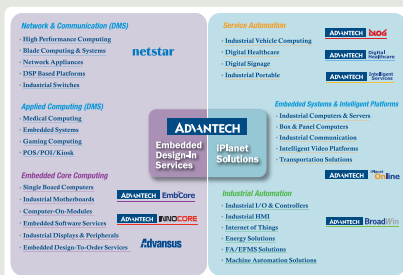
- ISO 9001 Certification
- ISO 14001 Certification
- ISO 13485 Certification
- OHSAS 18001 Certification
- TL9000 Quality Management System
- RoHS Directive Compliance
- WEEE Directive Compliance
- Authorized Sony Green Partner



## Timely Support at Your Convenience

Advantech has over 12 regional toll-free hotlines, and offices throughout 71 cities in 21 countries, with over 5,000 employees to provide efficient, professional services for customer care, product selection, technical support, and order handling. Through our call centers and online stores, customers worldwide enjoy the convenience of Advantech's multi-service channels to reduce business turnaround time. Together with over ten customer service centers in Taiwan, China, Japan, Korea, Singapore, Brazil, the Netherlands, Poland, and the United States, our global service network offers an extensive spectrum of services that includes warehousing, logistics, peripheral certification, sourcing and purchasing, and RMA and support services.

## Advantech Corporate Structure and Growth Engines



### • Networks & Communications DMS

Advantech's integrated DMS "StarFleet" Model provides OEMs and premier key accounts with customer-focused Design and Manufacturing Services (DMS), winning together through worldwide partnership and collaboration. DMS provides hardware and software integrated solutions. For the telecom and networking markets, Advantech provides mission-critical hardware to the leading equipment manufacturers. Advantech's standard and customized products are embedded in OEM equipment that the world's communications infrastructure depends upon. Through Advantech's premier Design & Manufacturing Services our customers get reliable, open-standard solutions from the leading innovator in network platform development and manufacturing – plus dedicated resources and support to back them up.

### • Applied Computing DMS

Advantech is a leading industrial computer systems manufacturer and customized solutions provider. Under Design & Manufacturing Services (DMS), our applied computing professionals develop vertically-driven, application-specific platforms and service-ready solutions for use in many sectors: gaming computing, eHealthcare computing, portable computing, and embedded systems. We specialize in designing and manufacturing the widest range of high quality and high performance industrial grade hardware and dedicated software tailored to the exact needs of each industry field. With a dedicated research & development team, a full range of customization capabilities, and a global sales/service organization, the Advantech DMS applied computing team has what it takes to fulfill customers' time-to-market requirements.

### • Embedded Core Computing

Advantech's Embedded Core Computing Group provides a full range of embedded boards, systems, peripheral modules and innovative embedded software services with leading technologies to customers. With a range of specialized design-in services backed by our internal and global resources, Advantech is committed to working closely with embedded customers to ensure design success by helping them discover new business opportunities through advanced embedded technologies and services that empower smart applications for an intelligent planet.

### • Service Automation

Advantech's Service Automation & Applied Computing Group invests in developing vertically-driven, application-specific platforms and service-ready solutions for use in many sectors: industrial portable computing, digital logistics & fleet management, digital healthcare & medical computing, smart room & scenario control for home and office, and digital signage & self-service computing for retail, hospitality, enterprise, education, and public spaces. Service Automation & Applied Computing Group lets you enjoy the convenience, safety, and efficiency that smart applications deliver, and experience the best in interactive and innovative technologies and services.

### • Embedded Systems & Intelligent Platforms

With innovative technologies from cloud computing (industrial server, video server), edge computing (fitless, slim & portable devices), to high performance embedded systems (blade computing, network processor platforms, DSP processing), Advantech transforms embedded systems into intelligent systems with smart, secure, energy-saving features, built with Industrial Cloud Services and professional System Design-To-Order Services (System DTOS). Advantech's intelligent systems are designed to target vertical markets in transportation, industry (machine automation, equipment/machine building), digital signage, and video applications (video infrastructure and video surveillance).

### • Industrial Automation

With the theme of Intelligent Automation, Seamless Integration, the Industrial Automation Group (IAG) of Advantech Corporation is a pioneer in intelligent automation technology. By combining connectivity, flexibility, ruggedness and leading-edge "Internet of Things" technology, IAG offers product offerings for intelligent HMI platforms, the industrial Ethernet, wireless communications, automation controllers, automation software, embedded automation computers, distributed I/O modules, wireless sensor network solutions, motion I/O and plug-in I/O modules for a wide array of industries. With more than 20 years of experience in providing a full range of products to different vertical markets, IAG is a leading global automation product and services provider.

# Advantech iPlanet.Online Sales Force

## Enabling an Intelligent Planet Far and Wide

To provide fast and convenient services to our customers and users, Advantech provides several easily-accessible web portals, including: the Advantech.com website, Buy.Advantech.com and an Online Support Portal to serve different requirements. To supplement our electronic contacts, we've also built up regional call centers to take care of customers who prefer human contact. These methods allow us to deliver our services by live chat, phone line and email anytime and anywhere.

## 16 Teams in 23 Cities Serve Global Inquiries



## Advantech.com Website

Through [www.advantech.com](http://www.advantech.com), we not only offer comprehensive product ranges, but also real-time updated information to our customers. In addition to product information, you also can find case studies of proven applications from diverse sectors. Furthermore, registered MyAdvantech members, can access the RMA service center, updated price lists, and various promotion programs.



## Online Store



### Buy.Advantech.com

To extend Advantech's services, we launched the Buy.Advantech online store which offers one-stop shopping for Human Machine Interfaces, Industrial Ethernet Networking, Controller & I/O products, plus all computing platforms. This eStore offers comprehensive product information to build systems easily, with live expert support to help solve problems, online configuration providing system customization options, instant quotations, FAQs, and all the latest up-to-date downloads and firmware.

## Personal Web Service

MyAdvantech is a quick access portal to your account information where you can view Advantech product and order information, order online, and download data. It is also a resource center keeping the video, webcast, materials and much more you've viewed. Login to begin enjoying your personalized Advantech portal and increase your ordering efficiency.

## Online Support

Providing superior self-support mechanisms is one of the most essential parts of being a top-tier automation company, and we take pride in the outstanding level of service that we offer. To best support our customers, we've created a suite of useful interactive online tools, including:

- Technical Documents: Manuals, datasheets, updated drivers and utilities all available for download through the support portal
- 3D Product Models: Simulated products in 3D format to provide detailed exterior views for customer evaluation
- Online Training: Self-training documents and videos to provide learners with integrated information
- Online Catalog: Comprehensive online catalogs provide customers with extensive product information



## Call Center



To effectively respond to customers' questions, our regional call centers support inquiries about: purchasing, shipping, technical, and RMA issues among lots of general accounts. Contact your regional call center to get the support you need today.

### Global Hotlines

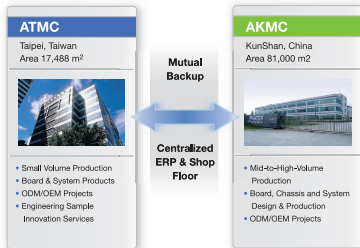
US	1-888-576-9668	Taiwan	0800-777-111	Singapore	65-6442-1000
Europe	08000-2426-8080	Japan	0800-500-1055	Malaysia	1800-88-1809
Brazil	0800-770-5355	Korea	080-363-9494	Thailand	66-2-248-3140
China	800-810-0345	Australia	1300-308-531	India	1800-425-5070
Indonesia	6221-7690525	Mexico	52-55-6275-2777		



# Advantech iPlanet Care

## Manufacturing

Our dual, world-class manufacturing centers in Taiwan and China maintain precise quality control, and offer a full range of production in a timely and cost-effective manner. To maximize the efficiency of operational procedures, we have implemented a cluster manufacturing system within our segmented manufacturing service units. This unique approach enables a direct, simplified, and highly streamlined design-to-manufacturing process.



- In-house board, chassis, and system production
- Dual world-class manufacturing centers minimize business risks
- Advanced production capabilities and customizable processes
- Rigid quality assurance system
- Most complete ISO standard coverage

## Configure To Order Services

Advantech Configure To Order Services (CTOS) makes industrial computing solutions more accessible by offering web-based configuration tools, comprehensive, complex assembly services with high-mix, low-volume box build and customized assembly, modification, system integration and functional testing services.

- Online intelligent configuration
- Comprehensive approach to complex configuration solutions
- Local customized configuration services
- 2 year global warranty covering system & peripherals integrated



## Certified Quality Assurance System

Advantech has been designing and manufacturing industrial PCs according to our 3C Quality Statement:

- Always strive for overall customer satisfaction
- Continuous improvement
- Apply closed-loop mechanisms to resolve problems

At Advantech, quality is our main priority. A complete line of safety, EMC and reliability measures such as ESD, vibration, drop testing, temperature, humidity and HALT chambers are available to ensure our products meet the strictest standards. All facilities are at least ISO 9001 and 14001 certified while others hold additional certifications such as ISO 13485, 17025, TL9000 and OHSAS18001. An environmental program that focuses on reducing, reusing and recycling of materials throughout the manufacturing process is also applied at Advantech. All our products are 100% RoHS compliant and Environmental Management Systems such as OC080000 are applied to meet worldwide environmental requests. Advantech's efforts towards environmental protection have been recognized by Sony since 2004 (Sony Green Partner).

- Complete ISO coverage
- Green policies
- Constant quality and reliability monitoring
- Ease of access to quality contacts



# One-Stop Global Services



Advantech iPlanet Care combines exceptional business expertise, powerful design capacities, and a thorough global service network to provide one-stop global services and total solutions. Our broad range of global support packages adds maximum flexibility and efficiency to your projects.

## Global Logistics Services

With strong integrated ERP and SAP supply chain solutions, our worldwide logistics network offers a wide range of options for different delivery models including local and global solutions that meet your unique needs and budget requirements. Advantech's Logistics Service gives you the flexibility to simplify your logistical networks, bring your products to market on time, and enjoy a timely return on your investment.

- Optimized and flexible shipping solutions
- Integrated ERP and SAP supply chain solution with global distribution network
- Centralized plants with local delivery

## Global Procurement Services

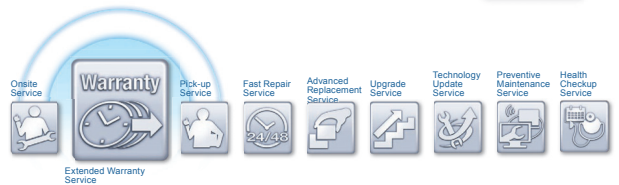
Advantech global procurement network consists of local teams that leverage strong, worldwide supplier relationships and strict vendor and product management to offer quality-guaranteed, compatible peripherals with short lead times and competitive prices.

- Localized procurement with worldwide network support
- Global standardization management; 100% compatible peripherals
- Trusted quality with revision control
- Short lead time and competitive price

## Global Customer Support Services

Our global presence provides localized reliable customer support services. We can create an optimized maintenance and support plan, leveraging the full power of our service portfolio to help reduce costs and proactively mitigate business risks to best meet your needs. In addition to our complete technical and repair support, we provide a variety of customizable after-sales services, including extended warranty, advance replacement, upgrade, fast repair, etc. With our knowledgeable local support groups, we enable a consistent support experience around the world and help keep your investment at peak performance and within your budget.

- 24/7 technical support: hotline AE & online chat support
- Global deployment with local full-line repair capability
- Easy-to-use web-based repair and tracking system (eRMA)
- Various value-added, after-sales service packages



## About Advantech Embedded Computing

Worldwide Leadership in Embedded Design and Services

Founded in 1983, Advantech has provided leadership for innovative Embedded Computing products and services for over 25 years. With comprehensive product ranges, customer-centric design services, and an extensive global network, Advantech is your most trustworthy partner to empower numerous innovations in intelligent embedded computing. Advantech is dedicated to helping customers develop reliable and innovative embedded solutions. We not only provide the latest embedded hardware computing products, we also think about how to provide more value to embedded developers through a variety of embedded design-in and software services.

### Embedded Design-in Services



#### Embedded Boards and Systems

A full spectrum of embedded computing in multiple form factors from computer on modules, single board computers, to industrial motherboards, and fanless box computers to digital signage media player. We commit continuous development of innovative form factors to meet customers' changing needs.

#### Peripheral Modules

Industrial peripheral products such as storage, wireless, touch modules and displays, along with Advantech's software turn-key solutions, provide innovative choices for industrial PC applications.

#### Embedded Software Services

Provide innovative embedded software services to help customers develop different embedded applications. Professional services include Industrial Cloud services, Embedded BIOS/OS services and software API & utilities.

#### Design-in Services

Streamlined design-in services fulfill engineering demands at the design-in phase and bring benefits which can shorten design and integration cycles, minimizing uncertainty and risk. Services include wide temperature and ruggedized solutions.

## Advantech Industrial Cloud Services

Intelligent Management, Rapid Deployment

Embedded computing is not only getting more intelligent but also more interconnected in the cloud era. To empower new possibilities in the cloud era, Advantech has designed a unique industrial cloud service that allows remote device management, secure system operation and the ability to build your own private industrial cloud. And to make things even easier, our services are already pre-loaded with each Advantech embedded computing product to help customers streamline and simplify building and deploying their own industrial cloud. Advantech Industrial Cloud Services include: SUSIAccess for remote device management, and CloudBuilder for rapid development of private cloud services.



#### CloudBuilder for Rapid Deployment of Private Cloud Services

Advantech CloudBuilder allows System Integrators (SI) to build and deploy their own private clouds and services in minutes. CloudBuilder is designed specifically for embedded and industrial markets to help SI quickly create a software on-demand platform, making software deployment to remote devices convenient and fast.

##### Major Features

- Easy Installation:** The one-click install wizard can auto-detect hardware and software environment for quick installation.
- Quick App Packaging:** Developer SDK to help embedded software engineers to easily create their own embedded apps.
- Rapid Deployment:** The administration console allows customers to deploy, upgrade and maintain software to remote devices without needing to repeat actions for each device.

#### SUSIAccess for Remote Device Management

SUSIAccess is an application for System Integrators (SI) that centralizes monitoring and managing of remote embedded devices in real-time. SUSIAccess is designed to be cloud-based and provide on-demand software services so SIs can automatically download and upgrade applications as needed. All Advantech Embedded Computing products are pre-loaded with SUSIAccess. By providing a ready-to-use remote access solution, SIs can focus more on their own applications, and let SUSIAccess configure the system, monitor their devices' health, and recover any systems that might fail.



##### Remote Management Functions

- Monitor multiple devices remotely
- Scheduled power management
- Protect system from potential threats
- Access devices using remote desktop
- Backup/Restore system image

##### SUSIAccess Features

- Intuitive GUI:** User-friendly design means customers can execute remote management applications more easily and quickly.
- Centralized Management:** Deploy, upgrade and maintain Apps to remote devices through a simple friendly management interface.
- Reliable Operation:** Highly effective system recovery and protection program that assures remote device reliability.

## Powerful COM-Express Basic Module for Real-Time Image Processing System



### Introduction

Applications for real-time image capture and processing are increasing rapidly. They are widely used in medical diagnostics, video surveillance, and industrial process and quality control. Normally, these applications require processing of large amounts of data in real-time and need tremendous I/O throughput capability. Image processing can be done in software through adaptive algorithms or by a custom Application Specific Integrated Circuit (ASIC) solution. The software approach requires more intensive CPU processing which could affect overall system performance, and the ASIC approach has the best performance, but lacks flexibility for new formats. However, a new approach is available combines both COM Express modules and FPGA chips to get the best out of both methods.

### Application Requirements

Real-time image processing involves image acquisition, processing, analysis, display and archiving. All these steps require intensive processing due to the amount of data involved. A customer in North America was looking for solutions that integrated new technologies and design with high performance systems which were cost effective, reliable and flexible, and which met their current and future application needs.

### System Solutions

Advantech SOM-5790 COM-Express basic module meets these requirements and more. SOM-5790, embedded quad core platform is designed with the latest high performance Intel® Core™ i7 processor for computationally demanding real-time image applications. SOM-5790 has rich I/O interface for expansion, and more bandwidth for applications requiring massive data processing and transfer. In addition to the inherent chipset benefits, Advantech's iManager can enhance system reliability and provide an easy way to manage onboard devices, greatly speeding up system integration development.

### Benefits

- The latest technology support: 2nd generation Intel® Core i7 quad-core processor and 16 GB DDR3 memory, provides performance up to 20% greater than previous generations.
- Powerful graphics engine: Supports hardware encoding / decoding, DirectX 10.1 / OpenGL3.0, high-definition video acceleration, and double 3D graphics performance
- PICMG COM 2.0 Type 2: Supports the latest pin-out definition so users can design their own FPGA or other image processing solutions.
- Supports iManager 2.0: LCD backlight/brightness control, GPIO, I2C bus, voltage and temperature monitoring, and safe user data storage with security key protection.



## Innovative Form Factor for Metro System



### Introduction

As city populations grow, Mass Rapid Transit systems play a crucial role in public transportation strategies in growing metropolitan areas. They can safely and quickly carry millions of passengers every day whilst reducing road traffic and pollution. To ensure that the whole system runs reliably, unforeseen events need to be minimized. Therefore, maintaining a safe and reliable service is the most important challenge.

### Application Requirements

In order to provide a reliable non-stop service, metro systems need to overcome fluctuating temperatures, voltage spikes and other harsh environmental factors. This is especially important for in-vehicle mounted machines inside trains which need to be equipped with intelligent control functions to handle exceptions and critical condition events. If unforeseen events occur, they should be able to self-recover or be remotely recovered and rescued in the shortest time possible.

### System Solutions

Advantech's new form factor SBC: MIO-5270 from the MIO-Compact series, based on the AMD Embedded G-Series platform, comes equipped with an intelligent management tool – iManager, developed by Advantech. This intelligent self-management agent is designed with a Smart Fan utility. With this feature a system's stability can be dramatically increased to better save energy and minimize noise. It's also empowered with a robust hardware monitoring tool whereby information can be utilized as an event trigger or data log, and can be easily integrated into an application or accessed by a remotely controlled program. iManager also supports an advanced Watchdog Timer to correct and reset a system. Lastly, Advantech's MIOe-220 is integrated with MIO-5270 to provide additional extended I/Os to meet application needs.

### Benefits

- Compact SBC (146 x 102mm) with maximum flexibility through MIOe extension interface.
- Intelligent management tool – iManager to enhance system reliability.
- Auto-adjusting FAN speed based on temperature.
- Real-time monitoring of system status through local application or remote access.
- Rugged design for wide temperature and vibration challenges.



## Powerful, Ruggedized 3.5" SBC for Machine Automation



### Introduction

A leading Human Machine Interface (HMI) maker in the factory automation business has been producing compact and rugged HMI platforms for worldwide markets for many years. However, breakdowns and control system problems often cause large-scale production line shutdowns, affecting overall capacity and output. Therefore, the search was on for a robust solution that could keep production humming.

### Application Requirements

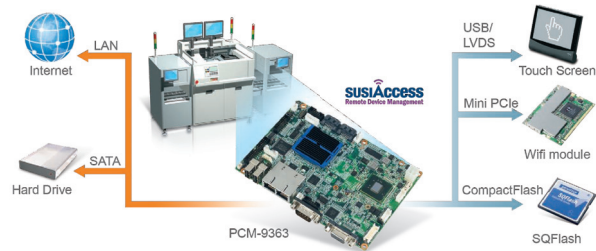
The customer was looking for a reliable, industrial-grade computer to fulfill their requirements for the HMI machine. It needed to be capable of operating in critical temperature environments and have a low profile mechanical design which supports a heat spreader thermal solution to make the system compact. And hardware was not the only consideration. Compatible software services and programs that would reduce labor costs and help integrate resources were important. Too, Advantech's 3.5" PCM-9363 board with the SUSIAccess was chosen for its winning combination of powerful, ruggedized features and bundled functions.

### System Solutions

Advantech's powerful ruggedized platform, the PCM-9363, has been tested to work perfectly in extended temperature ranges from -40 to 85° C. It supports a heat spreader that facilitates compact chassis designs with excellent thermal results. Even when fitted with an Intel® D525 dual core processor, the system can be designed fanless, making system integration easier than ever. By incorporating Advantech's SUSIAccess, IT developers and system integrators can quickly develop cost-efficient and reliable solutions that monitor and manage multiple terminal devices as well as configure, maintain and recover them. Through the SUSIAccess console, system operators can execute a number of API functions that give full remote control and access to their applications. It is also possible to use mobile devices like smart phones to keep track of any system abnormalities. If problems are detected, measures can be taken before things get serious.

### Benefits

- SUSIAccess provides a remote control and recovery mechanism.
- Efficient I/O connectivity for a wide variety of applications.
- Small and compact total solution.
- Highly reliable in wide temperature range environments.
- Low power consumption means less heat generated, allowing long life even in harsh environments.



## High Graphic Performance Micro-ATX Motherboard for Digital Surveillance



### Introduction

Digital Surveillance has become essential for the protection, safety and security of people and property. Today's digital surveillance systems offer easy setup and simple operation, remote management, high compression rates, and image quality, and real-time video & audio recording and monitoring. The need for continuous 24-hour operation over a large network with centralized control makes them a dependable first choice for professionals. With the increased demand for better reliability and performance, developers are now able to offer rugged, reliable and compact DVR systems that fulfill a variety of mission critical applications focused on safety and security.

### Application Requirements

A system integrator customer chose Advantech's AIMB-581 industrial motherboard with Advantech's SUSIAccess which provided remote configuration, monitoring and recovery which helped them build a fully functioning digital surveillance system for a police station security application with a minimum of effort. The system needed to process a lot of video and image data. Advantech's AIMB-581 industrial grade motherboard had an integrated graphic controller which included Intel® Dynamic Video Memory Technology and Intel® Clear Video Technology which delivers high graphic surveillance imaging performance.

### System Solutions

Powered by the latest Intel® Core™ i7/i5/i3 processors, Intel® Active Management Technology 7.0, and PCI Express expansion for high bandwidth throughput, the AIMB-581 industrial motherboard platform is the result of Advantech's long and mature surveillance experience. The board comes with Intel® Q67 Express chipset, dual GbE LAN, six serial ports, two SATA III and four SATA II, ten USB 2.0 ports, two USB 3.0, and dual display output with several output options. It features VGA, dual DVI, and LVDS (LVDS supports 3.3V, 5V, and 12V for large size panels). AIMB-581 also comes with software RAID 0, 1, 5 and 10 support, offering abundant data storage and reliable data protection. Intel® Hybrid multi-monitor enables concurrent function of an integrated Graphic Processing Unit (GPU) alongside a discrete GPU solution, allowing for two independently-driven displays. All this connectivity is packed into a power-efficient and cost-effective Micro-ATX form factor.

### Benefits

- High Performance 2nd generation Intel® Core™ i7 processor-based platforms
- Intelligent performance and power efficiency
- Integrated Intel HD graphics with DX10.1 support



## High Reliability SSD for POS System



### Introduction

Point of Sale (POS) systems were first used in the retail industry as a way to speed up customer transactions and record all the price, quantity and transaction details of products. As they increased in popularity, POS systems were developed to handle more and more functions to keep track of sales, labor and payroll, as well as generating records used in accounting and book keeping. They could be accessed remotely, helped retailers more easily manage their daily business as well as providing valuable customer information about shopping and purchasing trends.

### Application Requirements

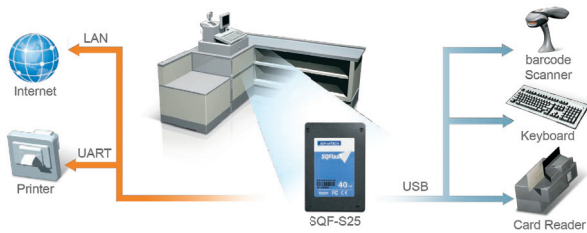
To meet with the market trend, POS applications are getting more sophisticated and multifunctional. One customer was developing a new POS system with real-time price and sales statistics running in the background, and interactive direct marketing content running on extended touch monitors. Overall system performance had to be enhanced to handle such rich and varied content and storage devices had to be upgraded to handle all the data. Increasingly, Solid State Disks (SSD) are being integrated into POS systems as they offer better performance as well as robust anti-vibration properties.

### System Solutions

POS systems usually shutdown directly by powering off, the data integrity of a SSD could be affected under certain conditions. So after careful research, a customer decided to design their application using Advantech's SQFlash SATA SSD, which features a technology called "GuaranteedFlash" that ensures information is correctly stored in NAND Flash to prevent potential risk of data loss. Besides, "Fragment Writing" was also developed to reduce the frequency of erase command in SSD blocks by managing sub-block pages more efficiently, thereby boosting the performance of the SSD and extending the endurance of the NAND Flash. With the implementation of both technologies, the POS system could now easily deal with simultaneous multimedia content playing on extended displays and make smooth transactions without any latency. These built-in features made Advantech's SQFlash SATA SSD a highly reliable storage media solution, which helped boost overall computing power and application performance.

### Benefits

- Extremely reliable and durable Flash Module with high performance
- SQFlash software utility with a user-friendly interface for security purposes
- SQFlash comes with 3-year longevity and fixed specification support
- Integrated services from boards to software and modules



## Ultra High Brightness Display Solution for Outdoor Automated Parking System



### Introduction

Nowadays, automated parking systems have become even more important due to the scarcity of parking spaces in most major cities. Automated parking systems provide a smart parking solution that eliminates most of the time and effort of finding an empty parking space. These systems need a user-friendly interface and are usually equipped with an intuitive and robust operating panel that is both durable and simply to use. Because automated parking systems are usually deployed in harsh 24hr outdoor environments that are directly under the sun, parking systems require industrial grade display solutions to meet critical environmental conditions such as temperature, humidity and vibration.

### Application Requirements

To fulfill all types of environments, the operating display panel needs to meet four major requirements. First, to overcome the glare of direct sunshine, sunlight readable features are essential. Second, because the systems are installed outdoors, wide temperature operation is necessary so they can work reliably in any location. Third, low power consumption is needed to allow the system work efficiently 24hrs round the clock. Last but not least, durable and user-friendly touch screen solutions are required for easy operation.

### System Solutions

Advantech IDK-2115 provides 15" XGA, 1200-nit LED panel perfect for applications in semi-outdoor and outdoor environments. Integrated with high-efficiency and low-power LED technology, IDK-2115 achieves 1200-nit brightness providing excellent sunlight readability. The series can operate reliably in temperatures ranging from -30 ~ 85° C, ideal for any location, and because IDK-2115 uses comparatively low power, the surface temperature is maintained below 40° C to prevent the system from overheating, making these devices work stably even in harsh environments. Moreover, IDK-2115 is equipped with resistive touch screens which are durable and even allow operation with gloved hands. The series works perfectly with Advantech's PCM-4373 single board computer with matching LVDS and power cable — offering a perfect ready-to-use solution for faster time-to-market applications.

### Benefits

- 1200-nit LCD panel provides excellent sunlight readability with comparative low power consumption.
- -30 ~ 85° C wide operating temperature support for semi-outdoor and outdoor environments.
- Total display solution with compatible embedded boards and cables reduces time-to-market.



# Computer On Modules



Model Name	SOM-5788	SOM-5790	SOM-5890
Form Factor	COM-Express Basic Module	COM-Express Basic Module	COM-Express Basic Module
<b>Pin-out Type</b>	COM R1.0 Type 2	COM R2.0 Type 2	COM R2.0 Type 6
<b>Processor System</b>	CPU: Intel Core i7/i5/i3 / Celeron	2nd gen. Intel Core i7/i5/i3 / Celeron	2nd gen. Intel Core i7/i5/i3 / Celeron
FSB	-	-	-
System Chipset	Intel QM57	Intel QM77	Intel QM77
BIOS	AMI 64 Mbit	AMI 64 Mbit	AMI 64 Mbit
Technology	DOR3 800 / 1066 MHz	DOR3 1066 / 1333 MHz	DOR3 1066 / 1333 MHz
<b>Memory</b>	Max. Capacity: 8 GB	16 GB	16 GB
Socket / On-board	2 x 204-pin SODIMM	2 x 204-pin SODIMM	2 x 204-pin SODIMM
Graphics	Intel Gx	Intel Gx	Intel Gx
LCD	2 ch. 24-bit LVDS	2 ch. 24-bit LVDS	2 ch. 24-bit LVDS
VGA	2048 x 1536	2048 x 1536	2048 x 1536
<b>Display</b>	DVI: 2 Ports (shared with PEG)	-	3 Ports (shared with HDMI / DisplayPort)
TV Out	NTSC/PAL, S-Video, Composite	-	-
SDVO	-	1 Port	1 Port
Dual Display	Dual Display VGA, LVDS, TV-out, HDMI, DisplayPort	Dual Display VGA, LVDS	Dual Display VGA, LVDS, DVI, HDMI, DisplayPort
<b>Ethernet</b>	Chipset: Intel 8257LM	Intel 8257LM	Intel 8257LM
Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
<b>WatchDog Timer</b>	65536 level, 0 - 65535 sec	65536 level, 0 - 65535 sec	65536 level, 0 - 65535 sec
<b>Expansion</b>	PCIe x 16, 6 PCIe x 1, 4 PCI masters, LPC, SMBus	PCIe x 16, 5 PCIe x 1, LPC, SMBus	PCIe x 16, 7 PCIe x 1, LPC, SMBus
PATA	1 EIDE (QDMA 100)	1 EIDE (QDMA 100)	-
SATA	4 SATAII	2 SATAIII, 2 SATAII	2 SATAIII, 2 SATAII
USB	8 USB 2.0	8 USB 2.0	8 USB 2.0
Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	8-bit
COM	-	2 Ports	2 Ports
FDD / LPT	-	-	-
SSD	-	-	-
<b>Power</b>	Power Type: ATX, AT	ATX, AT	ATX, AT
Power Supply Voltage	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
Power Consumption (Typical)	(1 GB DOR3 1066) 17-60W @ 12V @ 1.5A	(2 GB DOR3 1333) 17-2710SE + 12V @ 0.9A	(2 GB DOR3 1333) 17-2710SE + 12V @ 0.9A
Power Consumption (Max, tested in HCT)	(1 GB DOR3 1066) 17-60W @ 12V @ 2.5A	(2 GB DOR3 1333) 17-2710SE + 12V @ 0.9A	(2 GB DOR3 1333) 17-2710SE + 12V @ 0.9A
<b>Environment</b>	Operating Temperature: 0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)
Operating Humidity	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing
<b>Mechanical</b>	Dimensions: 125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")



Model Name	SOM-5892	SOM-6761	SOM-6763 B1	SOM-6765
Form Factor	COM-Express Basic Module	COM-Express Compact Module	COM-Express Compact Module	COM-Express Compact Module
<b>Pin-out Type</b>	COM R2.0 Type 6	COM R1.0 Type 2	COM R2.0 Type 2	COM R2.0 Type 2
<b>Processor System</b>	3rd gen. Intel Core i7/i5/i3 / Celeron	Intel Atom N270 1.6 GHz	Intel Atom N455 1.66 GHz / D525 1.86GHz	Intel Atom N2900 1.6 GHz / N2900 1.86GHz / D5250 1.86GHz
FSB	-	533 MHz	-	-
System Chipset	Intel QM77	Intel 945GSE / ICH7M	Intel ICH8M	Intel NM10
BIOS	AMI 64 Mbit	AWARD 8 Mbit	AMI 16 Mbit	AMI 16 Mbit
Technology	DOR3 1333/1600 MHz	DOR2 400 / 533 MHz	DOR3 667 / 800 MHz	DOR3 800 MHz for N2900, 1300 MHz for N2900 / D5250
<b>Memory</b>	Max. Capacity: 16 GB	2 GB	2 GB (N455) 4 GB (D525)	2 GB (N2900) 4 GB (D5250 / D5250)
Socket / On-board	2 x 204-pin SODIMM	1 x 200-pin SODIMM	2 x 204-pin SODIMM	2 x 204-pin SODIMM
Graphics	Intel Gx	Intel Gx	Intel Gx	Intel GFX
LCD	2 ch. 24-bit LVDS	2 ch. 24-bit LVDS	24-bit LVDS	1824-bit LVDS
VGA	2048 x 1536	2048 x 1536	1400 x 1050 (N455) 2048 x 1536 (D525)	1920 x 1200
<b>Display</b>	DVI: 3 Ports (shared with HDMI / DisplayPort)	-	-	-
TV Out	NTSC/PAL, S-Video, Composite	-	-	-
SDVO	-	1 Port	-	-
Dual Display	Dual Display VGA, LVDS, TV-out, HDMI, DisplayPort	CRT + LCD, TV out + LCD, TV out + CRT	CRT + LCD	CRT + LCD
<b>Ethernet</b>	Chipset: Intel 8257LM	Intel 8257LM	Intel 8257LM	Intel 8257LM
Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
<b>WatchDog Timer</b>	65536 level, 0 - 65535 sec	256 levels, 0 - 255 sec/min	65536 level, 0 - 65535 sec	65536 level, 0 - 65535 sec
<b>Expansion</b>	PCIe x 16, 7 PCIe x 1, LPC, SMBus	3 PCIe x 1, 4 PCI masters, LPC, SMBus	5 PCIe x 1, 4 PCI masters, LPC, SMBus	2 PCIe x 1, 4 PCI masters, LPC, SMBus
PATA	1 EIDE (QDMA 100)	1 EIDE (QDMA 100)	1 EIDE (QDMA 100)	1 EIDE (QDMA 100)
SATA	2 SATAIII, 2 SATAII	2 SATA	3 SATAII	2 SATAII
USB	8 USB 2.0	8 USB 2.0	8 USB 2.0	8 USB 2.0
Audio	AC97 / HD Audio	AC97 / HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	8-bit	8-bit
COM	-	-	-	-
FDD / LPT	-	-	-	-
SSD	-	-	-	-
<b>Power</b>	Power Type: ATX, AT	ATX, AT	ATX, AT	ATX, AT
Power Supply Voltage	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
Power Consumption (Typical)	(1 GB DOR3 1066) 17-60W @ 12V @ 1.5A	(4GB DOR3 1333) 17-3610SE + 12V @ 0.9A	(1 GB DOR2 533) + 12V @ 0.62A	(2 GB DOR3 800) N2900 + 12V @ 0.9A (4 GB DOR3 1066) N2900 + 12V @ 0.9A D5250 + 12V @ 0.67A
Power Consumption (Max, tested in HCT)	(1 GB DOR3 1066) 17-60W @ 12V @ 2.5A	(4GB DOR3 1333) 17-3610SE + 12V @ 0.9A	(1 GB DOR2 533) + 12V @ 0.9A	(2 GB DOR3 800) N2900 + 12V @ 0.9A (4 GB DOR3 1066) N2900 + 12V @ 0.9A D5250 + 12V @ 0.9A
<b>Environment</b>	Operating Temperature: 0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)
Operating Humidity	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing
<b>Mechanical</b>	Dimensions: 125 x 95 mm (4.92" x 3.74")	95 x 95 mm (3.74" x 3.74")	95 x 95 mm (3.74" x 3.74")	95 x 95 mm (3.74" x 3.74")

Selection Guide

# Computer On Modules



NEW



NEW

Model Name	SOM-7562 B1	SOM-7564	SOM-7565	
Form Factor	COM-Express Mini	COM-Express Mini	COM-Express Mini	
Pin-out Type	COM R1.0 Type 1	COM R2.0 Type 10	COM R2.0 Type 10	
Processor System	CPU	Intel Atom N455 1.66 GHz	Intel Atom E6xx series	
	FSB	667 MHz	-	
	System Chipset	Intel CHHM	Intel EC20T	Intel NM10
Memory	BIOS	AMI 16 Mbit	AMI 16 Mbit	
	Technology	DDR3 667 MHz	DDR2 667 / 800 MHz	DDR3 800 MHz
	Max. Capacity	1 GB (up to 2 GB)	1 GB (up to 2 GB)	2 GB
Display	Socket / on-board	Memory on-board	Memory on-board	
	Graphics	Intel Gx	Intel Gx	Intel Gx
	LCD	18-bit LVDS	24-bit LVDS	18-bit LVDS
	VGA	1400 x 1050	-	-
	DVI	-	-	1 Port (shared with HDMI / DisplayPort)
	TV Out	-	-	-
Ethernet	SDVO	1 Port	-	
	Dual Display	CRT + LVDS	LVDS + SDVO	LVDS + DDI
	Chipset	Intel 82567V	Intel 82583V	Intel 82574L
Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	
WatchDog Timer	256 levels, 0 - 255 sec/min	65536 levels, 0 - 65535 sec	65536 levels, 0 - 65535 sec	
I/O	Expansion	5 PCIe x1, LPC, SMBus	3 PCIe x1, LPC, SPI, SMBus, I2C	3 PCIe x1, LPC, SMBus, I2C
	PATA	-	-	-
	SATA	3 SATAI	-	1 SATAI
	USB	8 USB 2.0	-	8 USB 2.0
	Audio	HD Audio	HD Audio	HD Audio
	GPIO	8-bit	8-bit	8-bit
	COM	-	-	-
	FDD / LPT	-	-	-
	SSD	1 / 2 GB (up to 4 GB)	-	4 GB
	Power Type	ATX, AT	ATX, AT	ATX, AT
	Power	Power Supply Voltage	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
Power Consumption (typical)		(1GB DDR3 667) +12V @ 0.67A	(1GB DDR3 800) + 12V @ 0.37A (E680)	TBD
Power Consumption (Max, tested in HCT)		(1GB DDR3 667) +12V @ 0.87A	(1GB DDR3 800) + 12V @ 0.51A (E680)	TBD
Environment	Operating Temperature	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)
	Operating Humidity	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing
Mechanical	Dimensions	84 x 55 mm (3.3" x 2.17")	84 x 55 mm (3.3" x 2.17")	84 x 55 mm (3.3" x 2.17")

Model Name	SOM-4455	SOM-4461 A2	SOM-4463 B1	SOM-3560	
Form Factor	ETX	ETX	ETX	Qseven	
Pin-out Type	ETX 3.0	ETX 3.0	ETX 3.0	Qseven 1.1	
Processor System	CPU	Intel Atom N455 1.66 GHz / D525 1.50GHz	Intel Atom N455 1.66 GHz	Intel Atom Z520 1.6 GHz / Z510 1.1 GHz	
	FSB	33 MHz	533 MHz	667/800 MHz	400 / 533 MHz
	System Chipset	AMD C553E	Intel 945GSE / ED7M	Intel CHHM	Intel U519W
Memory	BIOS	Award 8 Mbit	Award 8 Mbit	Award 8 Mbit	
	Technology	DDR 200 / 266 / 333 / 400 MHz	DDR2 400 / 533 MHz	DDR3 667 / 800 MHz	DDR2 400 / 533 MHz
	Max. Capacity	1 GB	2 GB	2 GB (N455) 4 GB (N455)	512 MB (up to 1 GB)
Display	Socket / on-board	Memory on-board	Memory on-board	Memory on-board	
	Graphics	AMD C553E	Intel Gx	Intel Gx	Intel Gx
	LCD	24-bit LVDS / 18-bit TTL	2 ch. 36/48-bit LVDS	18/24-bit LVDS	24-bit LVDS
	VGA	1024 x 768	2048 x 1536	1400 x 1050 (N455) 2048 x 1536 (D525)	-
	DVI	-	-	-	-
	TV Out	-	NTSC/PAL, S-Video, Composite	-	-
Ethernet	SDVO	1 Port (optional)	1 Port	1 Port	
	Dual Display	CRT + LVDS (simultaneous mode)	CRT + LCD, TV out + LCD, TV out + CRT	CRT + LCD	-
	Chipset	RTL8100CL-LF	Realtek 8106L	Realtek 8106SL	Realtek 81111
Speed	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100/1000 Mbps	
WatchDog Timer	256 levels, 0 - 255 sec/min	256 levels, 0 - 255 sec/min	256 levels, 0 - 255 sec/min	65536 levels, 0 - 65535 sec	
I/O	Expansion	4 x PCI master (3 x PCI master for SATA version), ISA	4 PCI master, ISA	4 PCI master, ISA	1 PCIe x1, LPC
	PATA	1 EIDE (JDMMA 100) 2 EIDE (SATA ver.)	1 EIDE (JDMMA 100)	2 EIDE (JDMMA 100)	2 EIDE (JDMMA 100)
	SATA	2 SATA (on ETX module) (SATA ver.)	2 SATA (on ETX module)	2 SATA (on ETX module)	1 SATA
	USB	4 USB 2.0	4 USB 2.0	4 USB 2.0	8 USB 2.0
	Audio	AC97	AD97	HD Audio	HD Audio
	GPIO	1-bit GPIO, 2-bit GPE	2-bit GPIO (optional)	1-bit GPIO, 2-bit GPE	-
	COM	2 Ports	2 Ports	2 Ports	-
	FDD / LPT	FDD or LPT	FDD or LPT	FDD or LPT	-
	SSD	Type II CF slot	-	-	0 / 2 GB
	Power Type	ATX, AT	ATX, AT	ATX, AT	ATX, AT
	Power	Power Supply Voltage	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)
Power Consumption (typical)		(1 GB DDR 333) +5V @ 1.60A	(1 GB DDR 533) +5V @ 1.15A	(2 GB DDR3 1333) +5V @ 1.32A (Intel N455) +5V @ 2.18A (Intel D525)	(1 GB DDR3 533) +5V @ 0.72A (Intel Z510)
Power Consumption (Max, tested in HCT)		(1 GB DDR 333) +5V @ 2.01A	(1 GB DDR 533) +5V @ 1.98A	(2 GB DDR3 1333) +5V @ 2.25A (Intel N455) +5V @ 2.73A (Intel D525)	(1 GB DDR3 533) +5V @ 1.13A (Intel Z510)
Environment	Operating Temperature	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)	0 - 60° C (32 - 140° F)
	Operating Humidity	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing	0% - 90% relative humidity, non-condensing
Mechanical	Dimensions	114 x 95 mm (4.5" x 3.74")	114 x 95 mm (4.5" x 3.74")	114 x 95 mm (4.5" x 3.74")	70 x 70 mm (2.76" x 2.76")



Selection Guide

# MI/O Extension SBCs



Model Name	MIO-5250	MIO-5270
<b>Processor System</b>	3.5" MI/O extension SBC CPU: Intel Atom Dual Core N2980 1.6 GHz/0.2550 1.86 GHz Frequency: Dual Core 1.6 GHz/1.86 GHz L2 Cache: 1 MB System Chipset: Intel Atom N2980/02550 + Intel MMIO BIOS: AME E1 10M04 Technology: DDR3 1066 MHz (D2550), DDR3 800 MHz (N2980) Max. Capacity: 4 GB Sockets: 1 x 204-pin SODIMM On-board memory: Intel Atom N2980/02550	3.5" MI/O extension SBC CPU: AMD G-Series, T40R 1.0 GHz single core, T40E 1.0 GHz dual core, T50R 1.0 GHz dual core Frequency: 1.0 GHz single/dual core, 1.65 GHz dual core L2 Cache: 512 KB on T40R/T40E, 1 MB on T50R System Chipset: AMD G-Series + AZM/FCH BIOS: AME E1 20M04 Technology: DDR3 1066 MHz, 1333 MHz for T50R only Max. Capacity: 4 GB Sockets: 1 x 204-pin SODIMM On-board memory: AMD G-Series
<b>Memory</b>	Intel Atom N2980/02550 + Intel MMIO DDR3 1066 MHz (D2550), DDR3 800 MHz (N2980) 4 GB 1 x 204-pin SODIMM	AMD G-Series + AZM/FCH AM E1 20M04 DDR3 1066 MHz, 1333 MHz for T50R only 4 GB 1 x 204-pin SODIMM
<b>Graphic Engine</b>	Intel Atom N2980/02550 DirectX 9 and OpenGL 3.0 support Hardware decode HW acceleration: MPEG2 HW Decode/Acceleration: H.264/H.264 VC-1/MPEG	AMD G-Series Direct9D 11 graphics with VLD 3.0 2D Acceleration, 3D Acceleration, Motion Video Acceleration, Supports DVD, Blu-ray™ Hardware decode (AVD 3H/2H4, VC-1 & MPEG2)
<b>Display</b>	LVDS: 18/24-bit LVDS: up to 1366 x 768 (N2980), 1440 x 900 (D2550) 48-bit LVDS: up to 2560 x 1600 (only for MIO-5250D-SBA1E) VGA: up to 1920 x 1200 TTL LCD: - DVI: - HDMI: Supports 1920 x 1200, Max data rate: up to 1.65 Gbps, Supports 30MM V.I. 3.0 in 1.3882 support eDP: Option supported by request Dual Display: VGA + LVDS or VGA + HDMI or HDMI + LVDS or LVDS + LVDS Speed: 10/100/1000Mbps Controller: GSE1 Intel ICS20V 10/100Mbps, SAE2 Intel ICS20V 10/100Mbps Connector: 2 x RJ45 on Base I/O Chipset: Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Amplifier: Can be supported via MiB 255 levels timer interval, programmable by software	LVDS: Supports single channel 24-bit or dual channel 48-bit LVDS T50R up to 2560 x 1600 or 60 Hz, T40R, T40E, up to 1920 x 1200 at 60 Hz, Intel dual channel 48-bit LVDS, T50R up to 2560 x 1600, T40R, T40E, up to 1920 x 1200 Supports 1920 x 1080p at 60 Hz, 30 fps, Supports HDMI 1.4, Supports HDCP, HDCP encryption, Option supported by request T50R (up to 2560 x 1600), T40R, T40E up to 1920 x 1080 VGA + LVDS or VGA + HDMI or HDMI + LVDS Speed: 10/100/1000Mbps Controller: GSE1 Realtek RTL8111E-08 or 10/100/1000Mbps, SAE2 Realtek RTL8111E-08 or 10/100/1000Mbps Connector: 2 x RJ45 on Base I/O Chipset: Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Can be supported via MiB 255 levels timer interval, setup by software
<b>Ethernet</b>	10/100/1000Mbps GSE1 Intel ICS20V 10/100Mbps, SAE2 Intel ICS20V 10/100Mbps 2 x RJ45 on Base I/O	10/100/1000Mbps GSE1 Realtek RTL8111E-08 or 10/100/1000Mbps, SAE2 Realtek RTL8111E-08 or 10/100/1000Mbps 2 x RJ45 on Base I/O
<b>Audio</b>	Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Can be supported via MiB 255 levels timer interval, programmable by software	Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Can be supported via MiB 255 levels timer interval, setup by software
<b>WatchDog Timer</b>	255 levels timer interval, programmable by software	255 levels timer interval, setup by software
<b>Storage</b>	Compact Flash: Supports either mSATA or full size miniPCie selected by BIOS, default support full size miniPCie mSATA: 1 x SATA II (Max. Data Transfer Rate 300 MB/s) DFast: 1 SATA: 2 x SATA II (Max. Data Transfer Rate 300 MB/s) Ethernet: 2 (10/100/1000Mbps) KB/Mouse: 1 VGA: 1 HDMI: 1 USB: 4 x USB 2.0 LCD: Power, touch panel DC Power Jack: 1 (Supported only on MIO-5250D-SBA1E) USB: 2 x USB 2.0 Serial: 2 RS-232 from COM1/4, 2 RS-232/485 from COM2/3 (RS485 support auto flow control) (ESD protection for RS-232/485 via 15kV Contact +8kV)	Compact Flash: Supports either mSATA or full size miniPCie selected by BIOS, default support full size miniPCie mSATA: 2 x SATA II (Max. Data Transfer Rate 300 MB/s) DFast: 1 SATA: 2 x SATA II (Max. Data Transfer Rate 300 MB/s) Ethernet: 2 (10/100/1000Mbps) KB/Mouse: 1 VGA: 1 HDMI: 1 USB: 4 x USB 2.0 LCD: Power, touch panel DC Power Jack: 1 (Supported only on MIO-5270D-SBA1E) USB: 2 x USB 2.0 Serial: 3 RS-232, 1 RS-232/485 (RS485 support auto flow control) (ESD protection for RS-232/485 via 15kV Contact +8kV)
<b>Internal I/O</b>	Parallel (LPT): Supported shares with I/O SMBus: Supported shares with I/O KB/Mouse: 8-bit general purpose input/output GPIO: Supported shares with SMBus Mini PCie: 1 full size with SM heater	Parallel (LPT): Supported shares with I/O SMBus: Supported shares with I/O KB/Mouse: 8-bit general purpose input/output GPIO: Supported shares with SMBus Mini PCie: 1 full size
<b>Expansion</b>	MIO: (SMBus, 3 x USB2.0, LPC, 1 x POK, line out, 5 Vsb/12 Vsb power, ACPI S3/S5, On-board optomux) Single 12V DC power input Supports single 12V input, ± 10% Power Consumption (Typical): N2980: 0.606 A @ 12 V (7.27 W), D2550: 0.829 A @ 12 V (9.95 W) Power Consumption (Max. test in HCT): N2980: 0.729 A @ 12 V (8.75 W), D2550: 1.020 A @ 12 V (12.25 W) Power Management: ACPI Battery: Lithium 3 V/210 mAh Operational: (Operational humidity: 40% ~ 85% RH Non-Condensing) Non-Operational: -40° C ~ 85° C and 80° C @ 95% RH Non-Condensing Dimensions (L x W x H): 145 x 102 mm (5.7 x 4.1") Weight: 0.78 kg (1.72 lb), weight of total package	MIO: (SMBus, 3 x USB2.0, LPC, 4 x POK, line out, 5 Vsb/12 Vsb power, ACPI S3/S5, On-board optomux) Single 12V DC power input Supports single 12V input, ± 10% Power Consumption (Typical): T40R: 0.59 A @ 12 V (7.08 W), T40E: 0.53 A @ 12 V (6.36 W), T50R: 1.05 A @ 12 V (12.6 W) Power Consumption (Max. test in HCT): T40R: 0.8 A @ 12 V (9.6 W), T40E: 0.82 A @ 12 V (9.84 W), T50R: 1.35 A @ 12 V (16.2 W) Power Management: ACPI Battery: Lithium 3 V/210 mAh Operational: (Operating humidity: 40% ~ 85% RH non-condensing) Non-Operational: -40° C ~ 85° C and 80° C @ 95% RH non-condensing Dimensions (L x W x H): 145 x 102 mm (5.7 x 4.1") Weight: 0.78 kg (1.72 lb), weight of total package

Model Name	MIO-5260	MIO-2260	MIO-2261
<b>Processor System</b>	3.5" MI/O extension SBC CPU: Intel ULV Core i3 3217UE/ULV Core i7 3517UE/ULV Core i7 3557UE Frequency: 1.6 GHz (Dual Core)/1.7 GHz (Dual Core)/2.5 GHz (Dual Core) L2 Cache: 3 MB/4 MB/4 MB System Chipset: Intel Core i3/i7 + Intel GM77 FCH BIOS: AME E1 16 M04 Technology: DDR3 1066 MHz (i3217UE), DDR3 800 MHz (i3517UE/3557UE) Max. Capacity: 4 GB Sockets: 1 x 204-pin SODIMM On-board memory: Intel GM77 FCH	2.5" MI/O extension SBC (Pico-1 TX) CPU: Intel Atom processor N455 Single Core 1.66 GHz Frequency: 1.66 GHz L2 Cache: 512 KB System Chipset: Intel N455 + COMM BIOS: AME E1 16 M04 Technology: DDR3 1066 MHz (N455), DDR3 800 MHz (N2980) Max. Capacity: 4 GB Sockets: 1 x 204-pin SODIMM On-board memory: Intel Atom processor N455 1.66GHz	2.5" MI/O extension SBC (Pico-1 TX) CPU: Intel Atom Dual Core N2980 1.6 GHz/ N2980 1.86 GHz Frequency: Dual Core 1.6 GHz/1.86 GHz L2 Cache: 1 MB System Chipset: Intel Atom N2980 + Intel MMIO BIOS: AME E1 16 M04 Technology: DDR3 1066 MHz (N2980), DDR3 800 MHz (N2980) Max. Capacity: 4 GB Sockets: 1 x 204-pin SODIMM On-board memory: Intel Atom N2980/02550
<b>Memory</b>	Intel ULV Core i3 3217UE/ULV Core i7 3517UE/ULV Core i7 3557UE 1.6 GHz (Dual Core)/1.7 GHz (Dual Core)/2.5 GHz (Dual Core) 3 MB/4 MB/4 MB Intel Core i3/i7 + Intel GM77 FCH AME E1 16 M04 DDR3 1066 MHz (i3217UE), DDR3 800 MHz (i3517UE/3557UE) 4 GB 1 x 204-pin SODIMM	Intel Atom processor N455 Single Core 1.66 GHz 1.66 GHz 512 KB Intel N455 + COMM AME E1 16 M04 DDR3 1066 MHz (N455), DDR3 800 MHz (N2980) 4 GB 1 x 204-pin SODIMM	Intel Atom Dual Core N2980 1.6 GHz/ N2980 1.86 GHz Dual Core 1.6 GHz/1.86 GHz 1 MB Intel Atom N2980 + Intel MMIO AME E1 16 M04 DDR3 1066 MHz (N2980), DDR3 800 MHz (N2980) 4 GB 1 x 204-pin SODIMM
<b>Graphic Engine</b>	Intel GM77 FCH DirectX 11, OpenGL 3.1, OpenCL 1.1 IPS/AMPEG decode, Full decode MPEG2 AV/CIN 264 - Main and High Profiles; Up to Level 4.1 (including CABAC) VC-1 - Simple, Main and Advanced Profiles; Up to Level 3 MPEG-2 - Main Profile 0.9, Main Profile 1.0	Intel Atom processor N455 1.66GHz DirectX 9 and OpenGL 3.0 support Hardware decode HW acceleration: MPEG2 HW Decode/Acceleration: H.264/H.264 VC-1/MPEG	Intel Atom N2980/02550 DirectX 9 and OpenGL 3.0 support Hardware decode HW acceleration: MPEG2 HW Decode/Acceleration: H.264/H.264 VC-1/MPEG
<b>Display</b>	48-bit LVDS: up to 2560x1600 at 60 Hz Up to 2560x1536 at 75 Hz Up to 1920x1200 at 60 Hz using HDMI Up to 2560x1600 at 60 Hz through DisplayPort	LVDS: Single channel 18-bit LVDS up to WQXGA 1366 x 768 Intel Atom processor N455 Single Core up to 1400 x 1000 (SXGA)	18/24-bit LVDS: up to 1366 x 768 Up to 1920 x 1200
<b>Ethernet</b>	3 independent display (VGA + LVDS + HDMI or VGA + LVDS + DVI) Speed: 10/100/1000Mbps Controller: GSE1 Intel ICS20V Connector: 2 x RJ45 on Base I/O Chipset: Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Amplifier: Can be supported via MiB 255 levels timer interval, setup by software	VGA+LVDS Speed: 10/100/1000Mbps Controller: GSE1 Intel ICS20V Connector: 2 x RJ45 on Base I/O Chipset: Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Can be supported via MiB 255 levels timer interval, setup by software	VGA+LVDS Speed: 10/100/1000Mbps Controller: GSE1 Intel ICS20V Connector: 2 x RJ45 on Base I/O Chipset: Realtek AL2892, High Definition Audio (HDA), Line-in, Line out, Mic-in Can be supported via MiB 255 levels timer interval, setup by software
<b>Storage</b>	Supports either mSATA or full size miniPCie selected by BIOS, default support full size miniPCie 2 x SATA II (Max. Data Transfer Rate up to 300 MB/s) DFast: 1 SATA: 2 x SATA II (Max. Data Transfer Rate up to 300 MB/s) Ethernet: 2 (10/100/1000Mbps) KB/Mouse: 1 VGA: 1 HDMI: 1 USB: 2 x USB 2.0, 2 x USB 2.0 LCD: Power, touch panel DC Power Jack: 1 (Supported only on selected SKUs) USB: 2 x USB 2.0 Serial: 1 RS-232, 1 RS-232/485	Supports either mSATA or full size miniPCie selected by BIOS, default support full size miniPCie 1 x SATA II (Max. Data Transfer Rate 300 MB/s) DFast: 1 SATA: 1 x SATA II (Max. Data Transfer Rate 300 MB/s) Ethernet: 1 (10/100/1000Mbps) KB/Mouse: 1 VGA: 1 HDMI: 1 USB: 2 x USB 2.0 LCD: Power, touch panel DC Power Jack: 1 (Supported by request) USB: 2 x USB 2.0 Serial: 2 RS-232, 2 RS-232/485 (RS485 support auto flow control) (ESD protection for RS-232/485 via 15kV Contact +8kV)	Supports either mSATA or full size miniPCie selected by BIOS, default support full size miniPCie 1 x SATA II (Max. Data Transfer Rate 300 MB/s) DFast: 1 SATA: 1 x SATA II (Max. Data Transfer Rate 300 MB/s) Ethernet: 1 (10/100/1000Mbps) KB/Mouse: 1 VGA: 1 HDMI: 1 USB: 2 x USB 2.0 LCD: Power, touch panel DC Power Jack: 1 (Supported by request) USB: 2 x USB 2.0 Serial: 2 RS-232, 2 RS-232/485 (RS485 support auto flow control) (ESD protection for RS-232/485 via 15kV Contact +8kV)
<b>Internal I/O</b>	Parallel (LPT): Supported shares with I/O SMBus: Supported shares with I/O KB/Mouse: 8-bit general purpose input/output GPIO: Supported shares with SMBus Mini PCie: 1 full size with SM heater	Parallel (LPT): Supported shares with I/O SMBus: Supported shares with I/O KB/Mouse: 8-bit general purpose input/output GPIO: Supported shares with SMBus Mini PCie: 1 full size Mini PCie	Parallel (LPT): Supported shares with I/O SMBus: Supported shares with I/O KB/Mouse: 8-bit general purpose input/output GPIO: Supported shares with SMBus Mini PCie: 1 full size Mini PCie
<b>Expansion</b>	MIO: (SMBus, 2 x USB2.0, USB3.0, 4 x POK, 1 line out, 5 Vsb/12 Vsb power, ACPI S3/S5, On-board optomux) Single 12V DC power input Supports single 12V input, ± 10% Power Consumption (Typical): N2980: 0.35A @12V (4.2W), N2980: 0.46A @12V (5.52W) Power Consumption (Max. test in HCT): N2980: 0.76A @12V (9.12W), N2980: 0.89A @12V (10.68W) Power Management: ACPI Battery: Lithium 3 V/210 mAh Operational: (Operational humidity: 40% ~ 85% RH non-condensing) Non-Operational: -40° C ~ 85° C and 80° C @ 95% RH non-condensing Dimensions (L x W x H): 100 x 72 mm (3.94 x 2.83") Weight: 0.65 kg (1.43 lb), weight of total package	MIO: (SMBus, 3 x USB 2.0, 4 x POK, 1 line out, 5 Vsb/12 Vsb power) Single 12V DC power input (Support DC power hot plug) Supports single 12V input, ± 10% Power Consumption (Typical): N2980: 0.35A @12V (4.2W), N2980: 0.46A @12V (5.52W) Power Consumption (Max. test in HCT): N2980: 0.76A @12V (9.12W), N2980: 0.89A @12V (10.68W) Power Management: ACPI Battery: Lithium 3 V/210 mAh Operational: (Operating humidity: 40% ~ 85% RH non-condensing) Non-Operational: -40° C ~ 85° C and 80° C @ 95% RH non-condensing Dimensions (L x W x H): 100 x 72 mm (3.94 x 2.83") Weight: 0.65 kg (1.43 lb), weight of total package	MIO: (SMBus, 2 x USB 2.0, 4 x POK, 1 line out, 5 Vsb/12 Vsb power) Single 12V DC power input (Support DC power hot plug) Supports single 12V input, ± 10% Power Consumption (Typical): N2980: 0.35A @12V (4.2W), N2980: 0.46A @12V (5.52W) Power Consumption (Max. test in HCT): N2980: 0.76A @12V (9.12W), N2980: 0.89A @12V (10.68W) Power Management: ACPI Battery: Lithium 3 V/210 mAh Operational: (Operating humidity: 40% ~ 85% RH non-condensing) Non-Operational: -40° C ~ 85° C and 80° C @ 95% RH non-condensing Dimensions (L x W x H): 100 x 72 mm (3.94 x 2.83") Weight: 0.65 kg (1.43 lb), weight of total package

# Selection Guide PC/104 CPU Modules



Module Name	PCM-3345	PCM-3353
<b>Module Type</b>	PC/104 CPU Module	PC/104 Plus CPU Module
<b>Processor System</b>	<b>CPU</b> OMAP3438 1.0 GHz, supports floating point unit (FPU)	<b>CPU</b> AMD Geode LX800, 500 MHz AMD Geode LX800, 366 MHz
<b>Front Side Bus</b>	1.0 GHz	500 MHz / 366 MHz
<b>L2 Cache</b>	256 KB	128 KB
<b>System Chipset</b>	OMAP3438	AMD C5530
<b>BIOS</b>	Award Integrated 16 Mbit ROM in SOC	Award 4 Mbit
<b>Technology</b>	DDR2 333MHz SDRAM on board	DDR 333/400 MHz
<b>Max. Capacity</b>	1 GB	1 GB
<b>Memory</b>	On board 256 MB	On board 512 MB
<b>Chipset</b>	OM3438	AMD Geode LX800/L800
<b>VRAM</b>	4 MB internal memory	Optimized Shared Memory Architecture up to 64 MB system memory
<b>Graphic Engine</b>	62 MHz single clockcycle engine (EM+) 60MHz single clockcycle engine (EM+) Designed for accelerated DirectDraw	Optimized shared memory architecture up to 64 MB system memory
<b>Display</b>	<b>LVDS</b> Single channel 24-bit LVDS up to 1024 x 768	Single channel 18/24-bit LVDS up to 1600 x 1200 x 32 bpp at 60 Hz Supports up to 1024 x 768 at 85Hz Supports up to 1600 x 1200 x 32 bpp at 60 Hz Supports up to 1600 x 1200 x 32 bpp at 100 Hz
<b>VGA</b>	Supports up to 1024 x 768 at 85Hz	Supports up to 1024 x 768 at 85Hz
<b>DVI</b>	Supports up to 1024 x 768 at 24bit interface	Supports up to 1600 x 1200 x 32 bpp at 60 Hz for 24-bit interface
<b>TV Out</b>	-	-
<b>Dual Display</b>	VGA+TTL, VGA+LVDS	VGA+TTL, VGA+LVDS
<b>Interface</b>	10/100 Mbps	10/100/1000 Mbps
<b>Ethernet</b>	<b>Controller</b> FE1: Winbond8005 SOC integrated FE2: Realtek RTL8101C-LF	Intel 82541PI Intel 82541PM
<b>Audio</b>	<b>Chipset</b> Realtek AL2003	Realtek AL2003
<b>WatchDog Timer</b>	System reset, programmable counter from 1 - 255 minutes/seconds Software programmable from 30.5p sec to 512 sec, 3.2 bits CompactFlash socket (Type VIII, shared with primary PKA)	Output system reset, programmable counter from 1 - 255 minutes/seconds CompactFlash socket (Type I)
<b>Storage</b>	<b>CompactFlash</b> 1 (transfer from PKA)	1 (transfer from LPT)
<b>Floppy</b>	-	-
<b>SPI Flash</b>	Optional onboard 4MB SPI Flash (Not supported by request for boot device or storage on D0S 0)	-
<b>On board Flash</b>	-	-
<b>USB</b>	4 x USB 2.0	4 x USB 2.0
<b>Serial</b>	3 x RS-232, 1 x RS-232/422/485 (w/ flow control on)	3 x RS-232, 1 x RS-232/422/485
<b>Parallel (LPT)</b>	-	1 (F00 mode supported)
<b>SMBus</b>	-	-
<b>KB/Mouse</b>	1	1
<b>GPIO</b>	16-bit GPIO	8-bit GPIO
<b>I2C</b>	1	1
<b>PC/104 Slot</b>	1	1
<b>PC-104 Slot</b>	-	-
<b>PC/104-Plus Slot</b>	-	-
<b>Mini PCI Express</b>	-	-
<b>Power</b>	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 0.74 A @ +5V <b>Power Consumption (Max. test in HCT)</b> 0.82 A @ +5V <b>Power Management</b> APM 1.2 Lithium 3V/210 mAh	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 1.35 A @ +5V, 0.1 A @ +12V <b>Power Consumption (Max. test in HCT)</b> 1.51 A @ +5V, 0.1 A @ +12V <b>Power Management</b> ACPI 3.0 Lithium 3V/210 mAh
<b>Environment</b>	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing
<b>Physical Characteristics</b>	<b>Dimensions (L x W)</b> 96 x 90 mm (3.8" x 3.5") <b>Weight</b> 0.500 kg (1.12 lb)	<b>Dimensions (L x W)</b> 96 x 115 mm (3.8" x 4.5") <b>Weight</b> 0.574 kg (1.26 lb) (with heat-sink)

Module Name	PCM-3355	PCM-3362	PCM-3363	PCM-4153
<b>Module Type</b>	PC/104 CPU Module	PC/104 Plus CPU Module	PC/104 CPU Module	PC/104 Plus CPU Module
<b>Processor System</b>	<b>CPU</b> AMD Geode LX800, 500 MHz AMD Geode LX800, 366 MHz	Intel Atom N450 1.86 GHz	Intel Atom N551 1.86 GHz Intel Atom D525 1.8 GHz	AMD Geode LX800, 500 MHz
<b>Front Side Bus</b>	500 MHz / 366 MHz	1.66 GHz	1.66 GHz / 1.8 GHz	500 MHz
<b>L2 Cache</b>	512 KB	512 KB	512 KB / 1 MB	128 KB
<b>System Chipset</b>	AMD C5530	ICHM	ICHM	AMD C5530
<b>BIOS</b>	Award 4 Mbit	AMI 16 Mbit	AMI 16 Mbit	Award 4 Mbit
<b>Technology</b>	DDR 333/400 MHz	DDR2 667 MHz	DDR3 800 MHz	DDR 333/400 MHz
<b>Max. Capacity</b>	1 GB	2 GB	1 GB	512 MB
<b>Memory</b>	On board 512 MB	1 x 200-pin SODIMM	1 GB	512 MB
<b>Chipset</b>	AMD Geode LX800/L800	Intel Atom N450	Intel Atom N551 / D525	AMD Geode™ LX800
<b>VRAM</b>	Optimized shared memory architecture up to 224 MB system memory	Optimized shared memory architecture up to 224 MB system memory	Optimized shared memory architecture up to 224 MB system memory	Optimized shared memory architecture up to 64 MB system memory
<b>Graphic Engine</b>	-	Intel Gen 3.5 D03, MPEG2 Hardware Acceleration, 250 / 400 MHz	Intel Gen 3.5 D03, MPEG2 Hardware Acceleration, 250 / 400 MHz	-
<b>Display</b>	Single channel 18-bit LVDS up to WGA 1366 x 768 Supports up to 1024 x 768 at 85 Hz Supports up to 1600x1200x32 bpp at 100 Hz	Single channel 24-bit LVDS up to WGA 1366 x 768 Supports up to 1600x1200x32 bpp at 60 Hz	Single channel 24-bit LVDS up to WGA 1366 x 768 Supports up to 1600x1200x32 bpp at 60 Hz Supports up to 1600x1200x32 bpp at 100 Hz	Supports up to 1024x768x32 bpp at 85 Hz Supports up to 1600x1200x32 bpp at 100 Hz
<b>VGA</b>	Supports up to 1024 x 768 at 85Hz	Supports up to 1600x1200x32 bpp at 60 Hz	Supports up to 1600x1200x32 bpp at 60 Hz	Supports up to 1024x768x32 bpp at 85 Hz
<b>DVI</b>	Supports up to 1024 x 768 at 24bit interface	-	-	Supports up to 1600x1200x32 bpp at 60 Hz for 24-bit interface
<b>TV Out</b>	-	-	-	-
<b>Dual Display</b>	VGA+TTL, VGA+LVDS	VGA+LVDS	VGA+LVDS	VGA+TTL
<b>Interface</b>	10/100 Mbps	10/100/1000 Mbps	10/100 Mbps	10/100 Mbps
<b>Ethernet</b>	<b>Controller</b> FE1: Winbond8005 SOC integrated FE2: Realtek RTL8101C-LF	Intel 82551QM Intel 82551PM	ICHM + Intel 8257V (PHY) ICHM + Intel 8257V (PHY)	FE1: Intel 82551ER FE2: Intel 82551ER
<b>Audio</b>	<b>Chipset</b> Realtek AL2003	Realtek AL2003	Realtek AL2003	Realtek AL2003
<b>WatchDog Timer</b>	System reset, programmable counter from 1 - 255 minutes/seconds Software programmable from 30.5p sec to 512 sec, 3.2 bits CompactFlash socket (Type VIII, shared with primary PKA)	Output system reset, programmable counter from 1 - 255 minutes/seconds CompactFlash socket (Type I)	Output system reset, programmable counter from 1 - 255 minutes/seconds CompactFlash socket (Type VIII)	Output system reset, programmable counter from 1 - 255 minutes/seconds CompactFlash socket (Type VIII)
<b>Storage</b>	<b>CompactFlash</b> 1 (transfer from PKA)	1 (transfer from LPT)	1 (transfer from LPT)	1 (transfer from LPT)
<b>Floppy</b>	-	-	-	-
<b>SPI Flash</b>	Optional onboard 4MB SPI Flash (Not supported by request for boot device or storage on D0S 0)	-	-	-
<b>On board Flash</b>	-	-	-	-
<b>USB</b>	4 x USB 2.0	2 x USB 2.0	4 x USB 2.0	4 x USB 2.0
<b>Serial</b>	3 x RS-232, 1 x RS-232/422/485 (w/ flow control on)	2 x RS-232, 1 x RS-422/485	2 x RS-232, 1 x RS-422/485	3 x RS-232, 1 x RS-232/422/485
<b>Parallel (LPT)</b>	-	1 (F00 mode supported)	-	1 (F00 mode supported)
<b>SMBus</b>	-	-	-	-
<b>KB/Mouse</b>	1	1	1	1
<b>GPIO</b>	16-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO
<b>I2C</b>	1	1	1	1
<b>PC/104 Slot</b>	1	1	1	1
<b>PC-104 Slot</b>	-	-	-	-
<b>PC/104-Plus Slot</b>	-	-	-	-
<b>Mini PCI Express</b>	-	-	-	-
<b>Power</b>	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 0.74 A @ +5V <b>Power Consumption (Max. test in HCT)</b> 0.82 A @ +5V <b>Power Management</b> APM 1.2 Lithium 3V/210 mAh	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 1.45 A @ +5V, 0.1 A @ +12V <b>Power Consumption (Max. test in HCT)</b> 1.74 A @ +5V, 0.1 A @ +12V <b>Power Management</b> ACPI 3.0 Lithium 3V/210 mAh	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 2 A @ +5V, 0.1 A @ +12V <b>Power Consumption (Max. test in HCT)</b> 2.37 A @ +5V, 0.1 A @ +12V <b>Power Management</b> ACPI 3.0 Lithium 3V/210 mAh	<b>Power Type</b> AT <b>Power Supply Voltage</b> 5V only to boot up (12V is optional for LCD inverter and add on card) <b>Power Consumption (Typical)</b> 1.45 A @ +5V, 0.1 A @ +12V <b>Power Consumption (Max. test in HCT)</b> 1.51 A @ +5V, 0.1 A @ +12V <b>Power Management</b> APM 1.2 Lithium 3V/210 mAh
<b>Environment</b>	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing	<b>Operational</b> 0 - 60° C (32 - 140° F) (operational humidity: 40% RH non-condensing) <b>Non-Operational</b> -40° C - 85° C and 60° C @ 85% RH non-condensing
<b>Physical Characteristics</b>	<b>Dimensions (L x W)</b> 96 x 90 mm (3.8" x 3.5") <b>Weight</b> 0.500 kg (1.12 lb)	<b>Dimensions (L x W)</b> 96 x 115 mm (3.8" x 4.5") <b>Weight</b> 0.550 kg (1.22 lb)	<b>Dimensions (L x W)</b> 96 x 115 mm (3.8" x 4.5") <b>Weight</b> 0.664 kg (1.46 lb) (with heat-sink)	<b>Dimensions (L x W)</b> 96 x 115 mm (3.8" x 4.5") <b>Weight</b> 0.574 kg (1.26 lb) (with heat-sink)

Selection Guide

# 3.5" Single Board Computers



Model Name		PCM-9343	PCM-9361
Module Type		3.5" SBC	3.5" SBC
Processor System	Front Side Bus	QMP/Intel®Q35 1.0 QPI, supports floating point unit (FPU)	Intel Atom™ D3100 1.86 GHz
	Frequency	1.0 GHz	1.86 GHz
	L2 Cache	512 KB	512 KB
	System Chipset	QMP/Intel®Q35 + SM SMP 12	Intel®Q35 + ICHM
Memory	BIOS	Award Integrated 16 MB ROM or 16C	Award 4 MB
	Technology	QMP 133MHz DDRAM on board	QMP 400MHz SDRAM
	Max. Capacity	512 MB	2 GB
	Bank(s)	1 x 256-pin SODIMM	1 x 256-pin SODIMM
Display	On-board Memory	On-board 256 MB or 512 MB	Intel®Q35
	Chipset	SM SMP 12.220 graphic chip	Intel®Q35
	VGA	4 MB embedded memory	Optimized shared memory architecture up to 224 MB system memory
	Graphic Engine	62.5 MHz single clockcycle engine (EM+), 62.5 MHz single clockcycle engine (EM+). Designed to support Intel®GMA	Optimized shared memory architecture up to 224 MB system memory
Audio	UFS2	Single channel 18.24-bit UFS2, up to 1024/768/320x1024 supported by request	UFS2: single channel 18-bit or dual channel 36-bit UFS2 UFS2: single channel 18.24-bit UFS2 (up to 1024/768/320x1024 supported by request) UFS2: web screen support: 1280x800 (1.44), 1024x600 (1.44), 1024x500 (1.44), 1024x400 (1.44)
	VGA	Up to 1024x768 8-bit RGB	Up to 1024x768 8-bit RGB
	TV-LCD	1024x768 8-bit @ 24Hz TTL	1024x768 8-bit @ 24Hz TTL
	HDMI	-	-
Ethernet	Serial	Up to 1024x768 8-bit RGB	Up to 1024x768 8-bit RGB
	Controller	LAN1: 10/100 Mbps on QMP/Intel®Q35, LAN2: 10/100 Mbps on Realtek RTL8105G	LAN1: 10/100 Mbps on QMP/Intel®Q35, LAN2: 10/100 Mbps on Realtek RTL8105G
	Connector	RJ-45 on LAN1, box header on LAN2	RJ-45
	Chipset	-	Realtek AL2895, High Definition Audio (HDA), Line-In, Line-Out, Mic-In
Watchdog Timer	Chipset	-	Realtek AL2895, High Definition Audio (HDA), Line-In, Line-Out, Mic-In
	Reset	Internal 2-wire, 167500Hz frequency counter to reset 1 x 32-bit counter up to 60k timer range to 100k to 500k to 2.146M with resolution 36.56 us	Output system reset, Programmable counter from 1-255 min/sec
	CompactFlash	CompactFlash type II (Primary Master, SEC Channel), Support 2 channels Ultra DMA 100	CompactFlash type II (Primary Master, SEC Channel)
	CFast	-	-
Storage	SATA	-	2 (SATA II)
	IDE	-	-
	FireWire	-	1 (shared with LPT)
	SD Flash	Optional onboard 4 MB SD Flash (not supported by request)	1 (shared with LPT)
Serial IO	Serial	1 (COM1) supports RS-232	1 (COM1) supports RS-232
	UART	1 (115200bps LAN1)	2 (115200/1000 Mbps)
	USB	-	-
	Reset Button	-	-
Internal IO	USB	1	1
	Ethernet	1 (10/100Mbps on LAN2)	4 (USB 2.0)
	Serial	2x COM, COM2, RS-232-422/485, support console mode, COM3/4 RS-232	1 (COM1) supports RS-232/422/485
	GPIO	-	-
Expansion	Parallel/LPT	1	1
	PS/2	-	-
	PS/2 Keyboard	-	-
	PS/2 Mouse	-	-
Power	PC/104 Slot	PC/104 (B16-B8 ISA)	-
	PC/104 Plus Slot	-	-
	Mini PCIe	-	-
	M.2 SATA	-	-
Environment	GPIO	-	-
	PC/104 Slot	PC/104 (B16-B8 ISA)	-
	Mini PCIe	-	-
	M.2 SATA	-	-
Physical Characteristics	Weight	0.84 kg (1.81 lb), weight of total package	0.84 kg (1.81 lb), weight of total package

Model Name		PCM-9362	PCM-9363
Module Type		3.5" SBC	3.5" SBC
Processor System	Front Side Bus	Intel Atom™ D3100 Single Core 1.86 GHz, Intel Atom™ D3100 Dual Core 1.86 GHz	Intel Atom™ D3100 Single Core 1.86 GHz, Intel Atom™ D3100 Dual Core 1.86 GHz
	Frequency	1.86 GHz	1.86 GHz on M455, 1.8 GHz on D325
	L2 Cache	512 KB	512 KB/1 MB
	System Chipset	Intel®M455/D310 + ICHM	Intel®M455/D310 + ICHM
Memory	BIOS	AWB 16 Mbit Flash BIOS	AWB 16 Mbit Flash BIOS
	Technology	QMP 400 MHz	QMP 400 MHz
	Max. Capacity	2 GB	4 GB for D325, 2 GB for M455
	Bank(s)	1 x 256-pin SODIMM	1 x 256-pin SODIMM
Display	On-board Memory	Intel Atom Processor M455/D310 1.86 GHz	Intel Atom Processor M455 1.86GHz/D325 1.8GHz
	Chipset	Intel Atom Processor M455/D310 1.86 GHz	Optimized shared memory architecture up to 224 MB system memory
	VGA	Optimized shared memory architecture up to 224 MB system memory	Optimized shared memory architecture up to 224 MB system memory
	Graphic Engine	Intel Gen 3.5 DSB, MPEG2 Decode in HW, Embedded Gen3.5+ GFX Core	Optimized shared memory architecture up to 224 MB system memory
Audio	UFS2	Single channel 18-bit UFS2 up to 1024/768 (80%)	Single channel 18-bit UFS2 up to 1024/768 (80%)
	VGA	Up to 1400x1050 (SDIG), 800x600 up to 2048x1536	Up to 1400x1050 (SDIG), 800x600 up to 2048x1536
	TV-LCD	Intel Atom M455 Single Core up to 1400x1050 (SDIG), Intel Atom D325 Dual Core up to 2048x1536	Intel Atom M455 Single Core up to 1400x1050 (SDIG), Intel Atom D325 Dual Core up to 2048x1536
	HDMI	-	-
Ethernet	Serial	Up to 1024x768 8-bit RGB	Up to 1024x768 8-bit RGB
	Controller	LAN1: 10/100 Mbps on QMP/Intel®Q35, LAN2: 10/100 Mbps on Realtek RTL8105G	LAN1: 10/100 Mbps on QMP/Intel®Q35, LAN2: 10/100 Mbps on Realtek RTL8105G
	Connector	RJ-45 on LAN1, box header on LAN2	RJ-45
	Chipset	-	Realtek AL2895, High Definition Audio (HDA), Line-In, Line-Out, Mic-In
Watchdog Timer	Chipset	-	Realtek AL2895, High Definition Audio (HDA), Line-In, Line-Out, Mic-In
	Reset	Internal 2-wire, 167500Hz frequency counter to reset 1 x 32-bit counter up to 60k timer range to 100k to 500k to 2.146M with resolution 36.56 us	Output system reset, Programmable counter from 1-255 min/sec
	CompactFlash	CompactFlash type II (Primary Master, SEC Channel), Support 2 channels Ultra DMA 100	CompactFlash type II (Primary Master, SEC Channel)
	CFast	-	-
Storage	SATA	-	2 (SATA II)
	IDE	-	-
	FireWire	-	1 (shared with LPT)
	SD Flash	Optional onboard 4 MB SD Flash (not supported by request)	1 (shared with LPT)
Serial IO	Serial	1 (COM1) supports RS-232	1 (COM1) supports RS-232
	UART	1 (115200bps LAN1)	2 (115200/1000 Mbps)
	USB	-	-
	Reset Button	-	-
Internal IO	USB	1	1
	Ethernet	1 (10/100Mbps on LAN2)	4 (USB 2.0)
	Serial	2x COM, COM2, RS-232-422/485, support console mode, COM3/4 RS-232	1 (COM1) supports RS-232/422/485
	GPIO	-	-
Expansion	Parallel/LPT	1	1
	PS/2	-	-
	PS/2 Keyboard	-	-
	PS/2 Mouse	-	-
Power	PC/104 Slot	PC/104 (B16-B8 ISA)	-
	PC/104 Plus Slot	-	-
	Mini PCIe	-	-
	M.2 SATA	-	-
Environment	GPIO	-	-
	PC/104 Slot	PC/104 (B16-B8 ISA)	-
	Mini PCIe	-	-
	M.2 SATA	-	-
Physical Characteristics	Weight	0.84 kg (1.81 lb), weight of total package	0.84 kg (1.81 lb), weight of total package

## Selection Guide 3.5" Single Board Computers



NEW

Module Type	PCM-9375		PCM-9389	
	3.5" SBC		3.5" SBC	
<b>Processor System</b>	AMD Geode LX800 processor, up to 500 MHz		Intel Atom N455 Single Core 1.66 GHz Processor Intel Atom D525 Dual Core 1.5 GHz Processor	
Front Side Bus	800 MHz		1.66 GHz or N455 1.8 GHz or D525 1.5 GHz	
Frequency	500 MHz		1.66 GHz or N455 1.8 GHz or D525 1.5 GHz	
L2 Cache	132 KB		1-2x32 / 1MB	
System Chipset	AMD Geode LX800		Intel 945GDS + ICHM	
BIOS	Award 4 Mbit Flash ROM BIOS		Award 4 Mbit Flash BIOS	
Technology	DDR 333/400MHz		DDR3 800/1066 MHz	
Max. Capacity	1 GB		SDDMM (up to 2GB for N455, 4 GB for D525)	
Socket	1 x 200-pin SDDMM		1 x 204-pin SDDMM	
On-board memory	-		1GB PCM-9389 supported by request	
Chipset	AMD Geode LX800		Intel Atom N455/D525	
VRAM	Optimized shared memory architecture, up to 64 MB system memory		Optimized shared memory architecture, up to 256 MB system memory	
Graphics Engine	AMD CG530A 2D engine		Intel Gen 5.5 GPU, MFD32 capable in HW Embedded Graphics + 3D Core	
Display	Single channel 18-bit LVDS (PCM-9375), 10-bit 180MHz/100MHz/100MHz/100MHz		Single channel 18-bit LVDS up to 1080p 136MHz/108MHz	
LVDS	Up to 180MHz/140MHz/100MHz/100MHz		N455 up to 1400MHz/800MHz, D525 up to 2048x1536	
VGA	24-bit (PCM-9375), up to 1600x1200x60 Hz at 60 Hz		18-bit TTL supported by request	
TTL LCD	-		-	
HD	-		-	
Dual Display	VGA + TTL, VGA + LVDS		VGA + LVDS, VGA + TTL (TTL supported by request)	
Serial	10/100 Mbps (Ethernet/Mini-LAN)		10/100/1000 Mbps (Ethernet/Mini-LAN)	
Controller	Ethernet/Realtek 8T1810 10/100 Mbps Ethernet/Realtek 8T1810 10/100 Mbps		GEM1 Intel 82579 GEM2 Intel 82579	
Connector	RJ-45 on Ethernet/Mini-LAN header on Ethernet2		GEM1 on RJ-45, GEM2 on internal box header	
Chipset	Realtek AL2003 AC'97		Realtek AC'97	
Augmenter	Line In, Line Out, Mic-In		High Definition Audio (HDA), Line In, Line Out, Mic-In	
WatchDog Timer	None (200MHz version) or 32K		None	
CompactFlash	Output system reset, programmable counter from 1-255 minutes		Output system reset, programmable counter from 1-255 minutes	
CFast	CompactFlash Type III (Primary Master IDE Channel)		CompactFlash Type III (Primary Master IDE Channel)	
Storage	SATA 1.5Gb/s (only for PCM-9375)		2 SATA/6Gb	
IDE	1 only for PCM-9375 (E)		-	
Floppy	1 (shared with LPT)		-	
Serial	1 (COM1) supports RS-232C		1 (COM1) supports RS-232C	
Ethernet	1 (10/100 Mbps)		1 (10/100/1000 Mbps)	
PS/2 Keyboard	-		-	
VGA	-		-	
USB	-		-	
Front Button	-		-	
USB	4 x USB 2.0		4 x USB 2.0	
Ethernet	-		-	
Serial	3x COM: COM1 COM2 support RS-232 COM2 supports RS-232/422/485		3x COM: COM1 support RS-232 COM2 supports RS-232/422/485	
IDE	1 (Primary Master)		-	
Parallel (LPT)	1 (shared with LPT)		-	
FDD	1 (shared with LPT)		1 (shared with FDI)	
GPIO	-		-	
PS/2 Keyboard	8-bit GPIO		8-bit GPIO	
GPIO	Optional		1 shared with (SMBus)	
PCI	-		-	
PCI104 Slot	PC104 (8-16 bit ISA)		PC104 (8-16 bit ISA, no support ISA DMA)	
PCI104 Slot	-		-	
PCI104-Plus Slot	-		-	
Mini PCI	-		-	
Mini PCI Socket	-		-	
Mini PCI Socket	-		1 (supports extra COM ports by PCA-COM555 or PCA-COM485)	
Power Type	ATX/ATX		AT / ATX	
Power Supply Voltage	5V ± 5% (12V optional for LCD and PC104)		5V ± 5% (12V optional for LCD and PC104)	
Power Consumption (Typical)	0.6A @5V, 0.5A @9V @ 3.3W		0.6A @5V, 0.5A @9V @ 3.3W	
Power Consumption (Max. test in HCT)	1.2A @5V, 0.25A @9V @ 3.3W		1.2A @5V, 0.25A @9V @ 3.3W	
Power Management	None (2.0 AC'97)		None (2.0 AC'97)	
Subtype	Lithium 3V / 150mAh		Lithium 3V / 210mAh	
Operational	0 - 60° C (32 - 140° F)		0 - 60° C (32 - 140° F)	
Non-Operational	Operational: 0 - 60° C (32 - 140° F) Non-Operational: -40° C to 85° C (at 0% RH Non-Condensing) Non-Operational: -40° C to 85° C (at 0% RH Non-Condensing)		Operational: 0 - 60° C (32 - 140° F) Non-Operational: -40° C to 85° C (at 0% RH Non-Condensing) Non-Operational: -40° C to 85° C (at 0% RH Non-Condensing)	
Dimensions (L x W)	148 x 102 mm (5.7" x 4")		148 x 102 mm (5.7" x 4")	
Weight	0.64 kg (1.41 lb), weight of total package		0.64 kg (1.41 lb), weight of total package	

## Selection Guide EPIC Single Board Computers



Module Type	PCM-4373		PCM-4381	
	EPIC SBC		EPIC SBC	
<b>Processor System</b>	AMD Geode LX800 processor		Intel Celeron M Processor 600 MHz/1 GHz/Socket type	
Front Side Bus	-		400 MHz (910GME/533 MHz (915GME)	
Frequency	500 MHz		C-M 600 MHz/C-M 1.0 GHz/Socket type	
L2 Cache	132 KB		312 KB/960 depends on CPU	
System Chipset	AMD Geode LX800 + AMD Geode CS530B		Intel 910GME/915GME + ICHM	
BIOS	Award 4 Mbit		Award 4 Mbit	
Technology	DDR 333/400 MHz		DDR2 400 MHz (910GME), 400/533 MHz (915GME)	
Max. Capacity	512 MB		2 GB	
Socket	1 x 200-pin SDDMM		1 x 200-pin SDDMM	
Chipset	AMD Geode LX800		Intel 910GME/915GME	
VRAM	64MB		DMMT 3.0 supports up to 128MB	
Graphics Engine	AMD 2D engine		Mobile Intel GMA 900 2D/3D Engine	
LVDS	18-bit LVDS		1 x 48-bit LVDS1, 1 x 48-bit LVDS2	
VGA	-		Up to DVI-D, DVI-I, DVI-D + I/24x	
TTL LCD	24-bit TTL		-	
Dual Display	VGA + 18-bit LVDS or VGA + 24-bit TTL		VGA + LVDS1 + LVDS2	
Interface	2 x RJ-45		2 x RJ-45	
Controller	2 x Realtek RTL8102CL-LF		2 x Realtek RTL8111B-GR	
Chipset	AC97		AC97	
Output	Line-in, Line-out, Mic-in		Line-in, Line-out, Mic-in	
WatchDog Timer	Interval		Output system reset, programmable counter from 1-255 minutes	
CompactFlash	Type I/II (Primary Master IDE Channel)		Type I/II (Primary Master IDE Channel)	
Storage	SATA 2		2	
IDE	-		-	
Floppy	1 x FDD (Optional, share with LPT through customized cable)		1 x FDD (Optional)	
Serial	1 (COM1) supports RS-232/422/485		1 x RS-232	
Ethernet	2		2	
PS/2 Keyboard	1		1	
VGA	-		-	
USB	2		2	
USB	2 x USB 2.0 (via USB DDM connector)		4 x USB 2.0 (2 via USB DDM connector)	
Serial	5 x COM: COM1/COM2 support RS-232 COM3/COM4/COM5 support RS-232 COM5 only for PCM-4373P COM2 supports RS-232/422/485		2 x RS-232 1 x RS-232/422/485	
IDE	-		-	
Parallel (LPT)	1		1	
FDD	1 (Optional, share with LPT)		Share with LPT (Optional)	
GPIO	16-bit GPIO		16-bit GPIO	
PCI104 Slot	-		-	
PCI104 Slot	-		-	
PCI104-Plus Slot	-		-	
Mini PCI	-		-	
Mini PCI Socket	-		-	
Power Type	AT / ATX		AT / ATX	
Power Supply Voltage	ATX: 5V±5%, 5Vsb AT: 5V±5%, (12V optional for LCD inverter and PC104+)		ATX: 5V±5%, 5Vsb AT: 5V±5%, (12V optional for LCD inverter and PC104+)	
Power Consumption (Typical)	1.45 A @ 5 V (7.25 W)		2.59 A @ 5 V (12.95 W) (Celeron M 15 with DDR2 256 MB)	
Power Consumption (Max. test in HCT)	1.66 A @ 5 V (8.3 W)		3.22 A @ 5 V (16.1 W) @ 0.12 V (Celeron M 15 with DDR2 256 MB)	
Operating	0 - 60° C (32 - 140° F) (Operational humidity: 80% C @ 95% RH Non-Condensing)		0 - 60° C (32 - 140° F)	
Non-Operating	-40° C - 85° C and 60° C @ 95% RH Non-Condensing		95% @ 60° C Relative Humidity	
Dimensions (L x W)	115 x 165 mm (4.5" x 6.5")		115 x 165 mm (4.5" x 6.5")	
Weight	0.64 kg (1.39 lb), weight of total package		0.55 kg (1.21 lb) (with HeatSink)	

Selection Guide

# EBX & 5.25" Single Board Computers



Model Name	PCM-Q562	PCM-Q584	
Model Type	EBX SBC	EBX SBC	
Processor System	CPU	Intel Atom Processor N450/D510 1.66 GHz	Embedded Intel Pentium M / Celeron M Processor Pentium M 1.4 GHz Celeron M 1.0 GHz iPQGA2 (478-pin)
	Front Side Bus	667 MHz	400/533 MHz
	Frequency	Atom N450/D510 1.66 GHz	C-M 1.0 GHz / P-M 1.4 GHz / Socket type
	L2 Cache	512 KB 1 MB	512 KB - 2 MB
Memory	System Chipset	N450/D510 + D30MM	Intel 915GM + D30MM
	BIOS	AM 16 Mbit	Award 4 Mbit
	Technology	DDR2 667	DDR2 400/533 MHz
	Max. Capacity	2 GB	4 GB
Display	Socket	1 x 200-pin SODIMM	2 x 200-pin SODIMM
	Chipset	N450/D510	Intel 915GM + GMA 900
	VRAM	Optimized Shared Memory Architecture up to 224 MB	Intel 915GM + GMA 900
	Graphics Engine	Embedded Gen3.5, GFX Core, HW MPEG2 decoder	Mobile Intel GMA 900 2D/3D Engine
Audio	LVD5	Single channel 18-bit LVD5 up to WGA 1366 x 768	LVD51 (single channel 18-bit or dual channel 36-bit LVD5) LVD52 (single channel 18-bit or dual channel 36-bit LVD5)
	VGA	N450: up to SXGA 1400 x 1050 @ 60 Hz (SVGA) D510: up to SXGA 1366 x 768 (WGA)	Up to 1600 x 1200 at 65-Hz and 2048 x 1536 at 75-Hz
	TTL LCD	-	-
	DVI	-	-
Ethernet	DVI	-	-
	TV Out	-	-
	Dual Display	VGA + LVD5	VGA + 48-bit LVD52, 36-bit LVD51 + 48-bit LVD52, VGA + 36-bit LVD51
	Interface	3 (RJ-45 connector through the cable and GbE3 is optional)	2 (RJ-45 connector through the cable)
Audio	Controller	GbE1 Intel 82567, GbE2 Intel 82569, Optional GbE3 Intel 82569 (L66001) Compliant: 10/100/1000 Mbps	2 x Broadcom BCM5721
	Connector	Box header	Box header
	Chipset	ALC269 HD Codec, Speaker out, CD input, Line-in, Line-out, Mic-in	ALC269, Speaker out, CD input, Line-in, Line-out, Mic-in
	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load	Max 2.2W/ch Stereo into a 3Ω Load
WatchDog Timer	Output	System reset	System reset
	Interval	Watchdog timer (WDT): monitor the system status before OS is ready (programmable 10ms, disable, 16, 60s) Watchdog timer (PWT): monitor the application status after OS is ready (programmable 1 - 255 seconds (full version only))	Programmable 1 - 255 level
	CompacFlash	Card Type I, Type II	Card Type I, Type II (Integrated 2nd IDE Channel)
	SATA	1 x SATA	2 x SATA
Storage	IDE	-	1 x EIDE (UDMA 100)
	Flash	Share with LPT (Optional)	1 x EIDE (UDMA 100)
	SPI Flash	16 Mbit	1 x FDD (Optional)
	Serial	4 x RS-232 (isolator design COM6 to full version only) 2 x RS-485/RS-422	3 x RS-232 1 x RS-232/RS-485
Internal I/O	Ethernet	3 x GbE (RJ-45 connector through the cable and GbE3 is full version only optional)	2 x GbE (RJ-45 connector through the cable)
	PS/2 KB/Mouse	1	1
	VGA	1	1
	Reset Button	1	1
Expansion	USB	8 x USB 2.0	6 x USB 2.0
	Parallel (LPT)	1	1
	FDD	Share with LPT (Optional)	Share with LPT (Optional)
	GPIO	16-bit GPIO	8-bit GPIO
Power	SMRIS	-	-
	I2C	1	-
	PC104 Slot	-	-
	PC104-Plus Slot	-	-
Power	PC104-Plus Slot	1	1
	Mini PCIe	1	-
	Mini PCI Socket	1	1
	PCI Slot	1	1
Environment	Power Type	AT / ATX (Both ATX can support ACPI)	AT / ATX
	Power Supply Voltage	ATX: 12V ±10%, 5VSB ±5% (5V stand-by power is only for auto power off function) AT: 12V ±10%	AT: ±5V ±5%, +12V ±10% ATX: ±5V ±5%, +12V ±10%
	Power Consumption (Typical)	PCM-Q562N-S8A1E: 10.8W (853 mA @ 12V, 0 mA @ 5VSB) PCM-Q562N-S8A1E: 13.8W (1150 mA @ 12V, 0 mA @ 5VSB)	Suspend: PCM-Q584F-S4A2E: 14.22W (2.42 A @ 5V, 0.48 A @ 12V)
	Power Consumption (Max. Test in HCT)	PCM-Q562N-S8A1E: 18.5W (1540mA @ 12V, 0mA @ 5VSB) PCM-Q562N-S8A1E: 18.5W (1540mA @ 12V, 0mA @ 5VSB)	PCM-Q588F-S8A1E: 18.5W (3.67 A @ 5V)
Physical Characteristics	Operating	0 - 60°C (32 - 140°F) (Operating humidity: 40% @ 85% RH non-condensing)	0 - 60°C (32 - 140°F)
	Non-Operating	-40° C - 85° C and 60° C @ 95% RH non-condensing	95% @ 60° C Relative Humidity
	Dimensions (L x W)	203 x 146 mm (8" x 5.75")	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (with Heatsink)	0.85 kg (1.87 lb) (with Heatsink)

Model Name	PCM-Q588	PCM-Q590	
Model Type	EBX SBC	EBX SBC	
Processor System	CPU	Embedded Intel Celeron M Processor supported	Embedded Intel Core2 Duo Duo/Core Duo Processor supported, Socket 478
	Front Side Bus	400 MHz	533/667 MHz
	Frequency	C-M 600 MHz/C-M 1.0 GHz	Core Duo 1.2 GHz Core Duo 1.66 GHz uPQGA2 (478-pin)
	L2 Cache	512 KB 1 MB	2 - 4 MB
Memory	System Chipset	Intel 915GM + D30MM	Intel 945GME + D30MM
	BIOS	Award 4 Mbit	Award 4 Mbit
	Technology	DDR2 400 Downward compatible for DDR2 533/667/800 MHz	DDR2 400/533/667
	Max. Capacity	2 GB	4 GB
Display	Socket	1 x 200-pin SODIMM	2 x 200-pin SODIMM
	Chipset	Intel 915GM + GMA 900	Intel 945GME
	VRAM	DMT 3.0 supports up to 128 MB	256 MB
	Graphics Engine	Mobile Intel GMA 900 2D/3D Engine	Intel Gen 3.5 Integrated Graphics Engine
Audio	LVD5	1 x LVD5, single channel 18/24-bit or dual channel 36/48-bit LVD5	LVD51 (single channel 18-bit or dual channel 36-bit LVD5) LVD52 (optional) (single channel 18/24-bit or dual channel 36/48-bit LVD5)
	VGA	up to DGA (2048 x 1536)	Up to DGA (2048 x 1536)
	TTL LCD	18/26-bit TTL (PCM-Q588T)	-
	DVI	Yes (PCM-Q588T)	-
Ethernet	DVI	-	-
	TV Out	-	-
	Dual Display	VGA + LVD5 / DVI + LVD5 / DVI + VGA / VGA + TTL	VGA + LVD51, VGA + LVD52, LVD51 + LVD52 Any FDD shared LVD52 is optional
	Interface	1 (RJ-45 connector through the cable)	2 x GbE (RJ-45 connector through the cable)
Audio	Controller	Realtek RTL8102C, 4E (Optional RTL8110S, 4E for S/PDIF)	2 x Intel 82573L
	Connector	Box header	Box header
	Chipset	AC971 Line-in, Line-out, Mic-in, speaker out (RL)	HD Audio, supports 7.1 channel, CD input, Line-in, Line-out, Mic-in
	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load	Max 2.2W/ch Stereo into a 3Ω Load
WatchDog Timer	Output	System reset	System reset
	Interval	Programmable 1 - 255 level	Programmable 1 - 255 level
	CompacFlash	Card Type I, Type II	Card Type I, Type II
	SATA	2 x SATA	2 x SATA
Storage	IDE	1 x EIDE (UDMA 100)	1 x EIDE (UDMA 100)
	Flash	Share with LPT (Optional)	1 x FDD (Optional)
	SPI Flash	16 Mbit	1 x FDD (Optional)
	Serial	4 x RS-232 2 x RS-232/RS-485	3 x RS-232 1 x RS-232/RS-485
Internal I/O	Ethernet	1 x Ethernet (RJ-45 connector through the cable)	2 x GbE (RJ-45 connector through the cable)
	PS/2 KB/Mouse	1	1
	VGA	1	1
	Reset Button	1	1
Expansion	USB	6 x USB 2.0	6 x USB 2.0
	Parallel (LPT)	1	1
	FDD	Share with LPT (Optional)	Share with LPT (Optional)
	GPIO	16-bit GPIO	16-bit GPIO
Power	SMRIS	-	-
	I2C	-	-
	PC104 Slot	-	-
	PC104-Plus Slot	-	-
Power	PC104-Plus Slot	1	1
	Mini PCIe	-	-
	Mini PCI Socket	1	1
	PCI Slot	1	1
Environment	Power Type	AT / ATX	AT / ATX
	Power Supply Voltage	ATX: 5V±5%, 5Vsb, +12V ± 10%, external 12V option for LCD Inverter, P13 & P14 Plus AT: 5V only to boot up, external 12V option for LCD Inverter, P13 & P14 Plus	ATX: 5V±5%, 5Vsb, +12V ± 10%, external 12V option for LCD Inverter, P13 & P14 Plus AT: 5V ± 5%, +12V ± 10% (For PC Card, RAM power, and LVD5 inverter power, CPU core power)
	Power Consumption (Typical)	PCM-Q588F-S8A1E: 18.5W (3.67 A @ 5V)	Suspend: PCM-Q590F-S8A2E: 17.07W (1.17 A @ 5V, 0.98 A @ 12V)
	Power Consumption (Max. Test in HCT)	PCM-Q588F-S8A1E: 18.5W (3.67 A @ 5V)	PCM-Q590F-S8A2E: 17.07W (1.17 A @ 5V, 0.98 A @ 12V)
Physical Characteristics	Operating	0 - 60°C (32 - 140° F) (Operating humidity: 40% @ 95% RH non-condensing)	0 - 60° C (32 - 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operating	-40° C - 85° C and 60° C @ 95% RH non-condensing	-40° C - 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	203 x 146 mm (8" x 5.75")	203 x 146 mm (8" x 5.75")
	Weight	0.7 kg (1.54 lb) (with Heatsink)	0.7 kg (1.54 lb) (with Heatsink)

Selection Guide

# Mini-ITX Motherboards



Model Name	AIMB-210	AIMB-212	AIMB-213
<b>Form Factor</b>	Mini-ITX	Mini-ITX	Mini-ITX
<b>Processor System</b>	<b>GPU</b> Intel Atom N270 <b>Socket</b> F23GA <b>Max. Speed</b> 1.6 GHz <b>533 MHz</b> <b>Front Side Bus</b> 533 MHz <b>L2 Cache</b> 512 KB <b>Chipset</b> Intel 945GSE + ICH7M <b>BIOS</b> Award 16 Mbit, SPI	<b>GPU</b> Intel Atom N450/D510 <b>Socket</b> F23GA <b>Max. Speed</b> 1.66 GHz <b>533 MHz</b> <b>Front Side Bus</b> 533 MHz <b>L2 Cache</b> 512 KB <b>Chipset</b> Intel 945GM <b>BIOS</b> Award 16 Mbit, SPI	<b>GPU</b> Intel Atom N455/D525 <b>Socket</b> F23GA <b>Max. Speed</b> 1.66/1.8 GHz <b>533 MHz</b> <b>Front Side Bus</b> 533 MHz <b>L2 Cache</b> 512 KB <b>Chipset</b> Intel 945GM <b>BIOS</b> Award 16 Mbit, SPI
<b>Expansion Slot</b>	<b>Mini PCI</b> 1 <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -
<b>Memory</b>	<b>Technology</b> Single channel DDR2 533 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 1 x 200-pin SODIMM	<b>Technology</b> Single channel DDR2 667 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 1 x 200-pin SODIMM	<b>Technology</b> Single channel DDR2 800 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 2 x 204-pin SODIMMs
<b>Graphics</b>	<b>Controller</b> Intel GMA 950 <b>VRAM</b> Shared system memory up to 224 MB <b>LCD</b> LVDS: Dual channel 36-bit LVDS LVDS: Dual channel 48-bit LVDS (J-Version)	<b>Controller</b> Gen3.5+ GFX Core, 300/400 MHz render clock frequency for N450/D510 <b>VRAM</b> Shared system memory up to 224 MB SDRAM <b>LCD</b> Supports 18-bit single channel	<b>Controller</b> Embedded Gen3.5+ GFX Core, 200/400 MHz render clock frequency for N455/D525 <b>VRAM</b> Shared system memory up to 224 MB SDRAM <b>LCD</b> Supports 18/24-bit single channel
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111C <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> LAN1: Intel 8257V, LAN2: Intel 82583V <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> LAN1: Intel 8257V, LAN2: Intel 82583V <b>Connector</b> RJ-45 x 2
<b>TPM</b>	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 100)	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 100)	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 133)
<b>Rear I/O</b>	<b>VGA/DVI/HDMI</b> 1 <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out
<b>Internal Connector</b>	<b>Serial</b> 3 (RS-232) <b>Parallel</b> 1 <b>IDE</b> 1 <b>SATA</b> 2 <b>Connect/Flash</b> 1 <b>GPIO</b> 16-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 3 (RS-232) <b>Parallel</b> 1 <b>IDE</b> - <b>SATA</b> 2 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 4 (1 x RS-232, supplies 5 V & 12 V) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 3 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min

Model Name	AIMB-214	AIMB-221	AIMB-222	AIMB-223	AIMB-252
<b>Form Factor</b>	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX
<b>Processor System</b>	<b>GPU</b> Intel Atom D550V N5900 <b>Socket</b> F23GA <b>Max. Speed</b> 1.66/1.8 GHz <b>533 MHz</b> <b>Front Side Bus</b> 533 MHz <b>L2 Cache</b> 512 KB <b>Chipset</b> Intel MM10 <b>BIOS</b> Award 4 Mbit, FWH	<b>GPU</b> AMD Turion TL 62-1M2 Sempron 3700+ <b>Socket</b> S1g1 Socket <b>Max. Speed</b> 2.2 GHz <b>800 MHz/800 MHz</b> <b>Front Side Bus</b> 800 MHz <b>L2 Cache</b> 1 MB/512 KB <b>Chipset</b> AMD N5900 + S5900 <b>BIOS</b> Award 4 Mbit, FWH	<b>GPU</b> AMD Mobile Athlon™ II New/Turion™ T6 Neo <b>Socket</b> F23GA <b>Max. Speed</b> 2.2 GHz <b>800 MHz/800 MHz</b> <b>Front Side Bus</b> 800 MHz <b>L2 Cache</b> 2 MB <b>Chipset</b> AMD R270S + SB720 <b>BIOS</b> Award 4 Mbit, SPI	<b>GPU</b> AMD D-series Dual Core/Single core processor <b>Socket</b> F23GA <b>Max. Speed</b> 1.65 GHz/1.0 GHz <b>533 MHz/400 MHz</b> <b>Front Side Bus</b> 533 MHz/400 MHz <b>L2 Cache</b> 2 MB/1 MB <b>Chipset</b> AMD e750 + AS5E <b>BIOS</b> Award 4 Mbit, FWH	<b>GPU</b> Intel Pentium M D6700 <b>Socket</b> µFCPGA 478 Socket/SPI on board <b>Max. Speed</b> 2.9 GHz/2.5 GHz <b>533 MHz/400 MHz</b> <b>Front Side Bus</b> 533 MHz/400 MHz <b>L2 Cache</b> 2 MB/1 MB <b>Chipset</b> Intel 915GM/915GMLE + ICH6M <b>BIOS</b> Award 4 Mbit, FWH
<b>Expansion Slot</b>	<b>Mini PCIe</b> 1 <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -	<b>Mini PCIe</b> 1 slot <b>PCIe</b> -
<b>Memory</b>	<b>Technology</b> Single channel DDR2 1066 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 1 x 204-pin SODIMM	<b>Technology</b> Dual channel DDR2 800 MHz <b>Max. Capacity</b> 4 GB <b>Socket</b> 2 x 204-pin SODIMMs	<b>Technology</b> Dual channel DDR2 533/667/800 MHz <b>Max. Capacity</b> 4 GB <b>Socket</b> 2 x 204-pin SODIMMs	<b>Technology</b> Single channel DDR2 1333 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 1 x 204-pin SODIMM	<b>Technology</b> Dual channel DDR2 400/533 MHz <b>Max. Capacity</b> 2 GB <b>Socket</b> 2 x 240-pin DIMM
<b>Graphics</b>	<b>Controller</b> Gen3.5+ GFX Core, 400/400 MHz render clock frequency for D550V/N5900 <b>VRAM</b> Shared system memory up to 224 MB SDRAM <b>LCD</b> LVDS 1: Dual channel 48-bit LVDS LVDS 2: Single channel 18-bit LVDS	<b>Controller</b> Integrated ATI Radeon HD4200 serial Engine <b>VRAM</b> Shared system memory up to 512 MB SDRAM <b>LCD</b> Dual channel 36/48-bit LVDS	<b>Controller</b> Integrated ATI Radeon HD4200 serial <b>VRAM</b> Shared system memory up to 1024 MB SDRAM <b>LCD</b> Dual channel 36/48-bit LVDS	<b>Controller</b> Integrated ATI Radeon HD320 <b>VRAM</b> - <b>LCD</b> Dual channel 36/48-bit LVDS	<b>Controller</b> Intel GMA 900 <b>VRAM</b> Shared system memory up to 128 MB <b>LCD</b> LVDS 1: Dual channel 36-bit LVDS LVDS 2: Dual channel 48-bit LVDS
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111C <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111C <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111D <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111D <b>Connector</b> RJ-45 x 2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Dual Realtek RTL8111C <b>Connector</b> RJ-45 x 2
<b>TPM</b>	<b>Max. Data Transfer Rate</b> 600 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 133)	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 133)	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 133)	<b>Max. Data Transfer Rate</b> 600 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 100)	<b>Max. Data Transfer Rate</b> 150 MB/s <b>Channel</b> 2 <b>Mode</b> EDC (Ultra DMA 100)
<b>Rear I/O</b>	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out	<b>VGA/DVI/HDMI</b> 1/-/- <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> Mic-in, Line-in, Line-out
<b>Internal Connector</b>	<b>Serial</b> 4 (3 x RS-232, 1 x RS-232C/422/485) <b>Parallel</b> 1 <b>IDE</b> 1 <b>SATA</b> 2 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 2 (1 x RS-232, 1 x RS-232C) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 3 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 2 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 2 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 2 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 4 <b>Connect/Flash</b> 1 <b>GPIO</b> 8-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min	<b>Serial</b> 1 (RS-232C/422/485) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 2 <b>Connect/Flash</b> 1 <b>GPIO</b> 16-bit GPIO <b>Output</b> System reset <b>Watchdog Timer</b> Programmable 1 ~ 255 sec/min

Selection Guide

# Mini-ITX Motherboards



Model Name	AIMB-256	AIMB-258	AIMB-262
<b>Form Factor</b>	Mini-ITX	Mini-ITX	Mini-ITX
<b>Processor System</b>	Intel Core 2 Duo/Celeron M Socket: $\mu$ FC PGA 478 Socket/CPU on board Max. Speed: 2.2 GHz/2.0 GHz Front Side Bus: 800 MHz/533 MHz L2 Cache: 4 MB/1 MB Chipset: Intel QM630 + iCH8M BIOS: AMI 16 Mbit, SPI PCI: 1 MINI PCI: - PCIE: - Technology: Dual channel DDR2 533/667 MHz Max. Capacity: 4 GB Socket: 2 x 200-pin SODIMMs Controller: Intel GMA X3100 VRAM: Shared system memory up to 384 MB LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: - HDMI: - DVI: 1 Dual Display: CRT + LVDS, DVI + LVDS, CRT + DVI	Intel Core 2 Duo/Celeron M Socket: $\mu$ FC PGA 478 Socket Max. Speed: 2.53 GHz/2 GHz Front Side Bus: 1066 MHz/667 MHz L2 Cache: 4 MB/1 MB Chipset: Intel QM630 + iCH8M BIOS: AMI 16 Mbit, SPI PCI: - MINI PCI: - PCIE: x16, 1 slot Technology: Dual channel DDR2 800/1066 MHz Max. Capacity: 4 GB Socket: 2 x 200-pin SODIMMs Controller: Intel GMA X4500 VRAM: Shared system memory up to 384 MB LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: - HDMI: - DVI: 1 Dual Display: CRT + LVDS, DVI + LVDS, CRT + DVI	Intel Core 2 Duo/Pentium 4/ Pentium Dual-Core/Celeron D Socket: LGA775 Max. Speed: 2.66 GHz/3.0 GHz/2.2 GHz/2.0 GHz Front Side Bus: 1066 MHz/800 MHz/533 MHz L2 Cache: 3 MB/2 MB/1 MB/512 KB Chipset: Intel QM630 + iCH8M BIOS: Award 16 Mbit, SPI PCI: - MINI PCI: - PCIE: x16, 1 slot Technology: Dual channel DDR2 533/667 MHz Max. Capacity: 2 GB Socket: 2 x 200-pin SODIMMs Controller: Intel GMA 950 VRAM: Shared system memory up to 224 MB LCD: - TV-Out: - DP: - HDMI: - DVI: - Dual Display: -
<b>Memory</b>			
<b>Graphics</b>			
<b>Ethernet</b>	Interface: 10/100/1000 Mbps Controller: Dual Realtek RTL8111B Connector: RJ-45 x 2 TPM: Optional	Interface: 10/100/1000 Mbps Controller: Dual Realtek RTL8111C Connector: RJ-45 x 2 TPM: TPM 2.0	Interface: 10/100/1000 Mbps Controller: Realtek RTL8111C Connector: RJ-45 x 1 TPM: -
<b>SATA</b>	Max. Data Transfer Rate: 300 MB/s Channel: 3 Mode: EIDE (Ultra DMA 100) Channel: 1 Ethernet: 2 USB: 4	Max. Data Transfer Rate: 300 MB/s Channel: 2 Mode: - Channel: 1 Ethernet: 2 USB: 4	Max. Data Transfer Rate: 300 MB/s Channel: 2 Mode: - Channel: 1 Ethernet: 2 USB: 4
<b>Rear I/O</b>	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (RS-232, supply 5 V & 12 V) PS/2: 2 LVDS & Inverter: 1 TV-Out: - DVI: - USB: 6 Serial: 2 (2 x RS-232, supplies 5 V & 12 V)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (1 x RS-232, 1 x RS-232/422/485) PS/2: 2 LVDS & Inverter: 1 TV-Out: - DVI: - USB: 4 Serial: 4 (RS-232)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (1 x RS-232, 1 x RS-232/422/485) PS/2: 2 LVDS & Inverter: - TV-Out: - DVI: - USB: 2 Serial: 5 (RS-232)
<b>Internal Connector</b>	Parallel: 1 IDE: 1 SATA: 3 CompactFlash: 1 GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 2 CompactFlash: 1 GPIO: 16-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 2 CompactFlash: - GPIO: System reset Interval: Programmable, 1 ~ 255 sec/min

Model Name	AIMB-267 KIOSK	AIMB-270	AIMB-272	AIMB-273	AIMB-280
<b>Form Factor</b>	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX
<b>Processor System</b>	Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-Core/Celeron Socket: $\mu$ FC PGA 989 Socket Max. Speed: 3.0 GHz/3.0 GHz/1.8 GHz/2.2 GHz Front Side Bus: 1333/1066/800 MHz L2 Cache: 12 MB/6 MB/1 MB/512 KB Chipset: Intel G41 + ICH7 BIOS: AMI EFI 64 Mbit, SPI PCI: - MINI PCI: - PCIE: x16, 1 slot Technology: Single channel DDR2 800/1066 MHz Max. Capacity: 4 GB Socket: 1 x 240-pin DIMM Controller: Intel GMA X4500 VRAM: Shared system memory up to 352 MB LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: - HDMI: - DVI: 2 Dual Display: CRT + LVDS	Intel Core 2 Duo/Pentium Socket: $\mu$ FC PGA 989 Socket Max. Speed: 2.66 GHz/2.4 GHz/1.86 GHz Front Side Bus: 1333/1066/800 MHz L2 Cache: 4 MB/3 MB/2 MB Chipset: Intel G41 + ICH7 BIOS: AMI EFI 64 Mbit, SPI PCI: - MINI PCI: 1 slot, PCIe x16, 1 slot Technology: Dual channel DDR2 800/1066/1333 MHz Max. Capacity: 8 GB Socket: 2x 204-pin SODIMMs Controller: Intel HD Graphics VRAM: 1 GB maximum shared memory with 2 GB and above system memory installed LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: - HDMI: - DVI: 2 Dual Display: CRT + LVDS, CRT + DVI, LVDS + DVI	Intel Core 2 Duo/Pentium Socket: $\mu$ FC PGA 989 Socket Max. Speed: 2.1 GHz/2.5 GHz/2.2 GHz/1.8 GHz Front Side Bus: 1333/1066/800 MHz L2 Cache: 6 MB/3 MB/2 MB Chipset: Intel GMA 7180/MS BIOS: AMI EFI 64 Mbit, SPI PCI: - MINI PCI: 1 slot, PCIe x16, 1 slot Technology: Dual channel DDR2 1066/1333 MHz Max. Capacity: 8 GB Socket: 2x 204-pin SODIMMs Controller: Intel HD Graphics VRAM: 1 GB maximum shared memory with 2 GB and above system memory installed LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: - HDMI: 1 DVI: 1 Dual Display: CRT + LVDS, CRT + DVI, LVDS + DVI, HDMI + LVDS, HDMI + CRT, HDMI + DVI	Intel Core 2 Duo/Pentium Socket: $\mu$ FC PGA 989 Socket Max. Speed: 2.3 GHz/2.5 GHz/2.2 GHz/1.8 GHz Front Side Bus: 1333/1066/800 MHz L2 Cache: 6 MB/3 MB/2 MB Chipset: Intel G47 BIOS: AMI EFI 64 Mbit, SPI PCI: - MINI PCI: 1 slot, PCIe x16, 1 slot Technology: Dual channel DDR2 1333/1600 MHz Max. Capacity: 16 GB Socket: 2x 204-pin SODIMMs Controller: Intel HD Graphics VRAM: 1 GB maximum shared memory with 2 GB and above system memory installed LCD: Dual channel 30/48-bit LVDS TV-Out: - DP: +DP + HDMI, DP + DP + HDMI, DP + CRT + HDMI Dual Display: DP + LVDS + HDMI, DP + DP + HDMI, DP + DP + LVDS, DP + CRT + HDMI	Intel Core 2 Duo/Pentium Socket: $\mu$ FC PGA 989 Socket Max. Speed: 2.83 GHz/2.66 GHz/2.33 GHz/3.06 GHz/2.8 GHz Front Side Bus: 1333/1066/800 MHz L2 Cache: 8 MB/6 MB/3 MB Chipset: Intel G47 BIOS: AMI 64 Mbit, SPI PCI: - MINI PCI: 1 slot Technology: Dual channel DDR2 1333/1600 MHz Max. Capacity: 4 GB Socket: 1 x 240-pin DIMM Controller: Intel HD Graphics VRAM: 1 GB maximum shared memory with 2 GB and above system memory installed LCD: - TV-Out: - DP: - HDMI: - DVI: 1 Dual Display: CRT + DVI
<b>Memory</b>					
<b>Graphics</b>					
<b>Ethernet</b>	Interface: 10/100/1000 Mbps Controller: Dual Realtek RTL8111E Connector: RJ-45 x 2 TPM: -	Interface: 10/100/1000 Mbps Controller: LAN1: Intel 82571LM, LAN2: Intel 82583V Connector: RJ-45 x 2 TPM: -	Interface: 10/100/1000 Mbps Controller: LAN1: Intel 82571LM, LAN2: Intel 82583V Connector: RJ-45 x 2 TPM: Optional	Interface: 10/100/1000 Mbps Controller: LAN1: Intel 82571LM, LAN2: Intel 82583V Connector: RJ-45 x 2 TPM: -	Interface: 10/100/1000 Mbps Controller: LAN1: Intel 82571LM, LAN2: Intel 82583V Connector: RJ-45 x 2 TPM: -
<b>SATA</b>	Max. Data Transfer Rate: 300 MB/s Channel: 2 Mode: - Channel: 1 Ethernet: 2 USB: 4	Max. Data Transfer Rate: 300 MB/s Channel: 4 Mode: - Channel: 2 Ethernet: 2 USB: 4	Max. Data Transfer Rate: 600 MB/s Channel: 2, 4 Mode: - Channel: 1 Ethernet: 1 USB: 4	Max. Data Transfer Rate: 600 MB/s Channel: 2, 4 Mode: - Channel: 1 Ethernet: 2 USB: 4	Max. Data Transfer Rate: 300 MB/s Channel: 2 Mode: - Channel: 1 Ethernet: - USB: 4
<b>Rear I/O</b>	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 3 (2 x RS-232, 1 x RS-232/422/485) PS/2: 2 LVDS & Inverter: 1 TV-Out: - DVI: - USB: 4 Serial: 5 (RS-232)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (RS-232) PS/2: 2 LVDS & Inverter: 2 TV-Out: - DVI: - USB: 4 Serial: 4 (RS-232)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (RS-232) PS/2: 2 LVDS & Inverter: 1 TV-Out: - DVI: - USB: 1 Serial: 4 (RS-232)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (RS-232) PS/2: 2 LVDS & Inverter: 1 TV-Out: - DVI: - USB: 4 Serial: 2 (RS-232)	Audio: Mic-in, Line-in, Line-out Parallel: - Serial: 2 (RS-232) PS/2: 2 LVDS & Inverter: - TV-Out: - DVI: - USB: 4 Serial: 2 (RS-232)
<b>Internal Connector</b>	Parallel: 1 IDE: - SATA: 2 CompactFlash: 1 GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 4 CompactFlash: - GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 4 CompactFlash: - GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 4 CompactFlash: - GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min	Parallel: - IDE: - SATA: 2 CompactFlash: - GPIO: 8-bit GPIO Output: System reset Interval: Programmable, 1 ~ 255 sec/min



Selection Guide

# MicroATX Motherboards



Model Name	AIMB-562 KIOSK	AIMB-564	AIMB-566	AIMB-567
<b>Form Factor</b>	MicroATX	MicroATX	MicroATX	MicroATX
<b>Processor System</b>	<b>CPU</b> Intel Core 2 Duo/Pentium 4/ Pentium Dual-Core/Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> 2.8/3.4/2.2/2.0 GHz <b>Front Side Bus</b> 1066/800/533 MHz <b>L2 Cache</b> 4 MB/2 MB/1 MB/512 KB <b>Chipset</b> Intel 945/GC + ICH7 <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-Core/Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> 2.66/2.82/2/3.2 GHz <b>Front Side Bus</b> 800/667/533 MHz <b>L2 Cache</b> 6 MB/3 MB/1 MB/512 KB <b>Chipset</b> Intel G45 + ICH9 DD <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-Core/Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> 2.66/3.16/2.6/2.0 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 6 MB/6 MB/2 MB/512 KB <b>Chipset</b> Intel Q35 + ICH9 DD <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-Core/Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> 2.66/3.16/2.6/2.0 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 6 MB/6 MB/2 MB/512 KB <b>Chipset</b> Intel Q35 + ICH9 DD <b>SBS</b> Award 18 Mbit, SPI
<b>Expansion Slot</b>	PCI 2 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 2 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 2 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 2 PCIe x16 1 PCIe x4 1 PCIe x1 1
<b>Memory</b>	<b>Technology</b> Dual channel DDR2 533/667 MHz SDRAM <b>Max. Capacity</b> 4 GB <b>Socket</b> 2 x 240-pin DIMM <b>Controller</b> Intel GMA 550 <b>VRAM</b> Shared system memory up to 224 MB <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> - <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+LVDS, CRT+CRT <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR2 533/667/800 MHz SDRAM <b>Max. Capacity</b> 8 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel GMA 3000 <b>VRAM</b> Shared system memory up to 256 MB <b>LCD</b> - <b>DVI-D</b> - <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> - <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR2 667/800 MHz SDRAM <b>Max. Capacity</b> 8 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel GMA 3100 <b>VRAM</b> Shared system memory up to 384 MB <b>LCD</b> - <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+DVI <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR3 1066/1333 MHz SDRAM <b>Max. Capacity</b> 4 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel GMA 4200 <b>VRAM</b> Shared system memory up to 352 MB <b>LCD</b> - <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> - <b>Triple Display</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Realtek RTL8111C <b>Connector</b> RJ-45 x1	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82566DM <b>Connector</b> RJ-45 x1	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82566DM <b>Connector</b> RJ-45 x1	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82566DM <b>Connector</b> RJ-45 x2
<b>TPM</b>	-	-	-	Optional
<b>SATA</b>	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 2 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1
<b>EIDE</b>	-	-	-	-
<b>SSD</b>	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 8 <b>Serial</b> 10 (8 x RS-232; 2 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 1 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 16-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 8 <b>Serial</b> 1 (RS-232) <b>Parallel</b> 1 <b>FDD</b> 1 <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 1 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Line-in, Line-out, Mic-in, CD-in, 6 jacks <b>GPIO</b> - <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 12 <b>Serial</b> 2 (RS-232) <b>Parallel</b> 1 <b>FDD</b> 1 <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 1 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> - <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 8 <b>Serial</b> 4 (3 x RS-232, 1 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 2 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min

Model Name	AKMB-G41M	AIMB-580	AIMB-581	AIMB-582	AIMB-501
<b>Form Factor</b>	MicroATX	MicroATX	MicroATX	MicroATX	MicroATX
<b>Processor System</b>	<b>CPU</b> Intel Xeon/ Core 17/5/3/Pentium <b>Socket</b> LGA775 <b>Max. Speed</b> 2.66/3.16/2.6/2.0 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 6 MB/6 MB/4 MB/4 MB/2 MB <b>Chipset</b> Intel G41 + ICH7 <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Xeon/ Core 17/5/3/Pentium <b>Socket</b> LGA1156 <b>Max. Speed</b> 2.93/2.66/3.3/3.0/2.8 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 8 MB/8 MB/4 MB/4 MB/2 MB <b>Chipset</b> Intel G57/G45 <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Xeon/ Core 17/5/3/Pentium <b>Socket</b> LGA1155 <b>Max. Speed</b> 3.4/3.1/3.3/2.9/3.4/3.1/3.3 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 8 MB/6 MB/2 MB/2 MB/2 MB/2 MB <b>Chipset</b> Intel G57/G206 <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Xeon/ Core 17/5/3/Pentium <b>Socket</b> LGA1155 <b>Max. Speed</b> 3.4/3.1/3.3/2.9/3.4/3.1/3.3 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 8 MB/6 MB/2 MB/2 MB/2 MB/2 MB <b>Chipset</b> Intel G77/G216 <b>SBS</b> Award 18 Mbit, SPI	<b>CPU</b> Intel Xeon/ Core 17/5/3/Pentium <b>Socket</b> LGA1155 <b>Max. Speed</b> 3.4/3.1/3.3/2.9/3.4/3.1/3.3 GHz <b>Front Side Bus</b> 1333/1066/800 MHz <b>L2 Cache</b> 8 MB/6 MB/2 MB/2 MB/2 MB/2 MB <b>Chipset</b> Intel G77/G216 <b>SBS</b> Award 18 Mbit, SPI
<b>Expansion Slot</b>	PCI 1 PCIe x16 1 PCIe x4 1 PCIe x1 0	PCI 1 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 1 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 1 PCIe x16 1 PCIe x4 1 PCIe x1 1	PCI 1 PCIe x16 1 PCIe x4 1 PCIe x1 0
<b>Memory</b>	<b>Technology</b> Dual channel DDR3 800/1066 MHz SDRAM <b>Max. Capacity</b> 4 GB <b>Socket</b> 2 x 240-pin DIMM <b>Controller</b> Intel GMA 3400 <b>VRAM</b> Shared system memory up to 352 MB <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> - <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> - <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR3 800/1066/1333 MHz SDRAM <b>Max. Capacity</b> 16 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel HD Graphics <b>VRAM</b> 1 GB maximum shared memory with 2 GB and above system memory installed <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+LVDS, CRT+DVI, LVDS+DVI <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR3 1066/1333 MHz SDRAM <b>Max. Capacity</b> 32 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel HD Graphics <b>VRAM</b> 1 GB maximum shared memory with 2 GB and above system memory installed <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+LVDS, CRT+DVI, LVDS+DVI <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR3 1333/1600 MHz SDRAM <b>Max. Capacity</b> 32 GB <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel HD Graphics <b>VRAM</b> 1 GB maximum shared memory with 2 GB and above system memory installed <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+LVDS, CRT+DVI, LVDS+DVI <b>Triple Display</b> -	<b>Technology</b> Dual channel DDR3 1066/1333 MHz SDRAM <b>Max. Capacity</b> 16 GB <b>Socket</b> 2 x 240-pin DIMM <b>Controller</b> Intel HD Graphics <b>VRAM</b> 1 GB maximum shared memory with 2 GB and above system memory installed <b>LCD</b> Dual channel 48-bit LVDS <b>DVI-D</b> 1 <b>eDP</b> - <b>DP</b> - <b>Dual Display</b> CRT+LVDS, CRT+DVI, LVDS+DVI <b>Triple Display</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Realtek RTL8111E <b>Connector</b> RJ-45 x1	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82579LM/Intel 82583V <b>Connector</b> RJ-45 x2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82579LM/Intel 82583V <b>Connector</b> RJ-45 x2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel 82579LM/Intel 82583V <b>Connector</b> RJ-45 x2	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Realtek RTL8111E/RTL8111E <b>Connector</b> RJ-45 x2
<b>TPM</b>	-	Optional	Optional	Optional	Optional
<b>SATA</b>	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 4 <b>Mode</b> ATA 100/66/33 <b>Channel</b> 1
<b>EIDE</b>	-	-	-	-	-
<b>SSD</b>	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 8 <b>Serial</b> 6 (RS-232) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 1 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Line-in, Line-out, Mic-in, CD-in, 6 jacks <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 10 <b>Serial</b> 4 (3 x RS-232, 1 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 2 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 10 <b>Serial</b> 6 (3 x RS-232, 1 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 2 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 10 <b>Serial</b> 6 (3 x RS-232, 1 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 2 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min	<b>CompactFlash</b> - <b>VGA</b> 2 <b>USB</b> 10 <b>Serial</b> 10 (8 x RS-232, 2 x RS-232C/422/485) <b>Parallel</b> 1 <b>FDD</b> - <b>PS/2</b> 2 <b>Ethernet (GbE)</b> 2 <b>eSATA</b> - <b>IEEE 1394</b> - <b>Audio</b> Mic-in, Line-out <b>GPIO</b> 8-bit <b>System reset</b> System reset <b>Programmable</b> 1 ~ 255 sec/min

# Semi-Industrial Motherboards



Model Name	SIMB-M01	SIMB-M21
<b>Form Factor</b>	Mini-ITX	Mini-ITX
<b>Processor System</b>	<b>CPU</b> Intel Atom D525 <b>Socket</b> - <b>Max. Speed</b> 1.8 GHz (dual core) <b>Front Side Bus</b> 800 MHz <b>L2 Cache</b> 1 MB <b>Chipset</b> Intel NM10 <b>BIOS</b> AM 9 Mbit SPI	<b>CPU</b> Intel Core i1503/Coleron <b>Socket</b> Intel iPGA988 <b>Max. Speed</b> 2.1/2.2/2.1/1.6 GHz <b>Front Side Bus</b> 1066/1333 MHz <b>L2 Cache</b> 6 MB / 3 MB / 2 MB / 2 MB <b>Chipset</b> Intel HM85 <b>BIOS</b> AM 9 Mbit SPI
<b>Expansion Slot</b>	<b>PCI</b> - <b>Full-size Mini PCIe</b> - <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> -	<b>PCI</b> - <b>Full-size Mini PCIe</b> 1 <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> 4.0 GB/s per direction, 1 slot
<b>Memory</b>	<b>Technology</b> Single channel DDR3 800 MHz SDRAM <b>Max. Capacity</b> 4 GB	<b>Technology</b> Dual channel DDR3 1066/1333 MHz <b>Max. Capacity</b> 16 GB
<b>Graphics</b>	<b>Socket</b> 2 x 204-pin SODIMM <b>Controller</b> Intel Graphics Media Accelerator 3150 Integrated <b>VRAM</b> Shared system memory up to 224 MB SDRAM <b>LCD</b> - <b>VGA</b> 1 <b>HDMI</b> 1 <b>DVI</b> - <b>Display Port</b> - <b>eDP</b> - <b>Dual Display</b> VGA + HDMI	<b>Socket</b> 2 x 204-pin SODIMM <b>Controller</b> Intel Graphics Media Accelerator HD 2000/3000 <b>VRAM</b> Shared system memory up to 1.7 GB SDRAM <b>LCD</b> Dual channel 24-bit LVDS supports max resolution 1600 x 1200 <b>VGA</b> 1 <b>HDMI</b> 1 <b>DVI</b> - <b>Display Port</b> 1 <b>eDP</b> - <b>Dual Display</b> VGA + LVDS, VGA + DisplayPort, LVDS + HDMI, LVDS + DisplayPort, VGA + HDMI, DisplayPort + HDMI
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Realtek RTL8111E <b>Connector</b> 1 x RJ-45	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> GigE LAN1: Intel I225PM GigE LAN2: Intel I2250V <b>Connector</b> 2 x RJ-45
<b>TPM</b>	TPM Header	Optional
<b>SATA</b>	<b>Max Data Transfer Rate</b> SATA II 300 MB/s	SATA II 600 MB/s / SATA II 300 MB/s
<b>SSD</b>	<b>Channel</b> 2 <b>CFast</b> - <b>Mode</b> -	<b>Channel</b> 2 / 3 <b>CFast</b> 1 <b>Mode</b> -
<b>EIDE</b>	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 1 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / 1 <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> - <b>Serial</b> 2 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)
<b>Rear I/O</b>	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 1 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / 1 <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> - <b>Serial</b> 2 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)
<b>Internal Connector</b>	<b>LVDS &amp; Inverter</b> - <b>USB</b> 4 (USB 2.0) <b>Serial</b> 1 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 2 SATA II <b>GPIO</b> - <b>Output</b> - <b>Interval</b> -	<b>LVDS &amp; Inverter</b> 1 <b>USB</b> 6 (USB 2.0) <b>Serial</b> 3 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 5 (2 SATA II, 3 SATA II) <b>GPIO</b> 8-bit <b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds

Model Name	SIMB-M22	SIMB-U01	SIMB-A01	SIMB-A21
<b>Form Factor</b>	Mini-ITX	Micro-ATX	ATX	ATX
<b>Processor System</b>	<b>CPU</b> AMD Single Core T40R <b>Socket</b> - <b>Max. Speed</b> 1.0 GHz <b>Front Side Bus</b> 800/1066/1333 MHz <b>L2 Cache</b> 512 KB <b>Chipset</b> AMD A55E Controller Hub <b>BIOS</b> AM 12 Mbit SPI	<b>CPU</b> Intel Core 2 Dual / Core 2 Duo / Pentium / Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> - <b>Front Side Bus</b> 800/1066/1333 MHz <b>L2 Cache</b> 6 MB / 8 MB / 2 MB / 512 KB <b>Chipset</b> Intel QDS + Q45MR <b>BIOS</b> AM 32 Mbit SPI	<b>CPU</b> Intel Core 2 Dual / Core 2 Duo / Pentium / Celeron <b>Socket</b> LGA775 <b>Max. Speed</b> - <b>Front Side Bus</b> 800/1066/1333 MHz <b>L2 Cache</b> 6 MB / 8 MB / 2 MB / 512 KB <b>Chipset</b> Intel QDS + Q45MR <b>BIOS</b> AM 32 Mbit SPI	<b>CPU</b> Intel Core 2 / i5 / i3 / Celeron <b>Socket</b> LGA1155 <b>Max. Speed</b> - <b>Front Side Bus</b> 1066/1333 MHz <b>L2 Cache</b> 8 MB / 6 MB / 3 MB / 2 MB <b>Chipset</b> Intel H61 <b>BIOS</b> AM 32 Mbit SPI
<b>Expansion Slot</b>	<b>PCI</b> - <b>Full-size Mini PCIe</b> 1 <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> -	<b>PCI</b> - <b>Full-size Mini PCIe</b> - <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> 4.0 GB/s per direction, 1 slot	<b>PCI</b> - <b>Full-size Mini PCIe</b> - <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> 4.0 GB/s per direction, 1 slot	<b>PCI</b> - <b>Full-size Mini PCIe</b> - <b>PCIe x1</b> 250 MB/s per direction, 1 slot <b>PCIe x4</b> - <b>PCIe x16</b> 4.0 GB/s per direction, 1 slot
<b>Memory</b>	<b>Technology</b> Single channel DDR3 1066/1333 MHz <b>Max. Capacity</b> 4 GB	<b>Technology</b> Dual channel DDR2 667/800 MHz <b>Max. Capacity</b> 8 GB	<b>Technology</b> Dual channel DDR2 667/800 MHz <b>Max. Capacity</b> 8 GB	<b>Technology</b> Dual channel DDR3 1066/1333 MHz <b>Max. Capacity</b> 8 GB
<b>Graphics</b>	<b>Socket</b> 1 x 204-pin SODIMM <b>Controller</b> AMD Radeon HD 6250 <b>VRAM</b> Shared system memory up to 2 GB SDRAM <b>LCD</b> Single channel 18-bit LVDS Supports max resolution 1400 x 1050 <b>VGA</b> Optional <b>HDMI</b> - <b>DVI</b> - <b>Display Port</b> - <b>eDP</b> - <b>Dual Display</b> VGA + LVDS, VGA + HDMI, LVDS + HDMI	<b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel Graphics Media Accelerator 4300 Integrated <b>VRAM</b> Intel DMAT 4.0 supports up to 352 MB Video Memory <b>LCD</b> Through AOD2 LVDS Card <b>VGA</b> 1 <b>HDMI</b> Through AOD2 HDMI Card <b>DVI</b> Through AOD2 DVI Card <b>Display Port</b> - <b>eDP</b> - <b>Dual Display</b> VGA + DVI-D	<b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel Graphics Media Accelerator 3150 Integrated <b>VRAM</b> Intel DVMT 4.0 supports up to 284 MB Video Memory <b>LCD</b> Through AOD2 LVDS Card <b>VGA</b> 1 <b>HDMI</b> Through AOD2 HDMI Card <b>DVI</b> Through AOD2 DVI Card <b>Display Port</b> - <b>eDP</b> - <b>Dual Display</b> VGA + DVI-D	<b>Socket</b> 2 x 240-pin DIMM <b>Controller</b> Intel Graphics Media Accelerator HD 2000/3000 <b>VRAM</b> Shared system memory up to 224 MB SDRAM <b>LCD</b> - <b>VGA</b> 1 <b>HDMI</b> Through AOD2 HDMI Card <b>DVI</b> Through AOD2 DVI Card <b>Display Port</b> - <b>eDP</b> - <b>Dual Display</b> VGA + DVI-D
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> GigE LAN1: Realtek RTL8111DL GigE LAN2: Realtek RTL8111DL <b>Connector</b> 2 x RJ-45	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> Intel I225PM <b>Connector</b> 1 x RJ-45	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> GigE LAN1: Realtek RTL8111C GigE LAN2: Realtek RTL8111C <b>Connector</b> 2 x RJ-45	<b>Interface</b> 10/100/1000 Mbps <b>Controller</b> GigE LAN1: Realtek RTL8111E GigE LAN2: Realtek RTL8111E <b>Connector</b> 2 x RJ-45
<b>TPM</b>	TPM Header	Optional	TPM Header	TPM Header
<b>SATA</b>	<b>Max Data Transfer Rate</b> SATA II 300 MB/s	SATA II 600 MB/s	SATA II 300 MB/s	SATA II 300 MB/s
<b>SSD</b>	<b>Channel</b> 2 <b>CFast</b> - <b>Mode</b> -	<b>Channel</b> 2 / 3 <b>CFast</b> 1 <b>Mode</b> -	<b>Channel</b> 2 <b>CFast</b> - <b>Mode</b> -	<b>Channel</b> 4 <b>CFast</b> - <b>Mode</b> -
<b>EIDE</b>	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 1 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / 1 <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> - <b>Serial</b> 2 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>Channel</b> - <b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)
<b>Rear I/O</b>	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 1 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / 1 <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> - <b>Serial</b> 2 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)	<b>VGA / DVI / HDMI / Display Port</b> 1 / - / 1 / - <b>Ethernet</b> 2 <b>USB</b> 4 (USB 2.0) <b>Audio</b> 3 (Line-out, Line-in, Mic-In) <b>Parallel</b> 1 (LPT) <b>Serial</b> 1 (RS-232) <b>PS/2</b> 2 (1 x keyboard and 1 x mouse)
<b>Internal Connector</b>	<b>LVDS &amp; Inverter</b> - <b>USB</b> 4 (USB 2.0) <b>Serial</b> 1 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 2 SATA II <b>GPIO</b> - <b>Output</b> - <b>Interval</b> -	<b>LVDS &amp; Inverter</b> 1 <b>USB</b> 6 (USB 2.0) <b>Serial</b> 3 (RS-232) <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 5 (2 SATA II, 3 SATA II) <b>GPIO</b> 8-bit <b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>LVDS &amp; Inverter</b> - <b>USB</b> 8 (USB 2.0) <b>Serial</b> 1 (RS-232) <b>Parallel</b> - <b>IDE</b> 1 (LPT Header) <b>SATA</b> 6 SATA II <b>GPIO</b> 16-bit <b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>LVDS &amp; Inverter</b> - <b>USB</b> 6 (USB 2.0) <b>Serial</b> 3 (1 x RS-232/422/485 and 2 x RS-232) <b>Parallel</b> 1 (LPT Header) <b>SATA</b> 4 SATA II <b>GPIO</b> 8-bit <b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds

Selection Guide

# RISC Computer-On-Modules



M/B	ROM-1210	ROM-1220	SOM-C3503	SOM-C3530
Kernel	CPU	Freescale i.MX53 Cortex-A8 1 GHz	Freescale i.MX6 Cortex-A9 DualQuad 1 GHz	TI OMAP 3530 Cortex-A8 600 MHz
	DSP	-	-	Built-in 430 MHz TMS320M4x+; DSP Core support
	Multi-Media Support	1080p decode / 720p encode	1080p decode / 1080p encode	Up to 720p decode
	2D/3D Accelerators	Supports OpenGL ES 2.0, and OpenGL 1.1	Supports OpenGL ES 2.0, and OpenGL 1.1	-
	System RAM	512 MB / 256 MB DDR3	1 GB DDR3	128 MB Mobile DDR
	Onboard Flash	2GB	4GB	-
	Image/AP Flash	2GB	4GB	-
	Graphics Chip	24-bit LCD controller by CPU	24-bit LCD controller by CPU	24-bit LCD out by CPU
	RTC	Yes	Yes	Yes
	Watchdog Timer	Yes	Yes	Yes
I/O (All interfaces with industrial TTL 3.3V level)	Power Management	Normal & idle mode	Normal & idle mode	Normal, idle mode & suspend mode
	Reset	HW reset & SW reset (Register setting)	HW reset & SW reset (Register setting)	HW reset & SW reset
	UART	TTL level x5 (4-wire x3 & 2-wire x2)	TTL level x5 (4-wire x3 & 2-wire x2)	TTL level 4-wire x3
	Ethernet LAN	10/100 Mbps	Gigabit Ethernet or 10/100 Ethernet	10/100 Mbps
	USB Host	1	1	1
	USB Client	1 (OTG supported)	1 (OTG supported)	1 (OTG supported)
	SD/MMC	2	2	2
	SATA	1	1	-
	Touch	4-wire resistive type	4-wire Resistive type	4-wire resistive type
	System Bus	Yes (address: 25-pin, data: 16-pin)	Yes (address: 27-pin, data: 16-pin)	Yes (address: 10-pin, data: 16-pin)
Multimedia	Keypad	6 x 6 matrix	3 x 3 matrix	6 x 6 matrix
	DC Interface	2	2	2
	IS Interface	1	2	2
	CANBus	1 (optional)	2 (optional)	-
	PCIe	-	1	-
	SPI Interface	1	1	1
	GPIO	20-pin 3.3V TTL level GPIOs	20-pin 3.3V TTL level GPIOs	20-pin 3.3V TTL level GPIOs
	Graphics Chip	CPU internal 24-bit LCD controller	CPU internal 24-bit LCD controller	CPU internal 24-bit LCD controller
	Resolution	Default: 800 x 480 WVGA, 320 x 240 ~ 1280 x 800 (optional)	Default: 800 x 480 WVGA, 320 x 240 ~ 1280 x 800 (optional)	Default: 800 x 480, 320 x 240 ~ 1280 x 800 (optional)
	LCD Interface	2x 24-bit LCD connector 1x 24-bit TTL	2x 24-bit LCD connector 1x 24-bit TTL	24-bit buffered 3.3V TTL level x1
Power	HDMI	-	1	-
	Brightness Control	Yes	Yes	Yes
	Audio	Line-in, Line-out, MIC-in	Line-in, Line-out, MIC-in	Line-in, Line-out, MIC-in
	DC-Input	3.3V; (-5% to 5%)	3.3V; (-5% to 5%)	3.3V; (-5% to 5%)
	Normal Run	0.8W	TBC	0.8W
	Full Run	2.2W	TBC	1.2W
	Board Size	68 x 68 x 7.5 mm	68 x 68 x 6.02 mm	68 x 68 x 7.5 mm
	Operating Temperature	0 ~ 60° C (+40 ~ 85° C project-based)	0 ~ 60° C (+40 ~ 85° C project-based)	0 ~ 60° C (+40 ~ 85° C project-based)
	Operating Humidity	5% ~ 95% relative humidity, non-condensing	5% ~ 95% relative humidity, non-condensing	5% ~ 95% relative humidity, non-condensing
	Mechanical & Environment	RoHS	Yes	Yes
Certifications		CE/FCC Class A	CE/FCC Class A	CE/FCC Class A
Other	Software Support	Embedded Linux 2.6 (WE7) and Android 2.3 (project-based)	Embedded Linux 3.0.15 (Android 4.0 project-based)	Embedded Linux 2.6, Win CE 6.0

Selection Guide

# RISC Single Board Computers



M/B	RSB-4210	PCM-C3503	PCM-C3530
CPU	Freescale i.MX53 Cortex-A8 1 GHz (i.MX530 Cortex-A8 800 MHz for wide temp. only)	TI OMAP 3530 Cortex-A8 600 MHz	TI OMAP 3530 Cortex-A8 600 MHz
DSP	-	-	Built-in 430 MHz TMS320M4x+ TM DSP Core support
2D/3D Accelerators	Supports OpenGL ES 1.1 & 2.0, OpenGL 1.0	-	Supports OpenGL ES 1.1 & 2.0, OpenGL 1.0 and Direct3D
System RAM	256 MB / 512 MB DDR3	128 MB Mobile DDR	256 MB Mobile DDR
Onboard Flash	2 GB	(Boot from SD Card)	2 GB
Graphic Chip	CPU internal 24-bit LCD controller	CPU internal 24-bit LCD controller	CPU internal 24-bit LCD controller
Brightness/Backlight Control	Yes	Yes	Yes
LCD Interface	2 x 24-bit UVIS-LCD connector	24-bit UVIS-LCD connector	24-bit UVIS-LCD connector
Inverter	5V /12V Inverter	5V /12V Inverter	5V /12V Inverter
Touchscreen	4-wire resistive type	4-wire resistive type	4-wire resistive type
I/O Interface	1 (pin header)	2 (pin header)	-
FS Interface	1 (pin header)	-	-
CANBus	Optional	-	-
SPI Interface	1	1 (pin header)	1 (pin header)
VGA/HDMI	1 (Co-Lay)	-	-
Mini PCIe Connector	1 (SS interface)	-	-
System Bus	1	-	-
Keypad	6 x 6 matrix keypad (pin header)	6 x 6 matrix keypad (pin header)	6 x 6 matrix keypad (pin header)
GPIO	20-pin 3.3V TTL level GPIOs	20-pin 3.3V TTL level GPIOs	20-pin 3.3V TTL level GPIOs
UART	RS-232 x2 (1 thru DB-9, 2 thru pin header), RS-485 x1 (pin header), TTL x1 (pin header)	RS-232 x2 (pin header), TTL x1 (pin header)	RS-232 x3 (1 thru DB-9, 2 thru pin header), RS-485 x1 (pin header), TTL x1 (pin header)
USB	USB 2.0 x4 (Type-A x2, pin header x1, mini PCIe x1)	USB 2.0 x4 (Type-A x2, pin header x2)	USB HS OTG x1 (OTG connector)
Audio	MIC-in, Line-in, Line-out, Speaker-out (pin header)	MIC-in, Line-in, Line-out, Speaker-out (pin header)	MIC-in, Line-in, Line-out, Speaker-out (pin header)
Ethernet LAN	2 (10/100 Mbps) (optional)	10/100 Mbps (RJ-45)	10/100 Mbps (RJ-45)
SD/MMC	2 (SD slot x1 + pin header x1)	2 (SD slot x1 + pin header x1)	2 (SD slot x1 + pin header x1)
SATA	1	-	-
Buzzer	Yes	Yes	Yes
RTC	Yes	Yes	Yes
Watchdog Timer	Yes	Yes	Yes
Power Input	9V ~ 24V; (+5%)	10V ~ 24V; (+5%)	10V ~ 24V; (+5%)
Power Consumption	Standard 2W (max. 3W)	Standard 2W (max. 3W)	Standard 2W (max. 3W)
Power Management	Normal/Idle mode	Standard / Idle / Suspend mode	Standard / Idle / Suspend mode
Size	146 x 102 x 20 mm	96 x 120 x 17 mm	96 x 120 x 17 mm
PCB Thickness	1.6mm, 8 layers	1.6 mm, 8 layers	1.6 mm, 8 layers
Operating Temperature	0 ~ 60° C (-20 ~ 70° C, -40 ~ 85° C wide temperature support)	0 ~ 60° C (-40 ~ 85° C wide temperature support)	0 ~ 60° C (-40 ~ 85° C wide temperature support)
Operating Humidity	5 ~ 95% relative humidity, non-condensing	5 ~ 95% relative humidity, non-condensing	5 ~ 95% relative humidity, non-condensing
Weight	110g	82g	82g
Wireless (optional)	Thru SDIO / USB interface	Thru SDIO / USB interface	Thru SDIO / USB interface
Software Support	Embedded Linux 2.6 (WE7, Android by project-based)	Embedded Linux 2.6, Win CE 6.0 (project-based)	Embedded Linux 2.6, Win CE 6.0 (project-based)

Selection Guide

# Fanless Embedded Box PCs



Model Name		ARK-1120	ARK-1122	ARK-1503	ARK-2120L
Features		Intel Atom N455 Palm-size and Price-competitive Solution	Intel Atom N2600/N2800 Palm-size and Low Power Consumption Solution	Intel Atom D525/D425 with Integrated Display Interface	Intel Atom N2600/D2550 with Rich I/O and iManager Integrated
Processor System	Processor	Intel Atom N455 1.86 GHz	Intel Atom Dual Core N2600 1.6 GHz / N2800 1.86GHz	Intel Atom D525/D425 1.8 GHz	Intel Atom Dual Core N2600 1.6 GHz/D2550 1.86 GHz
	System Chipset	Intel ICH8M	Intel NM10	Intel ICH8M	Intel NM10
	BIOS	AMI 16 Mbit Flash BIOS	AMI ER1 16 Mbit	AMI 16 Mbit Flash BIOS	AMI ER1 16 Mbit
	System Memory	1 x DDR3 667MHz SO-DIMM Max. up to 2 GB	1 x DDR3 800MHz (N2600) DDR3 1066MHz (N2800) SO-DIMM Max. up to 4 GB	1 x DDR3 667MHz SO-DIMM (N455) 1 x DDR3 800MHz SO-DIMM (D525) Max. up to 2 GB (N455) Max. up to 4 GB (D525)	1 x DDR3 1066MHz SO-DIMM (D2550) 1 x DDR3 800MHz SO-DIMM (N2600) Max. up to 4 GB
Display Interfaces	CRT	Up to 1400 x 1050	Up to 1920 x 1200	Up to 1400 x 1050 (N455) Up to 2048 x 1536 (D525)	Up to 1920 x 1200
	LVDS	-	-	24-bit LVDS up to 1386 x 768	-
	HDMI	-	H: up to 1920 x 1200 (with lockable connector) C: N/A F: up to 1920 x 1200 (with lockable connector)	-	Up to 1920 x 1200
	DVI	-	-	-	-
I/O Interface	Audio	L: Lin-In, Line-out F: N/A	H: Line-In, Line-out C: N/A F: Line-In, Line-out	Line-out	Lin-In, Line-out, Mic-in
	Ethernet	1 x RJ-45 (GigA LAN)	H: C: 1 x RJ45 (GigA LAN) F: 2 x RJ45 (GigA LAN)	2 x RJ-45 (GigA LAN)	2 x RJ-45 (GigA LAN)
	USB	L: 4 x USB2.0 F: 2 x USB2.0	4 x USB 2.0	Up to 4 x USB 2.0	6 x USB 2.0
	eSATA	-	-	-	-
	Serial Port/ Parallel Port (LPT)	L: 2 x RS-232 F: 2 x RS-232, 2 x RS-232/422/485	H: 1 x RS-232 C: 2 x RS-232, 2 x RS-422/485 F: 1 x RS-232	Up to 1 x RS-232, 1 x RS-232/422/485	3 x RS-232, 1 x RS-232/422/485
	Expansion	1 x half-size Mini PCIe	H: 1 x half-size Mini PCIe C: 1 x half-size Mini PCIe F: 1 x full-size Mini PCIe with SIM holder	1 x Mini PCIe	1 x Mini PCIe with SIM holder
	Wireless	-	-	-	-
	Storage	Solid State Disk: 1 x Type III Compact Flash Card HDD: 1 x 2.5" SATA HDD	1 x mSATA SSD H: 1 x 2.5" SATA HDD C: 1 x half-size Mini PCIe F: 1 x mSATA SSD	1 x Type III Compact Flash Card 1 x 2.5" SATA HDD	1 x CFast Card Supports 1 mSATA or miniPCIe (co-design) 1 x 2.5" SATA HDD
Power Requirements	Input Voltage & Type: DC 12 V, ATX	DC 12V ATX	DC 12 V, ATX	DC 12V, ATX	
Certifications	EMC: CE/FCC Class A, CCC, BSMI Safety: UL, CCC, BSMI	CE, FCC, CCC, BSMI UL, CCC, BSMI	CE, FCC, CCC, BSMI, KC UL, CCC, BSMI, KC	CE, FCC, CCC, BSMI UL, CCC, BSMI	
Dimensions (W x H x D)	133.8 x 43.1 x 94.2 mm (5.27" x 1.70" x 3.71")	133.8 x 43.1 x 94.2 mm (5.27" x 1.70" x 3.71")	230.6 x 44.4 x 133.0 mm (9.08" x 1.75" x 5.24")	265 x 68.39 x 133 mm (10.41" x 2.69" x 5.4")	
Operating Temperature	0 ~ 40° C (air flow) air flow: 0.7 m/sec	0 ~ 55° C (air flow) 0 ~ 55° C (air flow) air flow: 0.7 m/sec	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	
Software Support	Windows 7, XP Professional, XP Embedded, WinCE 6.0, Ubuntu	Windows 7, XP Professional, XP Embedded, WinCE 7.0, Ubuntu	Windows 7, XP Professional, XP Embedded, WinCE 6.0	Windows 7, XP Professional, XP Embedded, WinCE 7.0, Ubuntu	

Model Name		ARK-2120F	ARK-2150L	ARK-3360L	ARK-3360F
Features		Intel Atom N2600/D2550 with 3 GBE, 6 COM, Wide range power and iManager Integrated	Intel Core i3/i7 with flexible IO expansion and iManager Integrated	Intel Atom N450/D510 with Multiple I/O	Intel Atom N450/D510 with 3 GigA LAN and Isolated COM Ports
Processor System	Processor	Intel Atom Dual Core N2600 1.6 GHz/D2550 1.86 GHz	Intel Core i3 2170UE 1.6GHz / Core i7 2070UE 1.70Hz	Intel Atom N450/D510 1.86 GHz	Intel Atom N450/D510 1.66 GHz
	System Chipset	Intel NM10	Intel QM77	Intel ICH8M	Intel ICH8M
	BIOS	AMI ER1 16 Mbit	AMI ER1 16 Mbit	AMI 16 Mbit Flash BIOS	AMI 16 Mbit Flash BIOS
	System Memory	1 x DDR3 1066MHz SO-DIMM (D2550) 1 x DDR3 800MHz SO-DIMM (N2600) Max. up to 4 GB	1 x DDR3 1066MHz SO-DIMM or 1 x DDR3L 1333MHz SO-DIMM Max. up to 8 GB	1 x DDR2 667MHz SO-DIMM Max. up to 2 GB	1 x DDR2 667MHz SO-DIMM Max. up to 2 GB
Display Interfaces	CRT	Up to 1920 x 1200	Up to 2048 x 1536	N450 up to 1400 x 1050 D510 up to 2048 x 1536	N450 up to 1400 x 1050 D510 up to 2048 x 1536
	LVDS	48-bit LVDS: N2600 up to 1800 x 1200 D2550 up to 2560 x 1600	-	18-bit LVDS (optional): N450 up to 1400 x 1050 D510 up to 2048 x 1536	18-bit LVDS (optional): N450 up to 1400 x 1050 D510 up to 2048 x 1536
	HDMI	Up to 1920 x 1200	Up to 1920x1200 at 60 Hz through HDMI Up to 2560x1600 at 60 Hz through DisplayPort	-	-
	DVI	-	-	-	-
I/O Interface	Audio	Lin-In, Line-out, Mic-in	Lin-In, Line-out, Mic-in	Lin-In, Line-out, Mic-in	Lin-In, Line-out, Mic-in
	Ethernet	3 x RJ-45 (GigA LAN)	2 x RJ-45 (GigA LAN)	2 x RJ-45 (GigA LAN)	3 x RJ-45 (GigA LAN)
	USB	5 x USB 2.0	4 x USB 2.0 2 x USB 3.0	6 x USB 2.0	6 x USB 2.0
	eSATA	-	-	-	-
	Serial Port/ Parallel Port (LPT)	2 x RS-232, 4 x RS-232/422/485	2 x RS-232, 2 x RS-232/422/485	3 x RS-232, 1 x RS-232/422/485	1 x RS-232, 3 x RS-232/422/485, 2 x RS-422/485
	Expansion	1 x Mini PCIe with SIM holder	1 x Mini PCIe or mSATA (Selected by BIOS)	1 x Mini PCIe	1 x Mini PCIe, 1 x Mini PCIe
	Wireless	-	-	-	-
	Storage	1 x CFast Card Supports 1 mSATA or miniPCIe (co-design)	Supports 1 mSATA or miniPCIe (co-design)	1 x Type III Compact Flash Card	1 x Type III Compact Flash Card
Power Requirements	DC 12V ~ 24V, ATX	DC 12V, ATX	DC 12 V, ATX	DC 12 V ~ 24 V, ATX	
Certifications	CE, FCC, CCC, BSMI UL, CCC, BSMI	CE, FCC, CCC, BSMI UL, CCC, BSMI	CE, FCC, CCC, BSMI, KC UL, CCC, BSMI, KC	CE, FCC, CCC, BSMI, KC UL, CCC, BSMI, KC	
Dimensions (W x H x D)	265 x 68.39 x 133 mm (10.41" x 2.69" x 5.4")	264.5 x 73.39 x 137.25 mm (10.41" x 2.89" x 5.4")	264.5 x 69.2 x 137.25 mm (10.41" x 2.72" x 5.4")	264.5 x 69.2 x 137.25 mm (10.41" x 2.72" x 5.4")	
Operating Temperature	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	0 ~ 45° C (air flow) 20 ~ 60° C (air flow) air flow: 0.7 m/sec	
Software Support	Windows 7, XP Professional, XP Embedded, WinCE 7.0, Ubuntu	Windows 7, XP Professional, XP Embedded, WinCE 7.0, Ubuntu	Windows 7, XP Professional, XP Embedded, WinCE 6.0, Ubuntu, QNX	Windows 7, XP Professional, XP Embedded, WinCE 6.0, Ubuntu, QNX	

Selection Guide

# Fanless Embedded Box PCs



Model Name		ARK-3403	ARK-3440 A2
Features		Intel Atom D510/D525 with PCI/PCIe Expansion and Dual SATA HDDs	Intel Core i3/i5/i7 with PCI/PCIe Expansion and Dual SATA HDDs
Processor System	Processor	Intel Atom D510 1.66 GHz (D525 1.8 GHz)	Intel Core i7 610E 5.53 GHz/ Core i5 550E 2.4 GHz/ Core i3 330E 2.13 GHz
	System Chipset	Intel ICH8M	Intel QM67
	BIOS	AMI 16 Mbit Flash BIOS	AMI 16 Mbit Flash BIOS
	System Memory	1 x DDR2 667 MHz SO-DIMM Max. up to 2 GB	2 x DDR3 1333 MHz SO-DIMM Max. up to 8 GB
Graphics	CRT	Up to 1920 x 1200	up to 2048 x 1536
	LVDS	18-bit LVDS (optional) up to 1920 x 1200	24-bit LVDS (optional) up to 1920 x 1200
	DVI	-	up to 1920 x 1200
	HDMI	-	up to 2560 x 1600
I/O Interface	Audio	Line-in, Line-out, Mic-in	Line-in, Line-out, Mic-in
	Ethernet	2 x RJ-45 (GigE LAN)	2 x RJ-45 (GigE LAN)
	Keyboard/Mouse	-	-
	USB	6 x USB 2.0	6 x USB 2.0
	eSATA	1 x eSATA	1 x eSATA
	Serial Port/ Parallel Port (LPT)	2 x RS-232, 2 x RS-232/422/485 2 x RS-232 (option)	2 x RS-232, 1 x RS-232/422/485
	Expansion	2 x PCI/PCIe, 2 x Mini PCIe	2 x PCI/PCIe, 2 x Mini PCIe
	Wireless	-	-
	Storage	Solid State Disk 1 x Type III Compact Flash Card	1 x Type III Compact Flash Card
Power Requirements	Input Voltage & Type	DC 12V-24V ATX	DC 9V-34V ATX
	EMC	CE, FCC, CCC, BSMI	CE, FCC, CCC, BSMI
Certifications	Safety	UL, CCC, BSMI	UL, CCC, BSMI
	Dimensions (W x H x D)	220 x 102.5 x 200 mm (8.66" x 4.04" x 7.87")	220 x 117 x 200 mm (8.66" x 4.61" x 7.87")
Operating Temperature		-10 ~ 45° C (per HDD) -10 ~ 55° C (per SSD) air flow 0.7 m/sec	0 ~ 45° C (per HDD) 0 ~ 55° C (per SSD) air flow 0.7 m/sec
	Software Support	Windows 7, XP Professional, XP Embedded, WinCE 6.0, Fedora 12, Ubuntu	Windows 7, XP Professional, XP Embedded, Fedora 14, Ubuntu



Model Name		ARK-5260	ARK-6320	ARK-VH200
Features		Intel Atom D510 with Dual PCI/PCIe Expansion and Dual Mobile HDDs	Intel Atom D510/D525 Price-competitive Mini-ITX Systems	Intel Atom Fanless Mobile DVR Solution
Processor System		Intel Atom D510 1.66 GHz	Intel Atom D510 1.66 GHz/ D525 1.8 GHz	Intel Atom D510 1.66 GHz
Graphics		Intel ICH8M	Intel ICH8M	Intel ICH8M
I/O Interface		AMI 16 Mbit Flash BIOS	AMI 16 Mbit Flash BIOS	AMI 16 Mbit Flash BIOS
Storage		1 x DDR2 667 MHz SO-DIMM Max. up to 2 GB	1 x DDR2 667 MHz SO-DIMM Max. up to 2 GB 2 x DDR3 1333 MHz SO-DIMM Max. up to 4GB (D525)	1 x DDR2 667 MHz SO-DIMM Max. up to 2 GB
Power Requirements		up to 2048 x 1536	up to 2048 x 1536	up to 2048 x 1536
Certifications		-	18-bit LVDS (optional) up to 1366 x 768	18-bit LVDS up to 1366 x 768
Operating Temperature		-	up to 1600 x 1200 (D525)	-
Software Support		Line-in, Line-out, Mic-in	Line-in, Line-out, Mic-in	Line-out, Mic-in
I/O Interface		2 x RJ-45 (GigE LAN)	2 x RJ-45 (GigE LAN)	2 x RJ-45 (GigE LAN)
Storage		1 x PS/2	-	-
Power Requirements		6 x USB 2.0	8 x USB 2.0	2 x USB 2.0, 2 x lockable USB 2.0
Certifications		1 x eSATA	-	1 x eSATA
Operating Temperature		2 x RS-232, 2 x RS-232/422/485 2 x RS-232 (option)	5 x RS-232, 1 x RS-232/422/485	3 x RS-232
Software Support		2 x PCI/PCIe, 2 x Mini PCIe	1 x Mini PCIe	On-board GPS Receiver
I/O Interface		Wireless	-	2 x Mini PCIe (with one SIM card socket)
Storage		1 x Type III Compact Flash Card	1 x Type III Compact Flash Card	1 x Type III Compact Flash Card
Power Requirements		DC 12V-24V ATX	DC 12V	DC 9V-32V ATX, supports PWM ignition, compliant with ISO 7637-2
Certifications		CE, FCC, CCC, BSMI	CE, FCC, CCC, BSMI	CE, FCC, CCC, BSMI
Operating Temperature		220 x 102.5 x 200 mm (8.66" x 4.04" x 7.87")	200 x 73 x 200 mm (7.9" x 2.9" x 7.9")	260 x 77 x 134 mm (10.23" x 3.03" x 5.27")
Software Support		Windows 7, XP Professional, XP Embedded, WinCE 6.0	Windows 7, XP Professional, XP Embedded	Windows 7, XP Professional, XP Embedded

Selection Guide

# Digital Signage Media Players



NEW



NEW



NEW



NEW



NEW

Model	ARK-DS220	ARK-DS262
Features	OPS ION2-based Digital Signage Platform	OPS 3rd Generation Intel Core I7 Digital Signage Platform
Processor System	<b>Processor</b> Intel Atom D525 1.8 GHz, Intel Atom N455 1.06 GHz <b>Chipset</b> Intel ICHM <b>BIOS</b> AMI 16 MB Flash BIOS	<b>Processor</b> Intel Core i7-3555LE 2.5 GHz, Intel Core i3-3217UE 1.8 GHz <b>Chipset</b> Intel QM77 <b>BIOS</b> AMI 64 MB Flash BIOS
Graphics	<b>System Memory</b> 1 x DDR3 204-pin SO-DIMM, Max. up to 4 GB <b>Chipset</b> NVIDIA GT218 <b>Memory Size</b> Independent display memory 512 MB <b>Resolution</b> VGA: up to 2048 x 1536 @ 60 Hz HDMI/DP: 1920 x 1080p (via OPS interconnection)	<b>System Memory</b> 2 x DDR3 204-pin SO-DIMM, Max. up to 16 GB <b>Chipset</b> Integrated graphics built in Processor <b>Memory Size</b> - <b>Resolution</b> HDMI: 1920 x 1080p HDMI/DP: 1920 x 1080p (via OPS interconnection)
Display Interface	1 x VGA 1 x HDMI1 x DP (via OPS interconnection)	1 x HDMI 1 x HDMI1 x DP (via OPS interconnection)
I/O Interface	<b>Audio</b> 1 x Mic-In, 1 x Line-out <b>Ethernet</b> 1 x RJ-45 (GigE LAN) <b>Wireless LAN</b> via optional WLAN module <b>USB</b> 2 (USB 2.0 compliant) <b>Serial Port</b> 1 x RS-232 <b>Expansion</b> 1 x Mini PCIE (Internal) <b>PSW</b> 1 x power on/off button	<b>Audio</b> 1 x Line-out <b>Ethernet</b> 1 x RJ-45 (GigE LAN) <b>Wireless LAN</b> via optional WLAN module <b>USB</b> 2 (USB 3.0 compliant) <b>Serial Port</b> 1 x RS-232 <b>Expansion</b> 1 x Mini PCIE (Internal) <b>PSW</b> 1 x power on/off button
Storage System	<b>Solid State Disk</b> - <b>HDD Drive Bay</b> 1 x 2.5" 160 GB HDD	<b>Solid State Disk</b> - <b>HDD Drive Bay</b> 1 x 2.5" 250 GB HDD
Power Supply	<b>Power Management</b> ACPI 2.0 <b>Input Voltage</b> 12 - 24V DC-in (via OPS interconnection) <b>Power Consumption</b> Average 10W, Maximum 30W	<b>Power Management</b> ACPI 3.0 <b>Input Voltage</b> 12 - 24V DC-in (via OPS interconnection) <b>Power Consumption</b> Average 19W
Watchdog	<b>Output</b> Interrupt, system reset <b>Interval</b> Programmable 1 - 255 sec/min	<b>Output</b> Interrupt, system reset <b>Interval</b> Programmable 1 - 255 sec/min
Physical Characteristics	<b>Mounting</b> - <b>Dimensions (W x H x D)</b> 200 x 30 x 119 mm (7.87" x 1.18" x 4.65") <b>Weight</b> 1.0 kg (2.2 lb)	<b>Mounting</b> - <b>Dimensions (W x H x D)</b> 200 x 30 x 119 mm (7.87" x 1.18" x 4.65") <b>Weight</b> 1.0 kg (2.2 lb)
Operating Environment	<b>Operating Temperature</b> 0 - 40° C (32 - 104° F), operating <b>Relative Humidity</b> 95% @ 40° C (non-condensing), operating	<b>Operating Temperature</b> -10 - 50° C (-14 - 122° F), operating <b>Relative Humidity</b> 95% @ 40° C (non-condensing), operating
Certifications	EMC: CE/FC Class A, CCC, BSM, Safety: UL, CCC, BSM	EMC: CE/FC Class B, CCC, BSM, C-Trick, Safety: UL, CCC, BSM
Software Support	Windows 7, WE7E, XP Embedded, Linux	Windows 7, WE7E, XP Embedded, Linux
Ordering Information	ARK-DS220F-00A1E ARK-DS220B-00A1E ARK-DS220B-00A1E ARK-DS220B-00A1E ARK-DS220B-00A1E	ARK-DS262F-00A1E ARK-DS262F-00A1E ARK-DS262B-00A1E ARK-DS262B-00A1E ARK-DS262B-00A1E

Model	ARK-DS306	ARK-DS520	ARK-DS762
Features	AMD G-Series Digital Signage Platform	Advanced (ION2 based) Graphics Digital Signage Platform	3rd Generation Intel Core I7/15/13 Digital Signage Platform
Processor System	<b>Processor</b> AMD G-Series, T40M dual core 1.0 GHz <b>Chipset</b> ATI T40M + ASOM <b>BIOS</b> AMI 16 MB Flash BIOS	<b>Processor</b> Intel Atom D525 1.8 GHz, Intel Atom N455 1.06 GHz <b>Chipset</b> Intel ICHM <b>BIOS</b> AMI 64 MB Flash BIOS	<b>Processor</b> 3rd Generation Intel Core I7 up to 45W <b>Chipset</b> Intel QM77 <b>BIOS</b> AMI 64 MB Flash BIOS
Graphics	<b>System Memory</b> 1 x DDR3 204-pin SO-DIMM, Max. up to 4 GB <b>Chipset</b> Integrated graphics built in Processor <b>Memory Size</b> - <b>Resolution</b> VGA: 1920 x 1080 @ 60 Hz HDMI: 1920 x 1080 @ 60 Hz	<b>System Memory</b> 2 x DDR3 204-pin SO-DIMM, Max. up to 4 GB <b>Chipset</b> NVIDIA GT218 <b>Memory Size</b> Independent display memory 512 MB <b>Resolution</b> VGA: up to 2048 x 1536 @ 60 Hz DVI-D: single link, up to 1920 x 1080 @ 60 Hz HDMI: up to 1920 x 1080	<b>System Memory</b> 2 x DDR3 204-pin SO-DIMM, Max. up to 16 GB <b>Chipset</b> Integrated graphics built in Processor <b>Memory Size</b> - <b>Resolution</b> HDMI: up to 1920 x 1080 @ 60 Hz
Display Interface	1 x HDMI + 1 VGA	1 x HDMI (w/CCO) 1 x DVI-D/ 2 x VGA (support dual display)	3 x HDMI
I/O Interface	<b>Audio</b> 1 x Line-in, 1 x Line-out, 1 x Mic-in <b>Ethernet</b> 2 x RJ-45 (GigE LAN) <b>Wireless LAN</b> via optional WLAN module <b>USB</b> 2 (USB 2.0 compliant) <b>Serial Port</b> 2 x RS-232 <b>DIO Port</b> - <b>Expansion</b> 1 x Mini PCIE (Internal) <b>PSW</b> 1 x power on/off button	<b>Audio</b> 1 x Line-out, 1 x Mic-in (Support Jack Sense) <b>Ethernet</b> 2 x RJ-45 (GigE LAN) <b>Wireless LAN</b> via optional WLAN module <b>USB</b> 4 (USB 2.0 compliant) <b>Serial Port</b> 2 x RS-232 <b>DIO Port</b> - <b>Expansion</b> 2 x Mini PCIE (Internal) <b>PSW</b> 1 x power on/off button	<b>Audio</b> 1 x Line-out (Supports Jack Sense) <b>Ethernet</b> 1 x RJ-45 (GigE LAN) <b>Wireless LAN</b> via optional WLAN module <b>USB</b> 2 (USB 2.0 compliant) <b>Serial Port</b> 1 x RS-232 <b>DIO Port</b> - <b>Expansion</b> 1 x Mini PCIE (Internal) <b>PSW</b> 1 x power on/off button
Storage System	<b>Solid State Disk</b> - <b>HDD Drive Bay</b> 1 x 2.5" 160 GB HDD	<b>Solid State Disk</b> - <b>HDD Drive Bay</b> 1 x 2.5" 160 GB HDD	<b>Solid State Disk</b> - <b>HDD Drive Bay</b> 1 x 2.5" 250 GB HDD
Power Supply	<b>Power Management</b> ACPI 2.0 <b>Input Voltage</b> 12 V DC-in (ATX/AT mode) <b>Power Consumption</b> Average 9W, Maximum 19W	<b>Power Management</b> ACPI 2.0 <b>Input Voltage</b> 12 V DC-in (ATX/AT mode) <b>Power Consumption</b> Average 19W, Maximum 30W	<b>Power Management</b> ACPI 3.0 <b>Input Voltage</b> 19 V DC-in (ATX/AT mode) <b>Power Consumption</b> TBC
Watchdog	<b>Output</b> Interrupt, system reset <b>Interval</b> Programmable 1 - 255 sec/min	<b>Output</b> Interrupt, system reset <b>Interval</b> Programmable 1 - 255 sec/min	<b>Output</b> Interrupt, system reset <b>Interval</b> Programmable 1 - 255sec
Physical Characteristics	<b>Mounting</b> Desktop/Wall Mount <b>Dimensions (W x H x D)</b> 204.0 x 44.2 x 118.2 mm (8.03" x 1.74" x 4.65") <b>Weight</b> 1.3 kg (2.86 lb)	<b>Mounting</b> Desktop/Wall Mount <b>Dimensions (W x H x D)</b> 220 x 44.2 x 150 mm (8.7" x 1.7" x 5.9") <b>Weight</b> 1.7 kg (3.74 lb)	<b>Mounting</b> Easy mounting kits for LCD or Plasma <b>Dimensions (W x H x D)</b> 240 x 35 x 174.5 mm (9.45" x 1.38" x 6.87") <b>Weight</b> 2.0 kg (4.40 lb)
Operating Environment	<b>Operating Temperature</b> 0 - 40° C (w/HD); 0 - 50° C (w/CD card) <b>Relative Humidity</b> 95% @ 40° C (non-condensing), Operating	<b>Operating Temperature</b> 0 - 40° C (32 - 104° F), operating <b>Relative Humidity</b> 95% @ 40° C (non-condensing), Operating	<b>Operating Temperature</b> 0 - 40° C (32 - 104° F), operating -20 - 70° C, storage <b>Relative Humidity</b> 95% @ 40° C (non-condensing), Operating
Certifications	EMC: CE/FC Class A, CCC, BSM, Safety: UL, CCC, BSM	EMC: CE/FC Class A, CCC, BSM, Safety: UL, CCC, BSM	EMC: CE/FC Class A, CCC, BSM, Safety: UL, CCC, BSM
Software Support	Windows 7, XP with SP3, XP Embedded, Linux	Windows 7, XP with SP3, XP Embedded, Linux	Windows 7, XP with SP3, XP Embedded, Linux
Ordering Information	ARK-DS306F-00A1E ARK-DS306F-00A1E	ARK-DS520B-00A1E ARK-DS520F-00A1E ARK-DS520B-00A1E ARK-DS520B-00A1E	ARK-DS762-00A1E

Selection Guide

# Industrial Storage Modules



Model Name	SOF-P10	SOF-PDM	SOF-P25	SOF-S10	SOF-SHM
Interface	IDE / PCMCIA	IDE	IDE	SATA	SATA
Transfer Protocol	PID Mode-6 MultiMA Mode-2 UDMA Mode-5	PID Mode-4 MultiMA Mode-2 UDMA Mode-4	PID Mode-4 MultiMA Mode-2 UDMA Mode-4	SATA II (3.0G)	SATA II (3.0G)
Connector Type	CF Type-I	40-pin 2.54mm pitch 44-pin 2.0mm pitch Receptacle Housing Connector	44-pin 2.0mm pitch Receptacle Housing Connector	CFast Type-I	Mini PCIe 52pin connector with SATA pin-out
Flash Type	SLC	SLC	SLC / MLC	SLC / MLC	SLC / MLC
Capacity	256 MB and 1/2/4/8/16/32 GB	1/2/4/8/16 GB	SLC: 48/16/32/64 GB MLC: 9/16/32/64/128 GB	SLC: 1.2/4/8/16/32 GB MLC: 4/8/16/32/64 GB	SLC: 1.2/4/8/16 GB MLC: 4/8/16/32 GB
Performance (MB/s)	4 channel: 83/87 2 channel: 43/40 1 channel: 22/15	2 channel: 40/29	SLC: 4 channel: 65/55 MLC: 4 channel: 63/28	SLC: 70/50, MLC: 65/35	SLC: 35/30 MLC: 30/20
Operating Temp	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant
Security ID	Yes	Yes	Yes	Yes	Yes
Life Monitoring	Yes	Yes	Yes	Yes	Yes
Flash Lock	Yes	Yes	Yes	Yes	Yes



Model Name	SOF-SMS	SOF-SMS Extreme	SOF-SLM	SOF-SLM Extreme	SOF-S25
Interface	SATA	SATA	SATA	SATA	SATA
Transfer Protocol	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)
Connector Type	Mini PCIe 52pin connector with SATA pin-out	Mini PCIe 52pin connector with SATA pin-out	Standard 7+15 pin SATA Connector	Standard 7+15 pin SATA Connector	Standard 7+15 pin SATA Connector
Flash Type	SLC / MLC	SLC / MLC	SLC / MLC	SLC / MLC	SLC / MLC
Capacity	SLC: 2/4/8/16/32 GB MLC: 9/16/32/64/128 GB	SLC: 4/8/16/32/64 GB MLC: 16/32/64/128 GB	SLC: 2/4/8/16/32 GB MLC: 9/16/32/64/128 GB	SLC: 4/8/16/32/64 GB MLC: 16/32/64/128 GB	SLC: 4/8/16/32/64 GB MLC: 16/32/64/128/256 GB
Performance (MB/s)	SLC: 140/100 MLC: 120/80	SLC: 4 channel: 145/100, up to 210/175 MLC: 4 channel: 135/90, up to 200/175	SLC: 140/100 MLC: 120/80	SLC: 4 channel: 145/100, up to 210/175 MLC: 4 channel: 135/90, up to 200/175	SLC: 140/100 MLC: 120/80
Operating Temp	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant
Security ID	Yes	Yes	Yes	Yes	Yes
Life Monitoring	Yes	Yes	Yes	Yes	Yes
Flash Lock	Yes	Yes	Yes	Yes	Yes



Model Name	SOF-S25 Extreme	SOF-SDM	SOF-UDM	SOF-1SD
Interface	SATA	SATA	USB	SD
Transfer Protocol	SATA II (3.0G)	SATA II (3.0G)	USB 2.0, downward compatible with 1.1	SD 2.0
Connector Type	Standard 7+15 pin SATA Connector	7-pin Female SATA Connector optional VooPnP	10-pin 2.54mm pitch Receptacle Housing Connector	Standard 9-pin SD Connector
Flash Type	SLC / MLC	SLC	SLC	SLC
Capacity	SLC: 9/16/32/64/128/256 GB MLC: 32/40/64/80/128/256/512 GB	2/4/8/16/32 GB	1/2/4/8 GB	SDC: 1 GB, 2 GB SDHC: 4 GB, 8 GB
Performance (MB/s)	SLC 8 channel: 250/210 MLC 8 channel: 230/210	4 channel: 95/50 2 channel: 48/25	32/26	25/12.5
Operating Temp	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial)	-40 ~ 85° C (Industrial)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant
Security ID	Yes	Yes	-	-
Life Monitoring	Yes	Yes	-	-
Flash Lock	Yes	Yes	-	-

## Software Features



### Flash Security ID

Flash Security ID gives the ability to protect Intellectual Property. The maximum security ID length is up to 256 bytes so users can define their own security strings.



### Flash Lock

Flash Lock utility locks the SOFlash to a corresponding platform so it cannot be accessed by another platform. Based on the CF 3.0 specification, users can lock SOFlash via this utility and unlock it via the BIOS while booting.



### Life Monitoring

Life Monitoring helps users to check the health of the Flash. Endurance check from S.M.A.R.T. attributes provides Flash life-span estimation information.



### Emergency Erase

Emergency Erase is a military level security feature. Users can instantly destroy all data and corrupt controller firmware based on utility or API under OS.



Selection Guide

# Industrial RAM Modules



Model Name	SQR-SD2I	SQR-SD3I	SQR-SD3T	SQR-UD3I
Category	DDR2	DDR3	DDR3	DDR3
Clock Speed	667 Mbps	1333 Mbps	1333 Mbps	1333 Mbps
Pin/DIMM	200-pin SODIMM	204-pin SODIMM	204-pin SODIMM	240-pin UDIMM
Chip Package	FBGA	FBGA	FBGA	FBGA
Density	1/2GB	1/2/4GB	1/2/4GB	1/2/4GB
Power Supply	SSTL_18	SSTL_15	SSTL_15	SSTL_15
Voltage	1.5 V ± 0.1 V	1.5 V ± 0.075 V	1.5 V ± 0.075 V	1.5 V ± 0.075 V
Operation Temp	-40° C to +85° C	-40° C to +85° C	-40° C to +85° C	-40° C to +85° C
Dimensions (mm)	67.6±0.15 x 30	67.6±0.15 x 30	67.6±0.15 x 30	133.35±0.15 x 30±0.15
Thermal Sensor			YES	

## SQRAM Qualification Process



- 10G Vibration**  
 The purpose of vibration is to reveal non-robust modules. All components will pass 10G vibration which is a basic industrial grade specification.
- 40°C Test**  
 Low temperature testing is based on MIL-STD-105E. This winnows out DRAM modules with perfect memory (no error bit detected).
- +85°C Test**  
 High temperature testing is implemented into all modules that pass the previous two stages.
- Thermal Shock Test**  
 DRAM modules start testing from room temperature (25°C), go to low temperature (-40°C), then rise to high temperature (85°C before back to room temp (25°C)).
- Room Temperature**  
 Final stage is to test all DRAM modules to pass memory test without any error bit detected under room temperature.

Selection Guide

# Embedded Wireless Modules



Model Name	WLAN					
	EWM-W139	EWM-W142	EWM-W135	EWM-W136	EWM-W137H	EWM-W138H
Function	802.11 b/g/n, 1T1R	802.11 b/g/n, 2T2R	802.11 a/b/g/n, 2T2R	802.11 a/b/g/n, 2T2R	802.11 a/b/g/n, 2T2R	802.11 a/b/g/n, 2T2R
Interface	PCIe	PCIe	PCIe	Mini-PCI	PCIe	PCIe
Product Type	Half-size Mini Card Full-size Mini Card	Half-size Mini Card Full-size Mini Card	Half-size Mini Card Full-size Mini Card	Mini PCI Card	Half-size Mini Card	Half-size Mini Card
Operating Temp.	-10 ~ 70° C	0 ~ 60° C	0 ~ 60° C	0 ~ 60° C	-40 ~ 85° C	0 ~ 80° C
Antenna Connector	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L
OS/Drivers	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64 bit), Linux	XP/Vista/Win7 (32 and 64 bit), Linux
Longevity	2011-2013	2011-2014	2011-2014	2011-2014	2011-2017	2011-2017
Software Add-on Features	Driver & OS Integration					



Model Name	WiFi & Bluetooth		GPS		Cellular	
	EWM-W141H	EWM-W148H	EWM-G107H	EWM-G107F	EWM-C106FT	EWM-C108H
Function	802.11 b/g/n, 1T1R + Bluetooth 3.0 +HS	802.11 a/b/g/n, 2T2R Bluetooth 4.0	GPS	GPS	3.75G	3.75G
Interface	WiFi & BT PCIe	WiFi-PCIe & BT USB	USB	USB	USB	USB
Product Type	Half-size Mini Card	Half-size Mini Card	Half-size Mini Card	Full-size Mini Card	Full-size Mini Card	Half-size Mini Card
Operating Temp.	0 ~ 70° C	0 ~ 80° C	-40 ~ 85° C	-40 ~ 85° C	-20 ~ 65° C	-10 ~ 55° C
Antenna Connector	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L	Hirose U.F.L
OS/Drivers	XP/Win7	XP/Vista/Win7	XP/Vista/Win7(32 and 64bit)	XP/Vista/Win7(32 and 64bit)	XP/Vista/7, WinCE 5.0/6.0, Linux, Mac	Windows XP/Vista/7
Longevity	2012-2014	2012 Q3 - 2015 Q2	2010 - 2015	2010-2015	2011 - 2015	2011 - 2015
Software Add-on Features	Driver & OS Integration		GPS Parser Signal Strength API Satellite Number API GPS Raw Data API		Middleware Utility: connection manager, site survey and upload & download speed measurement Auto Dialing API, Center Name API, SIM Status API, Signal Strength API, PIN Lock & Unlock API	

## Selection Guide

# Embedded Touch Modules



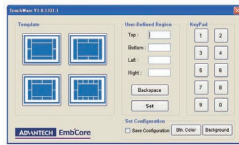
Model Name	ETM-RES02C	ETM-RES04C	ETM-RES05C
Touch Technology	Resistive type, Single Touch	Resistive type, Single Touch	Resistive type, Single Touch
Interface	USB & RS-232	USB & RS-232	USB & RS-232
Interface Connector	USB Port: 2.0 mm, 4-pin, male header RS-232 Port: 2.0 mm, 4-pin, male header Power Port: 2.0 mm, 2-pin, male header	USB and RS-232 Combo Port: 2.0 mm, 10-pin, male header	USB and RS-232 Combo Port: 2.0 mm, 10-pin, male header
Supported Touchscreen Type	4-wire: 1.0 mm, 4-pin, FPC type, double contact type 5-wire: 2.54 mm, 5-pin, male header 5-wire: 2.0 mm, 8-pin, male header	5-wire: 2.54 mm, 5-pin, male header	4-wire: 1.0 mm, 4-pin, FPC type
Operating Temperature	-20 to +85°C	-25 to +85°C	-25 to +85°C
Storage Temperature	-40 to +85°C	-25 to +85°C	-25 to +85°C
Software Add-on Features			
TouchWare	Yes	No	No

## Software Features

**Device Detection**  
Device Detection detects the status of the touch control board and touchscreen. This function will forward the abnormal status conditions of the touch system to a service site.

**Hot Key Definition**  
Hot Key Definition divides the screen into segments or frames, and provides four default templates for ease of use.

**Screen Configuration**  
Screen Configuration defines the function of each segment or frame with the ability to be individually configured to operate as the user wants.



## Selection Guide

# Industrial Display Solutions



Model Name	IDK-2108	IDK-2110	IDK-2112	IDK-2115	IDK-2117	IDK-2119
Size	8.4"	10.4"	12"	15"	17"	19"
Resolution	800 x 600	800 x 600	800 x 600	1024 x 768	1280 x 1024	1280 x 1024
Brightness	1200 cd/m <sup>2</sup>	1200 cd/m <sup>2</sup>	1200 cd/m <sup>2</sup>	1200 cd/m <sup>2</sup>	1200 cd/m <sup>2</sup>	1200 cd/m <sup>2</sup>
Viewing Angle (UD/RL)	80°/80°/80°/80°	60°/70°/80°/80°	50°/60°/80°/80°	70°/60°/80°/80°	80°/80°/85°/85°	80°/80°/85°/85°
Contrast Ratio	600:1	500:1	600:1	700:1	1000:1	1000:1
Response Time	30 ms	30 ms	30 ms	8 ms	5 ms	5 ms
Operating Temperature	-20 ~ 70° C	-20 ~ 70° C	-20 ~ 70° C	-20 ~ 70° C	0 ~ 50° C	0 ~ 50° C
Storage Temperature	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-20 ~ 60° C	-20 ~ 60° C
Signal Interface	1 channel LVDS	1 channel LVDS	1 channel LVDS	1 channel LVDS	2 channel LVDS	2 channel LVDS
Dimensions	203.0 x 142.5 x 8.0 mm (N Series)	236 x 178.9 x 5.7 mm (N Series)	278.0 x 209.0 x 12.0 mm (N Series)	328.5 x 253.5 x 12.0 mm (N Series)	358.5 x 296.5 x 16.8 mm (N Series)	396 x 324 x 17.5 mm (N Series)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant



Model Name	IDS-3110	IDS-3112	IDS-3115	IDS-3117	IDS-3119
Size	10.4"	12"	15"	17"	19"
Resolution	800 x 600	800 x 600	1024 x 768	1280 x 1024	1280 x 1024
Brightness	400 cd/m <sup>2</sup>	450 cd/m <sup>2</sup>	400 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>
Viewing Angle (UD/RL)	60°/80°/80°/80°	65°/75°/80°/80°	70°/70°/80°/80°	80°/80°/85°/85°	80°/80°/85°/85°
Contrast Ratio	700:1	700:1	700:1	800:1	1000:1
Response Time	30 ms	35 ms	25 ms	30 ms	5 ms
Operating Temperature	-20 ~ 70° C	-20 ~ 70° C	-20 ~ 60° C	-20 ~ 60° C	0 ~ 45° C
Storage Temperature	-30 ~ 70° C	-30 ~ 70° C	-30 ~ 70° C	-30 ~ 70° C	-20 ~ 60° C
Signal Interface	DWVGA	DWVGA	DWVGA	DWVGA	DWVGA
Dimensions	279.4 x 228 x 30 mm	320.2 x 252 x 30.7 mm	382 x 288 x 32.8 mm	400 x 344.7 x 33.4mm	438 x 369.7 x 34.3 mm
Certifications	CE/FCC/CCC	CE/FCC/CCC	CE/FCC/CCC	CE/FCC/CCC	CE/FCC/CCC

## Features

- Versatile LCD Sizes**: All sizes from 5.7" to 55" for small and large projects
- High Brightness**: Brightness up to 2000 cd/m<sup>2</sup> and a good choice for sunlight readable solutions
- Touchscreen**:
  - Resistive touch
  - Capacitive touch
  - Projected capacitive touch
- Optical Bonding**:
  - Anti-reflective glass
  - Tempered glass
  - Touchscreens
- Sunlight Readable**: Cost efficient solutions with anti-reflective film lamination
- Wide Temperature**: Extended operating temperature range from -20° C to 70° C

# Embedded Systems & Intelligent Platforms

Transforming the Industrial Cloud Era

With innovative technologies for cloud computing applications and services (industrial and video servers), edge computing applications (fanless, slim & portable devices), to high performance embedded systems (blade computing, network processor platforms, and DSP processing), Advantech is devoted to transforming our embedded systems into intelligent systems with smart, secure, energy-saving features. Designed by our Industrial Cloud Built-in Services and System Design-To-Order Services (System DTOS) teams, Advantech's intelligent systems are designed to target multiple vertical markets in transportation, industrial automation (machine automation, equipment/machine builders), digital signage, and also video applications (video infrastructure and video surveillance).

## Industrial Cloud Built-in



**Industrial Portable Computers**  
**Embedded Box PCs**   **Panel PC Platforms**  
**Industrial PCs & Servers**

**Blade Computing**  
**Network Appliances**   **Intelligent Video**  
**Platforms**

## Star Products

### Industrial Computers



**PCE-5126**

- LGA1155 Intel® Core™ i7/i5/i3 SHB with DDR3/Dual Core/SATA III
- 2nd Gen LGA 1155 Intel® Core™ i7/i5/i3/Xeon processors
- Dual Channel (ECC) DDR3 1333 MHz up to 8GB
- Supports SATA RAID 0, 1, 5, 10, AHCI 0, TPM 1.2 (optional)
- Out-of-band remote management with IPMI (optional by IPMI module)
- Supports embedded software APIs and utilities



**ACP-4320**

- Quiet 4U Chassis Ready with Dual SAS/SATA HDD Trays
- Supports either an ATX motherboard or a PICMG backplane with up to 15 slots
- Advantech low noise solution
- Supports dual SAS/SATA HDD trays for data monitoring applications
- LED indicators and alarm notification for system fault detection and network connection
- Lockable front door prevents unauthorized access

### Server-Grade IPCs



**ASMB-920iR**

- Intel® Xeon® E5-2600 EATX Server Board with 2 PCIe x16 PME Expansion Slots
- Dual LGA 2011 Intel® Xeon® E5-2600 series processor with C602 chipset
- Eight Quad channel ECC/Non-ECC 1000/1333/1600-registered DIMM, up to 128 GB
- Supports 2 PCIe x16 and PME which is an Advantech module board with optional PCIe, PCI, X, PCI expansion slot
- Supports 8 SAS ports



**HPC-7280/7480**

- 2U/4U Rackmount Server Chassis with 8 SAS/SATA Hot-swap Hard Drive Bays
- Supports dual/single Intel® processors ATX/EATX motherboard
- Lockable front bezel prevents unauthorized access
- 800 W (1+1) redundant / 665 W single power supply
- Supports 2 PCI, X and 1 x PCIe x8 through riser card (HPC-7280)

### Fanless Embedded Bo



**ARK-1120**

- Palm-size and Price-competitive Intel® Atom™ N455 Fanless Embedded Box PC
- Intel® Atom™ processor N455 1.66 GHz
- One half mini-PCIe socket expansion for wireless application
- Fanless construction with VESA mount, IP40
- Power consumption 10W



**ARK-2120F**

- Intel® Atom™ N2600/D2550 with 3 GBE and 6 COM Fanless Embedded Box PC
- Intel® Atom™ N2600 1.6 GHz D2550 1.66 GHz with DDR3 memory support up to 4 GB
- Supports dual independent displays: VGA, HDMI or 48-bit LVDS display
- DirectX 9 graphic engine
- Mini PCIe expansion with SIM holder or communication module

### Industrial Portable Computers



**S10A**

- 10.4" Semi-rugged Tablet PC with Intel® Atom™ 530XL Processor
- Efficient Intel® Atom™ 2530 1.6 GHz processor
- IP64-certified, 3 ft drop resistance MIL-STD-883C
- Optional GPS / GPRS / barcode scanner / MSR / RFID
- Hot swap, Li-ion battery provides 4.5 hours of operation
- Lightweight, 1.2 kg

### Panel PC Platforms



**PPC-L158**

- 15" Fanless Panel PC with Intel® Atom™ Dual-Core Processor
- Embedded Intel® Atom™ processor, dual-core D525 1.8G
- Supports one internal SATA 2.5" HDD, one Mini PCIe socket, Dual Gigabit Ethernet, and one more PCI or PCIe for expansion
- Fanless and ultra-low power consumption

### CompactPCI Platforms



**MIC-395S**

- 6U CompactPCI® 2nd Generation Intel® Core™ i7/i5 Processor Blade with ECC support
- Supports 2nd Generation Intel® Core™ i7/i5 processors and Intel® QM07 FCH with embedded graphic (dual independent display)
- Up to 16 GB (DDR3 1066/1333) ECC memory (max 6GB on board socket SO-DIMM x1, max 8GB)
- Optimized single-slot SBC with 2.5" SATA III HDD/CFast socket



**MIC-3042**

- 4U CompactPCI® Enclosure with cPCI Power Supply (CT Bus non-CT Bus or PICMG 2.16)
- 8-slot 6U CompactPCI® backplane
- AC cPCI 500 W / 250 W redundant (2+1) power supplies
- PICMG 2.16 (CompactPCI Packet Switching Backplane) compliance
- PICMG 2.5 (CompactPCI Computer Telegraphy) compliance
- Built-in alarm module (MIC-3924L-AE)

### Video Capture



**DSPC-8661-PCXO**

- 16-ch H.264 PCIe Video Encoder Card with SDK
- Powered by TMS320DM8168 SoC
- 16-channel composite video audio inputs with H.264 H/W compression
- Up to 480fps at D1 resolution for video recording and display
- One HDMI out for up to 1080p video output
- Half-length PCIe board with low power, fanless design
- Embedded digital signal processor for 3rd party program implementation
- Windows and Linux SDK with sample codes

### Encoder Cards



**DSPC-8601-USB**

- 1-ch H.264 USB Video Encoder Module with SDK
- Powered by T1 TMS320DM365 SoC
- 1 channel composite video input with H.264 hardware compression
- Supports PCM9711 hardware audio compression
- 30/25 fps (NTSC/PAL) at full D1 resolution for recording
- High-speed USB 2.0 interface
- SDK with VC sample codes

# Intelligent Transportation

## Embedded Systems with Industry-Proven Success

Advantech is committed to providing long-term cooperation and reliable platform solutions to enable intelligent transportation in cities all over the world. With a decade of successful experiences, especially in China, Advantech is there to assist customers for real-time control, Faster forecasting to avoid traffic congestion, and Environmental protection by reducing traffic & carbon emissions.

- Smarter Development & management**
- Accurate Sensor data information for real-time management**
- Faster forecasting Avoid traffic congestion**
- Environmental protection Reduced traffic & carbon emissions**

Intelligent Transportation



# Video Solutions

## Enabling Multicore DSP Designs for Diverse Video Applications

Advantech employs the latest DSP technologies in its video acquisition and encoder boards to enable a wide range of customer solutions. The boards address numerous video-related applications requiring single or multi-channel connectivity with analog or digital inputs. They perform high speed processing at SD, HD, and Full HD resolutions, provide analog and HDMI outputs, and supply a wide choice of interfaces for storage, networking, and peripherals. The DSPs provide the highest performance computing power for advanced image processing and video analytics functions. With an easy-to-use Software Development Kit, Advantech Intelligent Video Platforms are ideal for system integration in video transcoding, medical imaging, video surveillance, test & automation, and high-performance computing applications.



Video Solutions



**Infrastructure**  
Many cities worldwide are in the midst of improving their transportation system infrastructures, and Advantech is there to provide advanced product solutions for the transportation market.

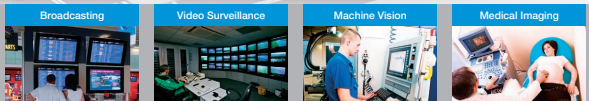
**In-Vehicle**  
Advantech offers industrial grade, high performance computing products for rugged operation in a range of in-vehicle applications, including in-vehicle signage, in-vehicle surveillance, and in-vehicle communications to control efficiency and ensure safety.

**Passenger Information Display System**  
Advantech provides industrial-grade Passenger Information Systems that deliver real-time arrival and departure times for trains, buses, and planes. Along with system reliability and safety, they allow operators to provide accurate, current information to keep travelers moving efficiently.

**Mobile Computing**  
Industrial Portable Computers communicate mission-critical data and report status in real-time. They are rugged enough for any in-vehicle and outdoor applications, such as in fleet management, warehouse management, and track inspection.

### Product Solutions

- AIMB-781**  
ATX Motherboard with 2<sup>nd</sup> Gen Intel® Core™ Processor
- ASMB-781**  
ATX Server Board with LGA1155 Intel® Xeon® E3 1200 Processor
- IPC-7130**  
Wallmount Chassis for ATX/MicroATX Motherboard
- ITA-1710**  
Compact System with Intel® Atom D525 Processor
- ARK-VH200**  
High-Performance Mobile Intel® Atom™ D510 Fanless DVR Solution
- S10A**  
10.4" Semi-rugged Tablet PC with Intel® Atom™ Z3300L Processor



**Broadcasting**  
• Capture video from tape, live or media files  
• Encode, transcode, and brand video content in real time  
• Stream and distribute multimedia content to multiple devices on the fly

**Video Surveillance**  
• Secure people and assets with high definition, high-density video surveillance  
• Proactively prevent accidents and crimes  
• Analyze video content for law enforcement and business intelligence

**Machine Vision**  
• Examine video content for Automated Optical Inspection  
• Assist PCB inspection, Automatic defect detection during manufacturing processes  
• Expedite logistics with automated barcode recognition

**Medical Imaging**  
• High-performance image applications in ultrasound, MRI, and X-Ray  
• Assist diagnosis and operation with high definition video  
• Record operation procedures for medical education

### Product Solutions

- USB Module**  
**DSPC-8601-USBE**  
1-ch H.264 USB Video Encoder Module with SDK
- PCI-104 Module**  
**DVP-2642AE**  
4-CH PCI-104 video encoder board
- PCIe Card (SD)**  
**DSPC-8661-PCXE**  
16-ch H.264 PCIe Video Encoder Card with SDK
- PCIe Card (HD)**  
**DVP-8642HAE**  
4-CH PCIe Full HD Video Encoder Card
- Multimedia Processing Card**  
**DSPC-8681**  
Half-length PCI Express Card with 4 TI 8-core DSPs

# Intelligent Transportation Systems



NEW



NEW

Model	ITA-1710	ITA-1910	
Features	Intel Atom DQ25 DC Wide Range Compact System	Intel Atom DQ25 DC Wide Range Compact System w/Expansion	
Processor System	Processor	Intel Atom Dual Core DQ25	Intel Atom Dual Core DQ25
	Chipset	Intel ICH8-M	Intel ICH8-M
	BIOS	AMI SPI 16 Mb	AMI SPI 16 Mb
	System Memory	Maximum 2 GB	Maximum 2 GB
Graphics	Chipset	Embedded Gen3.5+ GFX Core, Frequency 400 MHz	Embedded Gen3.5+ GFX Core, Frequency 400 MHz
	Memory Size	Shared system memory up to 256 MB SDRAM	Shared system memory up to 256 MB SDRAM
	Resolution	Single Channel Max: 2048 x 1536 @ 60 Hz Dual Channel Max: 1366 x 768 @ 60 Hz	Single Channel Max: 2048 x 1536 @ 60 Hz Dual Channel Max: 1366 x 768 @ 60 Hz
Display Interface	Dual VGA or VGA+LVDS	Dual VGA or VGA+LVDS	
I/O Interface	Audio	Line-out with 3W amplifier, Line-in	Line-out with 3W amplifier, Line in
	Ethernet	2 x Intel 82563V 10/100/1000 Mbps	2 x Intel 82563V 10/100/1000 Mbps
	USB	6	8
	Serial Port	10	14/16
	Expansion	NA	1 x Mini PCIe
	Storage System	1 x CompactFlash socket for Type I/II CompactFlash drive (internal) 1 x Easy Swap SATA DOM CompactFlash Module (external)	1 x CompactFlash socket for Type I/II CompactFlash drive (internal) 1 x Easy Swap SATA DOM CompactFlash Module (external)
HDD Drive Bay	1 x 2.5"	1 x 2.5"	
Power	Input Voltage	DC 9-30V	DC 9-30V
Watchdog	Output	System reset	System reset
	Interval	Programmable 1-255 sec/min	Programmable 1-255 sec/min
Physical Characteristics	Dimensions (W x H x D)	200 x 100 x 190 mm	315 x 100 x 190 mm
Operating Environment	Operating Temperature	Operating (With HDD) Non-Operating -25 - 60° C 0 - 40° C -40 - 85° C	Operating (With HDD) Non-Operating -25 - 60° C 0 - 40° C -40 - 85° C
		Certifications	CE/FCC/UL/CB/CCC
Software support	Win XP/7 embedded Linux/Vx Works	Win XP/7 embedded Linux/Vx Works	

# Pre-configured Systems



NEW



NEW



Model Name	S S-5W6025-7S01	S S-6W3026-6H01	S S-6W6508-4S03	S S-7W1132-7A01	
Form Factor	Wallmount	Wallmount	Wallmount	Wallmount	
	Chipset	Intel QM77	ICH8M	Intel QM77	Intel HES
Processor System	CPU	Intel Core i7 (5/13) processor Max. 3.4 GHz	Intel Atom D510, 1.66 GHz	Intel QM77	Intel Core i7 (5/13) processor Max. 3.4 GHz
	L2/ L3 Cache	8 MB	1 MB	12 MB	8 MB
	Core number/ Front Side Bus	Max 4	-	800/1066/1333 MHz	Max 4
	Memory	DDR3 1066/1333 MHz Max. 4 GB	-	DDR3 800/1066 MHz Max. 4 GB	DDR3 1066/1333 MHz Max. 8 GB
Graphic	Controller	Intel HD Graphics	Intel HD Graphics	Intel Graphic Media Accelerator X4500	Intel HD Graphics
	VRAM	Shared system memory max. 1 GB	Shared 224 MB	Shared with 352 MB system memory	1GB maximum shared memory with 2GB and above system memory installed
Expansion Slot	PCIe x16	1	-	-	1
	PCIe x1	-	-	-	-
	PCI	2	5	3	4
	PCIe/MiniPCI	-	-	1	-
	PCMC	-	-	-	-
	ISA	-	-	3	-
	PCI-104	-	-	-	-
Storage	Optical Drive (supported)	-	-	DVD-ROM / CD-RW / CD-ROM	DVD-ROM / CD-RW / CD-ROM
	HDD (supported)	SATA	SATA	-	SATA
Drive Bay	Slim ODD Bay	-	-	-	-
	5.25" (front-accessible)	-	-	2	1
	3.5" (front-accessible)	1	-	1	1
	3.5" (internal)	-	1	-	-
	2.5" (front-accessible)	-	-	-	-
	CompactFlash (supported)	-	-	-	-
	Ethernet	Interface	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet
Controller	Intel 82578LM, Intel 82563V	Intel 82567V, Intel 82563V	Intel 82563V	Intel 82568AM, Intel 82572V	
Front I/O Interface	USB	-	2	2	2
	PS/2	-	-	-	-
	COM	-	-	-	-
	Parallel	-	-	-	-
	RJ-45	-	-	-	-
	Audio	-	-	-	-
	VGA	-	-	-	-
	Reserved Outlets	-	2 USB + 4 x DB-9 + DN + 25 pin opening	-	-
	USB	1	1	1	4
	Real I/O	PS/2	1	1	1
COM		-	-	-	
VGA		1	1	1	VGA+DVI
LVDS		-	-	-	-
RJ-45		2	2	2	2
Audio	-	-	-	2 Mic-in, Line-out	
Watchdog Timer	Output	System reset	System reset	System reset	System reset
	Interval	Programmable 1 - 255 seconds	Programmable 1 - 255 seconds	Programmable 1 - 255 seconds	Programmable 1 - 255 seconds
Power Supply	Power Output	270 W	150 W	300 W	300 W
	Input Range	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V
	Chassis Fan	1 (9 CFM/ 53 CFM)	1 (9 CFM/ 53 CFM)	1 (12 CFM/ 65 CFM)	1 (12 cm/ 65 CFM)
Cooling	Air Filter	Yes	Yes	Yes	Yes
	Physical Characteristics	Dimensions (W x H x D)	111 x 212 x 420 mm (4.4"x8.3"x16.5")	150 x 222 x 270 mm	173 x 315 x 410 mm (6.8"x 12.4"x 16.1")
Weight	6.5 Kg (14.3 lb)	6.5 Kg (14.3 lb)	13 Kg (28.2 lb)	14.5 Kg (34.5 lb)	

Selection Guide

# Pre-configured Systems



Model Name	S-S-1U1320-4A01	S-S-1U1320-4S01	S-S-2U2000-7S01
<b>Form Factor</b>	1U Rackmount	1U Rackmount	2U Rackmount
<b>Processor System</b>	<b>Chipset</b> Intel Q25 + Q25B D0 <b>CPU</b> Intel Core 2 Quad Max. 2.66 GHz <b>L2/L3 Cache</b> 6 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR2 667/800 MHz Max. 8 GB	<b>Chipset</b> Intel Q25 + Q25B D0 <b>CPU</b> Intel Core 2 Quad processor Max. 2.8 GHz <b>L2/L3 Cache</b> 12 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR2 667/800 MHz Max. 8 GB	<b>Chipset</b> Intel Q37 <b>CPU</b> Intel Core i7/i5/i3 processor Max. 3.4 GHz <b>L2/L3 Cache</b> 8 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR3 1066/1333 MHz Max. 8 GB
<b>Graphic</b>	<b>Controller</b> Intel GMA3100 <b>VRAM</b> Shared system memory max. 348 MB	<b>Controller</b> Intel GMA3100 <b>VRAM</b> Shared system memory max. 256 MB	<b>Controller</b> Intel HD Graphics <b>VRAM</b> Shared system memory max. 1GB
<b>Expansion Slot</b>	<b>PCIe x16</b> - <b>PCIe x1</b> 1 <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -	<b>PCIe x16</b> 1 <b>PCIe x1</b> 1 <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -	<b>PCIe x16</b> 1 <b>PCIe x1</b> - <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -
<b>Storage</b>	<b>Optical Drive (supported)</b> Slim DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 1 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 2 <b>3.5" (internal)</b> 1 <b>2.5" (front-accessible)</b> - <b>Compass/Flash (supported)</b> -	<b>Optical Drive (supported)</b> Slim DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 1 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 2 <b>3.5" (internal)</b> 1 <b>2.5" (front-accessible)</b> - <b>Compass/Flash (supported)</b> -	<b>Optical Drive (supported)</b> Slim DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 1 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 2 <b>3.5" (internal)</b> 1 <b>2.5" (front-accessible)</b> - <b>Compass/Flash (supported)</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82578L, 82566DM	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82566DM, Intel 82573V	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82583V, Intel 82578LM, Intel 82563V
<b>Front I/O Interface</b>	<b>USB</b> 2 <b>PS/2</b> - <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -	<b>USB</b> 2 <b>PS/2</b> 1 <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -	<b>USB</b> 1 <b>PS/2</b> - <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -
<b>Real I/O</b>	<b>USB</b> 4 <b>PS/2</b> 2 <b>COM</b> 1 <b>VGA</b> 1 <b>LVDS</b> 1 <b>Parallel</b> 1 <b>RJ-45</b> 2 <b>Audio</b> 2 (Mic-in, Line-out)	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> - <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> -	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> 2 <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> 2 (Mic-in, Line-out)
<b>Watchdog Timer</b>	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds
<b>Power Supply</b>	<b>Power Output Wattage</b> 300 W <b>Input Range</b> AC 100 ~ 240 V	<b>Power Output Wattage</b> 300 W <b>Input Range</b> AC 100 ~ 240 V	<b>Power Output Wattage</b> 450 W <b>Input Range</b> AC 100 ~ 240 V
<b>Cooling</b>	<b>Chassis Fan</b> 2 (4 cm / 24 CFM each) <b>Air Filter</b> -	<b>Chassis Fan</b> 4 (4cm/24 CFMx3 + 15 CFM x1) <b>Air Filter</b> -	<b>Chassis Fan</b> 2 (8 cm / 47 CFM each) <b>Air Filter</b> -
<b>Physical Characteristics</b>	<b>Dimensions (W x H x D)</b> 480 x 44 x 617 mm (19" x 1.7" x 24.3") <b>Weight</b> 10 kg (22 lb)	<b>Dimensions (W x H x D)</b> 480 x 44 x 617 mm (19" x 1.7" x 24.3") <b>Weight</b> 10 kg (22 lb)	<b>Dimensions (W x H x D)</b> 482 x 88 x 451 mm (19" x 3.5" x 17.8") <b>Weight</b> 13.5 kg (33.5 lb)

Model Name	S-S-2U2000-4S03	S-S-2U2320-7A01	S-S-4U4320-7A01	S-S-4U4320-7S01
<b>Form Factor</b>	2U Rackmount	2U Rackmount	4U Rackmount	4U Rackmount
<b>Processor System</b>	<b>Chipset</b> Intel S45 + Q25B D0 <b>CPU</b> Intel Core i7/i5/i3 processor Max. 3.4 GHz <b>L2/L3 Cache</b> 12 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR3 1066/1333 MHz Max. 8 GB	<b>Chipset</b> Intel Q37 <b>CPU</b> Intel Core i7/i5/i3 processor Max. 2.7 GHz <b>L2/L3 Cache</b> 8 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR3 1066/1333 MHz Max. 8 GB	<b>Chipset</b> Intel Q37 <b>CPU</b> Intel Core i7/i5/i3 processor Max. 2.7 GHz <b>L2/L3 Cache</b> 8 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR3 1066/1333 MHz Max. 8 GB	<b>Chipset</b> Intel Q37 <b>CPU</b> Intel Core i7/i5/i3 processor Max. 2.7 GHz <b>L2/L3 Cache</b> 8 MB <b>Core number/ Front Side Bus</b> 800/1066/1333 MHz <b>Memory</b> DDR3 1066/1333 MHz Max. 8 GB
<b>Graphic</b>	<b>Controller</b> Intel HD Graphics <b>VRAM</b> Shared with 32GB system memory	<b>Controller</b> Intel HD Graphics <b>VRAM</b> 1GB maximum shared memory with 2GB and above system memory installed	<b>Controller</b> Intel HD Graphics <b>VRAM</b> 1GB maximum shared memory with 2GB and above system memory installed	<b>Controller</b> Intel HD Graphics <b>VRAM</b> 1GB maximum shared memory with 2GB and above system memory installed
<b>Expansion Slot</b>	<b>PCIe x16</b> 1 <b>PCIe x1</b> - <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -	<b>PCIe x16</b> 4 <b>PCIe x1</b> - <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -	<b>PCIe x16</b> 1 <b>PCIe x1</b> - <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -	<b>PCIe x16</b> 1 <b>PCIe x1</b> - <b>PCI</b> - <b>PCMG/PCI</b> - <b>PCMG</b> - <b>ISA</b> - <b>PCI-104</b> -
<b>Storage</b>	<b>Optical Drive (supported)</b> Slim DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 1 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 2 <b>3.5" (internal)</b> 1 <b>2.5" (front-accessible)</b> 4 <b>Compass/Flash (supported)</b> -	<b>Optical Drive (supported)</b> Slim DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 1 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 2 <b>3.5" (internal)</b> 1 <b>2.5" (front-accessible)</b> 4 <b>Compass/Flash (supported)</b> -	<b>Optical Drive (supported)</b> DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 2 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 3 <b>3.5" (internal)</b> 4 <b>2.5" (front-accessible)</b> 4 <b>Compass/Flash (supported)</b> -	<b>Optical Drive (supported)</b> DVD-ROM / CD-RW / CD-ROM <b>HDD (supported)</b> SATA <b>Slim ODD Bay</b> 2 <b>5.25" (front-accessible)</b> - <b>3.5" (front-accessible)</b> 3 <b>3.5" (internal)</b> 4 <b>2.5" (front-accessible)</b> 4 <b>Compass/Flash (supported)</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82583V	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82578M, Intel 82563V	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82578M, Intel 82563V	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> Intel 82566DM, Intel 82573V
<b>Front I/O Interface</b>	<b>USB</b> 1 <b>PS/2</b> - <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -	<b>USB</b> 4 <b>PS/2</b> 2 <b>COM</b> 2 <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> 2 (Mic-in, Line-out)	<b>USB</b> 1 <b>PS/2</b> - <b>COM</b> - <b>Parallel</b> - <b>RJ-45</b> - <b>Audio</b> - <b>VGA</b> - <b>Reserved Cutouts</b> -
<b>Real I/O</b>	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> 2 <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> 2 (Mic-in, Line-out)	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> - <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> -	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> 2 <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> 2 (Mic-in, Line-out)	<b>USB</b> 4 <b>PS/2</b> 1 <b>COM</b> - <b>VGA</b> 1 <b>LVDS</b> - <b>Parallel</b> - <b>RJ-45</b> 2 <b>Audio</b> -
<b>Watchdog Timer</b>	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds	<b>Output</b> System reset <b>Interval</b> Programmable 1 ~ 255 seconds
<b>Power Supply</b>	<b>Power Output Wattage</b> 300 W <b>Input Range</b> AC 100 ~ 240 V	<b>Power Output Wattage</b> 300 W <b>Input Range</b> AC 100 ~ 240 V	<b>Power Output Wattage</b> 450 W <b>Input Range</b> AC 100 ~ 240 V	<b>Power Output Wattage</b> 450 W <b>Input Range</b> AC 100 ~ 240 V
<b>Cooling</b>	<b>Chassis Fan</b> 2 (8 cm / 47 CFM each) <b>Air Filter</b> -	<b>Chassis Fan</b> 2 (8 cm / 47 CFM each) <b>Air Filter</b> -	<b>Chassis Fan</b> 2 (12 cm / 85 CFM) + 1 (12 cm / 14 CFM) + 1 (6 cm / 28 CFM) <b>Air Filter</b> -	<b>Chassis Fan</b> 2 (12 cm / 85 CFM) + 1 (12 cm / 14 CFM) + 1 (6 cm / 28 CFM) <b>Air Filter</b> -
<b>Physical Characteristics</b>	<b>Dimensions (W x H x D)</b> 482 x 88 x 480 mm (19" x 3.5" x 18.9") <b>Weight</b> 16 kg (35 lb)	<b>Dimensions (W x H x D)</b> 482 x 88 x 480 mm (19" x 3.5" x 18.9") <b>Weight</b> 16 kg (35 lb)	<b>Dimensions (W x H x D)</b> 482 x 177 x 479 mm (19" x 7.0" x 18.9") <b>Weight</b> 18 kg (39 lb)	<b>Dimensions (W x H x D)</b> 482 x 177 x 479 mm (19" x 7.0" x 18.9") <b>Weight</b> 18 kg (39 lb)

# Industrial Computer Chassis



Height (1U 1.75")		Desktop / Wallmount					
Model Name		ARK-6610/ ARK-6620	ARK-6622H/L	IPC-5120/7120	IPC-5122	IPC-7130	IPC-7132
Form Factor Support		Mini-ITX	Mini-ITX	MicroATX	MicroATX	ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX
Drive Bay	Slim Optical Drive	1/1	-	-	1	-	-
	3.5" Front	-	-	1	1	2	2
		Internal	1/1	2 x 2.5"	1	1	1
	5.25"	-	-	1	-	1	1
Front I/O	USB	Yes (on motherboard) + 2 cutouts	Yes (on motherboard)	Yes (on motherboard)	Yes	Yes	Yes
	PS/2	Yes (on motherboard)	Yes (on motherboard)	Yes (on motherboard)	-	-	-
Cooling	No. of Fans	1/2	2/1	2	1	2	1
	CFM	52.5/27.72	27.7/15.5	1 x 85 1 x 10	85	1 x 85 1 x 27.7	85
Power	AC	180 W ATX/PFC 270 W ATX/PFC	180 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC
	AC Redundant	-	-	-	-	-	-
	DC	-	-	-	-	-	-
No. of Slots / No. of Full-size Cards		1 for ARK-6610	1	7/0	4/0	7/4	7/0
Passive Backplane Options		PCMG 1.0	-	-	-	-	-
		PCMG 1.3	-	-	-	-	PC-5809-04 PC-5809-06
System Fault Detection		Yes	Yes	-	Yes	Yes	-
Dimensions (W x H x D)	mm	250 x 156 x 253 (ARK-6610) 272 x 88 x 232 (ARK-6620)	272 x 88 x 232	380 x 164 x 316.5	157 x 360 x 340	200 x 320 x 480	200 x 330 x 430
	inch	9.8 x 6.1 x 10 (ARK-6610) 10.7 x 3.5 x 9.1 (ARK-6620)	10.7 x 3.5 x 9.1	15 x 6.5 x 12.5	6.2 x 14.2 x 13.4	7.87 x 12.59 x 18.89	7.87 x 12.99 x 16.92
Weight	kg	4.8 (ARK-6610) / 3.5 (ARK-6620)	3.49	9	6.5	12.8	9.96
	lb	10.5 (ARK-6610) / 7.7 (ARK-6620)	7.68	19.8	14.3	28.2	21.9



Desktop / Wallmount						
IPC-7220	IPC-6006	IPC-6806	IPC-6908	IPC-3026	IPC-6025	IPC-6606/6608
ATX/MicroATX	PCMG 1.0	PCMG 1.0	PCMG 1.0/1.3	PCMG 1.0/1.3	PCMG 1.0/1.3	PCMG 1.0/1.3
-	-	-	-	-	-	-
1	-	1	1	-	1	1
1	-	1	1	1	1	-
2	-	1 (PC-6806) 0 (PC-6806/6808)	2	-	-	1 (PC-6606) 2 (PC-6608)
Yes	-	Yes	-	Yes	Yes	Yes
Yes	-	-	-	-	-	-
1	-	1	2	1	1	1
85	-	58 (PC-6806) 53 (PC-6806/6808)	53	53	53	53 (PC-6606) 85 (PC-6608)
300 W ATX/PFC 400 W ATX/PFC	-	150 W ATX/PFC (PC-6806) 250 W ATX/PFC (PC-6806) 300 W ATX/PFC (PC-6806)	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC	150 W ATX/PFC	270 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC
300 W 1+1 400 W 1+1	-	-	300 W 1+1	-	-	-
300 W ATX	-	-	300 W ATX	-	-	-
7/7	6/6 (PC-6006/6008) 6/0 (PC-6006)	6/0 (PC-6806) 0/0 (PC-6806/6808)	8/8	6/0	5/5	6/6 (PC-6606) 8/8 (PC-6608)
-	refer to Chapter 5					
-	refer to Chapter 5					
Yes	-	-	Yes	Yes	-	-
200 x 320 x 480	158 x 188 x 368 (PC-6806/6808) 158 x 188 x 215 (PC-6006)	151 x 170 x 285 (PC-6806) 165 x 170 x 292 (PC-6806) 158 x 213 x 352 (PC-6808)	200 x 300 x 483	150 x 222 x 270	111 x 212 x 420	173 x 254 x 396 (PC-6606) 173 x 315 x 410 (PC-6608)
7.9 x 12.6 x 18.9	6.2 x 7.3 x 14.5 (PC-6806/6808) 6.2 x 7.3 x 8.4 (PC-6006)	7.7 x 6.7 x 11.2 (PC-6806) 6.3 x 6.7 x 13.4 (PC-6806) 7.8 x 6.4 x 13.4 (PC-6808)	7.9 x 11.8 x 18.2	5.9 x 8.7 x 10.6	4.4 x 8.3 x 16.5	6.8 x 12.4 x 16.1
13.7	2.5 (PC-6006/6008) 1.8 (PC-6006)	5.6 (PC-6806) 6.3 (PC-6806) 7.3 (PC-6808)	12.9	4.4	4.7	9 (PC-6606) 11 (PC-6608)
30.5	5.5 (PC-6006/6008) 3.5 (PC-6006)	12.3 (PC-6806) 13.9 (PC-6806) 17.2 (PC-6808)	28.5	9.7	10.3	19.8 (PC-6606) 24.2 (PC-6608)



# Industrial Computer Chassis



Height (1U 1.75")		1U Rackmount			2U Rackmount			4U Rackmount		
Model Name		IPC-100-60SE	ACP-1010/1320	ACP-2000/IPC-602	ACP-2010MB/ACP-2320MB	IPC-603MB	ACP-4000	ACP-4010/ACP-4320	ACP-4360	
Form Factor Support		Mini-ITX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3	ATX/MicroATX	ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	
Drive Bay	Slim Optical Drive	1	1	1/-	-/1	1	-	-	1	
	3.5"	Front	-	1/2 (SAS/SATA)+1	2/1	1/2 (SAS/SATA)	-	1	1/2 (SAS/SATA) + 1	6 (SAS/SATA) + 1
		Internal	-	1/-	-/1	2	1	-	1/-	-
5.25"	-	-	-	-/1	1/-	-	3	2	-	
Front I/O	USB	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	
	PS/2	-	-	Yes	Yes	-	Yes	-	-	
Cooling	No. of Fans	0	2 (MB, 4 BP)	2	2/3	2	2	2/2	3	
	CFM	-	2 x 24 (MB) / 3 x 24 + 1 x 15 (BP)	2 x 47 / 2 x 40	2 x 47 / 2 x 47 + 1 x 28	47	85	2 x 85 / 1 x 114 + 1 x 28	1 x 114 + 2 x 47	
Power	AC	-	250 W ATX/PFC / 300 W ATX/PFC	250 W ATX/PFC (PC-602) / 300 W ATX/PFC / 400 W ATX/PFC	300 W ATX/PFC / 400 W ATX/PFC	300 W ATX/PFC	300 W ATX/PFC / 400 W ATX/PFC	300 W ATX/PFC / 400 W ATX/PFC	400 W ATX/PFC / 500 W ATX/PFC	
	AC Redundant	-	-	300 W 1+1 (RCP-3000)	-	-	300 W 1+1 / 400 W 1+1	300 W 1+1 / 400 W 1+1	400 W 1+1	
	DC	60W	-	-	-	-	-	-	-	
	No. of Slots / No. of Full-size Cards	2/0	MB: 1/1 / BP: 3/2	6/6	3/3	3/0	15/11	15/15 (RCP-4010) / 15/19 (RCP-4320)	15/9	
Passive Backplane Options	PCMG 1.0	-	refer to Chapter 5	-	-	-	refer to Chapter 5	-		
	PCMG 1.3	-	refer to Chapter 5	-	-	-	refer to Chapter 5	-		
System Fault Detection		-	Yes	Yes	Yes	-	Yes	Yes	Yes	
Dimensions (W x H x D)	mm	480 x 44 x 288	1010 / 480 x 44 x 497 / 1320 / 480 x 44 x 617	482 x 88 x 451	482 x 88 x 480	482 x 88 x 308	482 x 177 x 479	482 x 177 x 479	482 x 177 x 501	
	inch	19 x 1.7 x 11.3	1010 / 19 x 1.7 x 19.6 / 1320 / 19 x 1.7 x 24.3	19 x 3.5 x 17.8	19 x 3.5 x 18.9	19 x 3.5 x 12.1	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 19.8	
Weight	kg	2.2	8	11.5/11.3	10.7/11.7	6.4	15.2	16.6/17.6	19.5	
	lb	4.8	17.6	25.3/24.9	23.9/25.7	14.1	33.5	36.5/38.7	42.9	



4U Rackmount							5U Rackmount	6U Rackmount	7U Rackmount
IPC-510	IPC-610-F	IPC-610-H	IPC-610-L	IPC-611	IPC-619/619S	IPC-623	ACP-5360	IPC-622	ACP-7360
PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3 ATX/MicroATX	PCMG 1.0/1.3	PCMG 1.0/1.3	PCMG 1.0	PCMG 1.0/1.3
-	-	-	-	-	-	-	1	-	1
1	1	1	1	1	-	1	6 (SAS/SATA)+1	-	6 (SAS/SATA)+1
1	1	-	-	-	1	1	-	2	-
3	3	3	3	3	2/1	3	1	4	2
Yes	-	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
Yes	-	Yes	-	-	-	-	Yes	-	Yes
1	1	2	1	1	1	3	7	4	6
77	85	85	85	85	85	114	3 x 114 + 2 x 47 + 2 x 25	58	4 x 58 + 2 x 47
250 W ATX/PFC / 300 W ATX/PFC	300 W ATX/PFC / 400 W ATX/PFC	300 W ATX/PFC / 400 W ATX/PFC	250 W ATX/PFC / 300 W ATX/PFC	250 W ATX/PFC / 300 W ATX/PFC	250 W ATX/PFC / 300 W ATX/PFC / 400 W ATX/PFC	400 W ATX/PFC / 500 W ATX/PFC	-	400 W ATX/PFC / 500 W ATX/PFC	-
-	300 W 1+1	300 W 1+1	-	-	-	480 W 1+1 / 570 W 2+1 / 610 W 3+1	480 W 1+1 / 570 W 2+1 / 610 W 3+1	480 W 1+1	480 W 1+1 / 570 W 2+1 / 610 W 3+1
-	-	-	-	-	-	-	-	-	-
14/8	15/10	15/11	15/11	15/11	15/10 / 10/0	20/20	20/20	20/20	20/20
refer to Chapter 5									
refer to Chapter 5									
-	-	-	-	-	-	Yes	Yes	Yes	Yes
482 x 177 x 448	85 / 482 x 177 x 449 / MB / 482 x 177 x 459	482 x 177 x 479	482 x 177 x 479	482 x 177 x 479	482 x 177 x 430 / 482 x 177 x 275	482 x 177 x 657	482 x 222 x 682	482 x 286 x 484	482 x 307 x 502
19 x 7 x 17.6	85 / 19 x 7 x 17.8 / MB / 19 x 7 x 18.6	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 16.9 / 19 x 7 x 10.8	19 x 7 x 26	19 x 8.75 x 26	19 x 10.5 x 18.3	19 x 12.1 x 19.7
10.7	18	15	14.5	14.2	15 / 8	26	30	30	35
23.5	39.6	33	31.9	31.2	33/17.6	57	66	66	77

# PICMG 1.3 System Host Boards



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Model Name	LGA 775 PICMG 1.3 SHB		LGA 1155 PICMG 1.3 SHB	
	PCE-5020		PCE-5026	
Processor System	CPU	Intel Core 2 Duo/Pentium/Celeron 400/Pentium 4/Celeron D LGA775 processors	Intel Core 2/Core i3/Core i5/Pentium/Celeron LGA1155 processors	
	Max. Speed	3.06/3.06/2.0/3.4/ 3.6 GHz	3.4/3.1/3.3/3.1/2.5 GHz	
	Cache	L2: 4 MB/2 MB/512 KB/2 MB/512 KB	L3: 8/6/3/3/2 MB	
	Chipset	Intel 945GC / ICH7R	Intel H61	
	BIOS	Award 4 MBI (FBI)	AMI 64 Mbit SPI Flash	
Backplane Buses	FSB	1066/800/533 MHz		
	PCIe	One x16 & four x1	One x16 & four x1	
	PCI	32-bit/33 MHz PQ	32-bit/33 MHz PQ	
	Controller	Chipset integrated Intel Graphics Media Accelerator 950	Chipset integrated Intel HD Graphics	
Graphics	VRAM	Shared with 224 MB system memory	Shared system memory is subject to OS	
	Video out	VGA	VGA/DVI-D	
	Interface	10/100/1000 Mbps	10/100/1000 Mbps	
Ethernet	Controller	Intel 82573L/Intel 82573K	Intel 82579V	
	Connector	RJ-45 x 2	RJ45 x 1	
	Disabled in BIOS	Yes	Yes	
	Technology	Dual-channel DDR3 533/667 MHz	Dual-channel (Non-ECC) DDR3 1066/1333/1600 (depends on CPU Spec)	
Memory	Max. Capacity	4 GB	16 GB	
	Socket	240-pin DIMM x 2	240-pin DIMM x 2	
	Max. Data Transfer Rate	300 MB/s	300 MB/s SATA2	
SATA	Channel	4	4 x SATA2	
	RAID	0, 1, 5, 10	-	
	Mode	ATA 100/6G/33	-	
EIDE	Channel	1 (Max. two devices)	-	
	USB	Max. 8 (USB 2.0 compliant) 4 on SHB by pin headers, 4 to backplane	Ten USB 2.0 (Pin-header*4 + Vertical USB A type*2) + 4 on backplane	
	Serial	4 (1 RS-485 and 3 RS-232) with Pin Header	2 RS-232 with Pin Header	
I/O Interface	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	
	FDD	1	-	
	PS/2	1	1	
	LAN	WG: 1	-	
	LAN	GG: 2	-	
	ORS (Onboard Security Hardware Monitor)	Yes	Yes	
	Output	System reset	System reset	
Watchdog Timer	Interval	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min	
	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	
Miscellaneous	Advantech SMMIP-1000	-	Yes	
	IPMI	-	-	
	Solid State Disk	Optional (CompactFlash Type III)	-	

Model Name	LGA1155 PICMG 1.3 SHB		LGA 1155 PICMG 1.3 SHB		LGA 1155 PICMG 1.3 SHB	
	PCE-5126		PCE-5127		PCE-7127	
Processor System	CPU	Intel Xeon/Core i7/Core i5/Core i3/Pentium/Celeron LGA1155 processors	Intel Core i7/Core i5/Core i3/Pentium/Celeron LGA1155 processors	Intel Xeon/Core i7/Pentium/Celeron LGA1155 processors	Intel Xeon/Core i7/Pentium/Celeron LGA1155 processors	
	Max. Speed	3.4/ 3.4/ 3.1/ 3.3/ 3.1/ 2.5 GHz	3.4/ 3.1/ 3.3/ 3.1/ 2.5 GHz	3.5/ 3.3/ 3.1/ 2.5 GHz		
	Cache	L3: 8/ 6/ 3/ 3/ 2 MB	L3: 8/ 6/ 3/ 3/ 2 MB	L3: 8/ 3/ 3/ 2 MB		
	Chipset	QIC: Intel QM77 QVG: Intel 865 WIG: Intel C206	Intel Q77	Intel C216		
	BIOS	AMI 64 Mbit SPI Flash	AMI 64 Mbit SPI Flash	AMI 64 Mbit SPI Flash		
Backplane Buses	FSB	1066/800/533 MHz				
	PCIe	Two x16/Duo x16 & four x1	One x16 & four x1	Two x16 or One x16 & four x1		
	PCI	32-bit/33 MHz PQ	32-bit/33 MHz PQ	32-bit/33MHz PQ		
	Controller	Chipset integrated Intel HD Graphics	Chipset integrated Intel HD Graphics	Chipset integrated Intel HD Graphics		
Graphics	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS		
	Video out	VGA/DVI-D (optional)	VGA/DVI-D	VGA/DVI-D		
	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps		
Ethernet	Controller	QVG: Intel 82579LM; QIC: Intel 82579LM/82583M WIG: Intel 82579LM/82574L	Intel 82579LM/82583M	Intel 82579LM/82574L		
	Connector	GG2/WIG2: RJ-45 x 2 QVG: RJ-45 x 1	RJ45 x 2	RJ45 x 2		
	Disabled in BIOS	Yes	Yes	Yes		
	Technology	Dual-channel (ECC) DDR3 1066/1333 (Only WIG2 version supports ECC memory)	Dual-channel (Non-ECC) DDR3 1333/1600	Dual-channel (ECC) DDR3 1333/1600		
Memory	Max. Capacity	16 GB	16 GB	16 GB		
	Socket	240-pin DIMM x 2	240-pin DIMM x 2	240-pin DIMM x 2		
	Max. Data Transfer Rate	300 MB/s SATA2 & 600 MB/s SATA3	300 MB/s SATA2 & 600 MB/s SATA3	300 MB/s SATA2 & 600 MB/s SATA3		
SATA	Channel	GG2 & WIG2: 2 x SATA2, 4 x SATA2 (QVG: 1 x SATA2, 5 x SATA2)	2 x SATA2, 4 x SATA2	2 x SATA2, 4 x SATA2		
	RAID	GG2 & WIG2: SW RAID 0, 1, 5, 10	SW RAID 0, 1, 5, 10	SW RAID 0, 1, 5, 10		
	Mode	-	-	-		
EIDE	Channel	-	-	-		
	USB	WG2/QG2: Thirteen USB2.0 (Pin-header*8 + USB A type*1) + 4 on backplane QVG: Ten USB2.0 (Pin-header*6 + 4 on backplane)	Nine USB2.0 (Pin-header*4 + USB Type-A*1 + 4 on backplane); Three USB3.0 (Pin-Header*2 + Rear*1)	Nine USB2.0 (Pin-header*4 + USB Type-A*1 + 4 on backplane); Three USB3.0 (Pin-Header*2 + Rear*1)		
	Serial	2 RS-232 with Pin Header	2 RS-232 with Pin Header	2 RS-232 with Pin Header		
I/O Interface	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)		
	FDD	-	-	-		
	PS/2	1	1	1		
	LAN	1 (for QVG version)	-	-		
	LAN	2 (for GG2/WIG2 version)	2	2		
	ORS (Onboard Security Hardware Monitor)	Yes	Yes	Yes		
	Output	System reset	System reset	System reset		
Watchdog Timer	Interval	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min		
	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E		
Miscellaneous	Advantech SMMIP-1000	Yes	Yes	Yes		
	IPMI	Yes (WIG2)	-	-		
	Solid State Disk	-	-	Yes		

Selection Guide

# PICMG 1.0 Single Board Computers



Model Name	Pentium M PICMG 1.0 SBC	Core 2 Duo PICMG 1.0 SBC	
	PCA-6008	PCA-6010	
Processor System	CPU	Intel Pentium M/Celeron M (G2 version only) Optional: Celeron M (V3 version only)	Intel Core 2 Duo/Pentium/Celeron 400/Pentium 4/Celeron D LG4775 processors
	Max. Speed	2.26/1.7 GHz (G2 version only) 1.0 GHz/800 MHz (V3 version only)	3.06 GHz/3.06 GHz/2.2 GHz/2.2 GHz/3.6 GHz
	Max. L2 Cache	G2: 1 MB/2 MB V3: 512 KB	4 MB/2 MB/512 KB/2 MB/512 KB
Bus	Chipset	Intel 915GME + ICHM (G2 version only) Intel 915GME + ICH6M (V3 version only)	Intel 945GC + ICH7
	BIOS	Award 4 Mbit FLASH	Award 8 Mbit SPI Flash
	FSB	533/400 MHz	1066/800/533 MHz
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
Graphics	Controller	Chipset Integrated Intel Graphics Media Accelerator 900	Chipset Integrated Intel Graphics Media Accelerator 950
	VRAM	Shared with system memory up to 128 MB	Shared with system memory up to 224 MB
Ethernet	Interface	LVDS/DVI (G2 version only)	DVI (G2 version only)
	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: RTL8111B LAN2: RTL8111B	LAN1: Intel 82574L LAN2: Intel 82574L
	Connector	RJ-45 x 2	RJ-45 x 2
Memory	Technology	Dual-channel DDR2 533/400 MHz	Dual-channel DDR2 667/533 MHz
	Max. Capacity	2 GB	4 GB
	Socket	240-pin DIMM x 2	240-pin DIMM x 2
SATA	Max. Data Transfer Rate	150 MB/s	300 MB/s
	Channel	2	4
EIDE	Mode	ATA 100/66/33	ATA 100/66/33
	Channel	1 (Max. two devices)	1 (Max. two devices)
I/O Interface	USB	4 (USB 2.0, for V3 version) 8 (USB 2.0, for G2 version)	8 (USB 2.0, for V3 version) 7 (USB 2.0, for G2 version)
	Serial	G2 version: 5 (RS-232) / (RS-232/422/485) V3 version: 1 (RS-232) / (RS-232/422/485)	2 (RS-232)
	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
	FDI	1	1
	PS/2	1	1
	LAN	1 (for V3 version) 2 (for G2 version)	1 (for V3 version) 2 (for G2 version)
	OBS (Hardware Monitor)	Yes	Yes
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min
Miscellaneous	Audio	PCA-AUDIO-00A1E	PCA-AUDIO-HDA1E
	Solid State Disk	Yes	Yes

Model Name	Core 2 Quad PI CMG 1.0 SBC	Atom N455/D525 PICMG 1.0 SBC	Core 2 Duo PICMG 1.0 SBC	
	PCA-6011	PCA-6012	PCA-6194	
Processor System	CPU	Intel Core 2 Quad Core 2 Duo/Pentium dual-core/Celeron LG4775 processors	Optional Intel Atom N455 (G2 version only) Optional Intel Atom D525 (G2 version only)	Intel Core 2 Duo/Pentium/Celeron 400/Pentium 4/Celeron D LG4775 processors
	Max. Speed	3.0 GHz/3.16 GHz/2.33 GHz/2.2 GHz	1.66 GHz/1.8 GHz	3.06 GHz/3.06 GHz/2.2 GHz/3.4 GHz/3.6 GHz
	Max. L2 Cache	12 MB/6 MB/6 MB/512 KB	512 KB/1 MB	4 MB/2 MB/512 KB/2 MB/512 KB
Bus	Chipset	Intel G41 + ICH7 (G2 version only) Intel G41 + ICH7R (G2 version only)	Intel ICHM	Intel GME + ICH6D
	BIOS	AMI 16 Mbit SPI Flash	AMI 16Mbit SPI Flash	Award 16 Mbit SPI Flash
	FSB	1333/1066/800 MHz	-	1066/800/533 MHz
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
Graphics	Controller	HSA (SA High Drive)	HSA (SA High Drive)	HSA (SA High Drive)
	VRAM	Shared with system memory up to 352 MB	Shared with system memory up to 224 MB	Shared with system memory up to 256 MB
Ethernet	Interface	DVI (Optional)	LVDS (G2 version only)	-
	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel 8257V LAN2: Intel 8257V	LAN1: Intel 8257V LAN2: Intel 8257V	LAN1: Intel 82579M LAN2: Intel 82579V
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
Memory	Technology	Dual-channel DDR2 1066/800 MHz	Dual-channel DDR2 800 MHz	Dual-channel DDR2 800/667/533 MHz
	Max. Capacity	4 GB	2 GB (V3 version only) 4 GB (G2 version only)	8 GB
	Socket	240-pin DIMM x 2	204-pin SODIMM x 2	240-pin DIMM x 4
SATA	Max. Data Transfer Rate	300 MB/s	300 MB/s	300 MB/s
	Channel	4	3	6
EIDE	Mode	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33
	Channel	1 (Max. two devices)	1 (Max. two devices)	1 (Max. two devices)
I/O Interface	USB	8 (USB 2.0, for V3 version) 7 (USB 2.0, for G2 version)	8 (USB 2.0, for V3 version) 9 (USB 2.0, for G2 version)	6 (USB 2.0)
	Serial	2 (RS-232)	2 (RS-232)	1 (RS-232) / (RS-232/422/485)
	Parallel	1 (SPP/EPP/ECP)	1 (EPP/ECP)	1 (SPP/EPP/ECP)
	FDI	1	1	1
	PS/2	1	1	1
	LAN	1 (for V3 version) 2 (for G2 version)	1 (for V3 version) 2 (for G2 version)	1 (for V3 version) 2 (for G2 version)
	OBS (Hardware Monitor)	Yes	Yes	Yes
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min	Programmable, 1-255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Solid State Disk	Yes	Yes	Yes

Selection Guide

# Half-Size Single Board Computers

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Specifications		PCIe Half-Size SBC	PCI Half-Size SBC	PCI Half-Size SBC
		PCE-3026	PCI-7020	PCI-7030
Processor System	CPU	Intel LGA 1155 processor	Intel Core 2 Duo/Pentium/Celeron 4xx/Pentium 4/Atom D1/UMI79 processors	Intel Atom N270 processor onboard
	Speed	3.4 GHz	3.06 GHz	1.6 GHz
	L2 Cache	up to 8MB	Up to 4 MB	512 KB
	Chipset	H61	Intel 945GC + ICH7R	Intel 945GSE+Intel ICH7M
	BIOS	AMI 64 Mbit SPI Flash	Award 8 MB SPI Flash	Award SPI 8 MB SPI Flash
Bus	FSB	N/A	533/800/1066 MHz	400/533 MHz
	PCIe	One PCIe x16, Four PCIe x1	-	-
	PCI	-	32-bit/33 MHz PCI	32-bit/33 MHz PCI
	ISA	-	-	-
Graphics	Controller	Chipset integrated graphics with Intel HD	Chipset integrated Intel Graphics Media Accelerator 950	Chipset integrated Intel Graphics Media Accelerator 950
	VRAM	Shared with system memory is subject to OS	Shared with system memory up to 224 MB	Shared with system memory up to 224 MB
	Video output	D-sub VGA port, DMI	D-sub VGA port, DVI (Optional)	D-sub VGA port, 18.96 bit LVDS, DVI (E2 SKU)
Ethernet	Interface	10/100/1000Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Intel 82579V	Intel 82574L	Intel 82574L
	Connector	RJ-45*2	RJ-45 x 1	RJ-45 x 1 (E5 SKU) RJ-45 x 2 (E2 SKU)
	Disabled in BIOS	Yes	Yes	D-Sub VGA port, 18.96 bit LVDS, DVI(E2 SKU)
Memory	Technology	Dual Channel DDR3 1066/1333 MHz	Dual-channel DDR2 533/667 MHz	Single Channel DDR2 400/533 MHz
	Max. Capacity	8GB	4 GB	2 GB
	Socket	200-pin SO-DIMM x 2	200-pin SO-DIMM x 2	200-pin SO-DIMM x 1
SATA	Max. Data Transfer Rate	300 MB/s	300 MB/s	150 MB/s
	Channel	3	3	2
	RAID	-	-	-
EIDE	Mode	-	-	Ultra ATA 100/66/33
	Channel	-	-	1 (Max. 2 devices)
I/O Interface	USB	8	6	6 (E5 SKU) or 5 (E2 SKU)
	Serial	2 x RS-232 Optional: 4 x RS-422/485 w/ Auto-flow by COM module	Optional: 2 x RS-232 Optional: 4 x RS-422/485 w/ Auto-flow by COM module	2 x RS-232 Optional: 4 x RS-422/485 w/ Auto-flow by COM module
	Parallel	1	1	1
	FDD	-	-	1
	PS/2	1	1	1
	LAN	2	1	1 (E5 SKU) 2 (E2 SKU)
	OBS (Onboard Security Hardware Monitor)	Yes	Yes	Yes
	Watchdog Timer	Output: System reset Interval: programmable, 1~255 sec/min	System reset Programmable, 1~255 sec/min	System reset Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDAIE	PCA-AUDIO-HDAIE	PCA-AUDIO-HDAIE
	Advantech SNMP-1000	-	-	-
	IPMI	-	-	-
	Solid State Disk	-	CompactFlash Type VII	CompactFlash Type VII



Specifications		PCI Half-Size SBC	ISA Half-Size SBC	ISA Half-Size SBC	ISA Half-Size SBC
		PCI-7031	PCA-6742	PCA-6743	PCA-6782
Processor System	CPU	Intel Atom D510/N450	Advantech EWA-X4300	DMAP Vertes80DX	Intel Atom D525/N455
	Speed	1.66 GHz	300 MHz	800 MHz	D525 1.6 GHz/N455 1.6 GHz
	L2 Cache	512 KB (N450)/1 MB (D510)	L1 Cache 32 KB	256 KB	512 KB (N450)/1 MB (D525)
	Chipset	Intel Atom D510/N450+ICH7M	Advantech EWA-X4300	DMAP Vertes80DX	Intel Atom D525/N455+ICH7M
	BIOS	AMI 16 MB SPI Flash	Award integrated 256 KB ROM in EWA-X4300	Award integrated 256 KB ROM in Vertes80DX	AMI 16 MB SPI Flash
Bus	FSB	-	-	-	-
	PCIe	-	-	-	-
	PCI	-	-	-	-
	ISA	-	8/16-bit 8 MHz ISA	16-bit/8 MHz ISA	16-bit/8MHz Finger
Graphics	Controller	Embedded Gen3.5+ GFX Core technology	Chipset integrated VGA controller	Chipset integrated VGA controller	Embedded Gen3.5+ GFX Core technology
	VRAM	Shared with system memory up to 224 MB	4 MB display memory	4 MB display memory	Shared with system memory up to 224 MB
	Video output	D-Sub VGA port, LVDS	D-Sub VGA port, up to 24 bit TTL or 18/24 bit LVDS (Optional)	D-Sub VGA port, up to 24 bit TTL or 18/24 bit LVDS (Optional)	D-sub VGA port, 18 bit LVDS
Ethernet	Interface	10/100/1000 Mbps	10/100 Mbps	10/100 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel 82579V LAN2: Intel 82569V	Realtek RTL8100L	LAN on Vertes80DX	Intel 82567V
	Connector	RJ-45 x 2	RJ-45 x 1 (E5 Version)	RJ-45 x 1	RJ-45 x 1
	Disabled in BIOS	Yes	Yes	Yes	Yes
Memory	Technology	Onboard 1G DDR2 667 MHz (E2 PCI-7031) Single Channel DDR2 667 MHz (E5 PCI-7031) 2 GB (E5 PCI-7031)	Default onboard DDR 2 128 MB	Default onboard DDR2 256 MB (E5 PCI-7031) Default onboard DDR2 512 MB (E5 PCI-7031)	Single Channel DDR2 667 MHz (E5 PCI-7031) Single Channel DDR2 667/800 MHz (E5 PCI-6782)
	Max. Capacity	-	-	-	2 GB
	Socket	200-pin SO-DIMM x 1	-	-	200-pin SO-DIMM x 1
SATA	Max. Data Transfer Rate	300 MB/s	-	150 MB/s	300 MB/s
	Channel	3	-	1 (E5 SKU)	3
	RAID	-	-	-	-
EIDE	Mode	ATA 100/66/33	PIO 4	UDMA 100	ATA 100/66/33
	Channel	1 (Max. 2 devices)	1 (Max. 2 devices)	1 (Max. 2 devices)	1 (Max. 2 devices)
I/O Interface	USB	4	4	4	8
	Serial	2 x RS-232 Optional: 4 x RS-422/485 w/ Auto-flow by COM module	1 x RS-232/422/485 3 x RS-232	2 x RS-232/422/485 2 x RS-232 (F SKU)	2 x RS-232 Optional: 4 x RS-422/485 w/ Auto-flow by COM module
	Parallel	1	1	1	1
	FDD	-	-	(Optional)	1
	PS/2	1	1	1	1
	LAN	2	1 (E5)	1	1
	OBS (Onboard Security Hardware Monitor)	Yes	Yes	Yes	Yes
	Watchdog Timer	Output: System reset Interval: Programmable, 1~255 sec/min	System reset Programmable, 1~255 sec/min	System reset/RQ11 Programmable, 1~255 sec/min	System reset Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDAIE	-	-	PCA-AUDIO-HDAIE
	Advantech SNMP-1000	-	-	-	-
	IPMI	-	-	-	-
	Solid State Disk	-	CompactFlash Type VII	CompactFlash Type VII	CompactFlash Type VII

Selection Guide

# PICMG1.3 Full-Size SHB Backplanes

Server Grade Compatible with PCE-Series CPU Boards

es: Supported/-: Not supported

Table with columns for Model Name, PCIe (x16, x8, x4, x1), PCI-X (64/100, 64/133, 32/33), PCI (ACP-1010, ACP-1330, ACP-2000B, IPC-602, IPC-510, IPC-610), Rackmount Chassis, and Wallmount/Desktop Chassis.

Table with columns for Model Name, Backmount Chassis (IPC-611 to IPC-623), Rackmount/Desktop Chassis (IPC-622 to IPC-6908), and other specifications.

Des-top Compatible with PCE-Series CPU Boards

es: Supported/-: Not supported

Table with columns for Model Name, PCIe (x16, x8, x4, x1), PCI-X (64/66, 64/100, 64/133, 32/33), PCI (ACP-1010, ACP-1390, ACP-2000), Rackmount Chassis (IPC-602, IPC-510, IPC-610), and other specifications.

Table with columns for Model Name, Backmount Chassis (IPC-611 to IPC-623), Wallmount/Desktop Chassis (IPC-622 to IPC-6908), and other specifications.

Selection Guide

# PCI/ISA Backplanes

Selection Guide

es: supported/-: not supported/ Δ: optional

Table with columns for Category, Model Name, ISA, PCI, Slot (PICMG, PICMG/PCI), ISA/PCI, Segment, AT, ATX, 1U Chassis (ACP-1010, ACP-1320, ACP-1330, ACP-2000), 2U Chassis (ACP-602, ACP-680, ACP-430), 4U Chassis (ACP-4320), and other specifications.

Table with columns for Category, Model Name, 4U Chassis (ACP-4010, ACP-4300, IPC-610, IPC-611, IPC-623, ACP-7360), 5U Chassis (ACP-6500), 6U Chassis (IPC-622), 7U Chassis (ACP-7360), Wallmount/Desktop Chassis (ACP-6508, IPC-6608, IPC-6606, IPC-6805, IPC-6025, IPC-6006), and Cage (IPC-6006).

Remarks:

- 1. : only sold with Advantech's 1U/2U chassis
2. IPC-622, IPC-623, ACP-7360 provides four reset buttons for quad-system. For more information regarding chassis, please refer to chapter 4.

Selection Guide

# Backplanes Compatible with Half-Size SBCs

es : supported/ : not supported

Category	Model Name	Slots per segment						Segment
		ISA	PCI	PCIe x16	PCIe x4	PCIe x1	PICMG	
Pure ISA Backplane	PCA-6104-0C2E	3	-	-	-	-	1	1
	PCA-6106-0B2E	5	-	-	-	-	1	1
	PCA-6108-0B2E	7	-	-	-	-	1	1
Pure PCI Backplane	PCA-6108E-0C2E	7	-	-	-	-	1	1
	PCA-6104P4-0B2E	-	3	-	-	-	-	1
	PCA-6105P5-0B2E	-	4	-	-	-	-	1
PCI/ISA Backplane	PCA-6108P8-0A2E	-	7	-	-	-	-	1
	PCA-6110P10-GA1E *	-	9	-	-	-	-	1
	PC-7110P3S8-00A1E	6	3	-	-	-	-	1
PICMG1.3 Half-Size Backplanes	PCE-3B03-00A1E	-	-	1	1	-	-	1
	PCE-3B06-00A1E	-	-	1	-	4	1	1
	PCE-3B06-03A1E	-	3	1	-	1	1	1

Category	Model Name	AT	ATX	IPC-619S		IPC-690B		IPC-660B		IPC-609S		IPC-606S		IPC-3026	
				Rackmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount
				10-slot	8-slot	8-slot	6-slot	6-slot	6-slot	6-slot	6-slot	6-slot	6-slot	6-slot	6-slot
Pure ISA Backplane	PCA-6104-0C2E	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	PCA-6106-0B2E	Yes	Yes	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	PCA-6108-0B2E	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-
Pure PCI Backplane	PCA-6108E-0C2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
	PCA-6104P4-0B2E	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	PCA-6105P5-0B2E	Yes	Yes	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PCI/ISA Backplane	PCA-6108P8-0A2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
	PCA-6110P10-GA1E *	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	PC-7110P3S8-00A1E	-	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-
Half-Size Backplanes	PCE-3B03-00A1E	-	Yes	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	PCE-3B06-00A1E	-	Yes	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	PCE-3B06-03A1E	-	Yes	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes

Not suitable for Advantech Chassis

Selection Guide

# ATX Motherboards



Model Name	AIMB-767	AIMB-769	AIMB-780	AIMB-781	AIMB-782
<b>Processor System</b>	Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-core/Celeron	Intel Core 2 Quad/Core 2 Duo/ Pentium Dual-core/Celeron	Intel Core i7/i5/i3/Pentium/Atom	2nd Gen Intel Core i7/i5/i3/ Pentium	2nd/3rd Gen Intel Core i7/i5/i3/ Pentium
Socket	LGA775	LGA775	LGA1156	LGA1155	LGA1155
Max. Speed	3.0 GHz/2.16 GHz/ 2.80 GHz/2.0 GHz	3.0 GHz/3.16 GHz/ 2.80 GHz/2.0 GHz	3.80 GHz/3.40 GHz/ 3.60 GHz/3.06 GHz/ 2.8 GHz	3.4 GHz/3.1 GHz/ 3.3 GHz/2.8 GHz	3.4 GHz/3.0 GHz/ 3.0 GHz/2.1 GHz
Front Side Bus	1333/1066/800 MHz	1333/1066/800 MHz	-	-	-
Cache	L2: 12 MB/6 MB/ 6 MB/512 KB	L2: 12 MB/6 MB/ 6 MB/512 KB	L3: 8 MB/4 MB/4 MB/3 MB/8 MB	L3: 8 MB/6 MB/2 MB/ 3 MB	L3: 8 MB/6 MB/2 MB/ 3 MB
Chipset	Intel G41 + ICH7R	Intel G41 + ICH7	G57 for QX2 version; 3450 for W52 version	G57/B85	G77
BIOS	AM 16 Mbit SPI	AM 16 Mbit SPI	AM 64 Mbit SPI	AM 64 Mbit SPI	AM 64 Mbit SPI
<b>Expansion Slot</b>					
PCI	5	5	4	4	4
PCIe x16	1	1	1 (Gen2)	1 (Gen2)	1 (Gen2)
PCIe x1	-	1	1	1 (Gen2)	1 (Gen2)
PCIe x4	1	-	1	1 (Gen2)	1 (Gen2)
<b>Memory</b>					
Technology	Dual channel DDR3 800/1066 MHz	Dual channel DDR3 800/1066 MHz	Dual Channel DDR3 800/1066/1333 MHz	Dual Channel DDR3 1066/1333	Dual Channel DDR3 1066/1333/1600
Max. Capacity	8 GB	8 GB	16 GB	32 GB	32 GB
Socket	2 x 240-pin DIMM	2 x 240-pin DIMM	4 x 240-pin DIMM	4 x 240-pin DIMM	4 x 240-pin DIMM
<b>Graphics</b>					
Controller	Intel GMA X4500	Intel GMA X4500	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
VRAM	Shared system memory up to 256 MB	Shared system memory up to 256 MB	Shared system memory up to 1 GB	Shared system memory up to 1 GB	Shared system memory up to 1 GB
<b>Ethernet</b>					
Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Controller	Dual Intel 82563V	GigE LAN: Realtek RTL8111DL	GigE LAN: Intel 82578LM, GigE LAN: Intel 82563V	GigE LAN: Intel 82578LM, GigE LAN: Intel 82563V	GigE LAN: Intel 82578LM, GigE LAN: Intel 82563V
<b>SATA</b>					
Max. Data Transfer Rate	300 MB/s	300 MB/s	300 MB/s	600 MB/s; 300 MB/s	600 MB/s; 300 MB/s
Channel	4 (SATA RAID)	4	6 (SATA RAID)	6 (SATA RAID)	6 (SATA RAID)
<b>EIDE</b>					
Mode	-	-	-	-	-
Channel	-	-	-	-	-
<b>VO Interface</b>					
VGA	1	1	1	1	1
DVI	1	-	1	1 for QX2 version	1
USB	8	8	14	14 for QX2 version; 12 for QW2 version	14 (4 USB 3.0 and 10 USB 2.0)
Serial	4	2	4	6 for QX2 version	6
Parallel	1	-	1	1	1
FDD	1	1	1	-	-
PS/2	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)
Ethernet (GbE)	2	1	2	2	2
<b>Audio</b>					
Output	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
Interval	System reset	System reset	System reset	System reset	System reset
<b>Watchdog Timer</b>					
Output	System reset	System reset	System reset	System reset	System reset
Interval	Programmable, 1 ~ 255 seconds	Programmable, 1 ~ 255 seconds	Programmable, 1 ~ 255 seconds	Programmable, 1 ~ 255 seconds	Programmable, 1 ~ 255 seconds

## Selection Guide Riser Cards



Model Name	AIMB-RP10P-01A1E	AIMB-RP30P-03A1E	AIMB-RP3PF-21A1E	AIMB-RP3PB-12A1E
Interface	PCI	PCI	PCIe x16PCI	PCIe x16PCI
Expansion Slots	1 PCI	3 PCI	1 PCIe x16 + 2 PCI	2 PCIe x8 + 1 PCI
Chassis	1U	Yes	-	-
	2U	-	Yes	Yes
MicroATX	AIMB-780	Yes	Yes	Yes (M2 Only)*
	AIMB-787	Yes	Yes	-
	AIMB-786	Yes	Yes	-
	AIMB-783	-	-	Yes
	AIMB-582	Yes	Yes	Yes (M2 Only)*
	AIMB-581	Yes	Yes	Yes (M2 Only)*
	AIMB-580	Yes	Yes	Yes (M2 Only)*
	AIMB-567	Yes	Yes	-
	AIMB-566	Yes	Yes	-
	AIMB-562	-	-	Yes
AIMB-501 KIOSK	Yes	Yes	Yes	

Note: AIMB-RP3PB-12A1E is not compatible with ACP-2010MB/2320MB chassis unless change special bracket to special bracket 1950014302N001 for riser card AIMB-RP3PB-12A1E



Model Name	AIMB-R410A-01A1E	AIMB-R430P-03A2E	AIMB-R430T-03A1E	AIMB-R431F-21A1E	AIMB-R432F-21A1E
Interface	PCIe x4	PCIe x4	PCIe x4	PCIe x16PCIe x4	PCIe x16PCIe x4
Expansion Slots	1 PCIe x4	3 PCI	3 PCIe x4	1 PCIe x16 + 2 PCIe x4	1 PCIe x16 + 2 PCI
Chassis	1U	Yes	-	-	-
	2U	-	Yes	Yes	Yes
ATX	AIMB-782	-	Yes	-	Yes
	AIMB-781	Yes	Yes	Yes	Yes
	AIMB-789	Yes	Yes	Yes	-
	AIMB-784	Yes	Yes	Yes	Yes
	AIMB-782	Yes	Yes	Yes	Yes
	AIMB-562 KIOSK	-	Yes	-	-
Micro ATX	AIMB-556	Yes	Yes	Yes	Yes
	AIMB-554	Yes	Yes	Yes	Yes

es: Fully compatible

△: Only one PCIe x1 connector works (bottom slot).

## Selection Guide Power Supplies

### Redundant Power Supplies



Model Name	RPS-300ATX- E	RPS-400ATX- E	1757001757 1757001760	1757001758 1757001761	1757001759 1757001767
Wattage	300 W	400 W	400 W	500 W 2+1	800 W 2+1
Input Range	100 ~ 240 VAC 60 ~ 50 Hz 8 ~ 3A	100 ~ 240 VAC 47 ~ 63 Hz 8 ~ 4A	100 ~ 240 VAC 47 ~ 63 Hz 8 ~ 4A	115 ~ 230 VAC 60 ~ 50 Hz 12 ~ 6A	115 ~ 230 VAC 60 ~ 50 Hz 15 ~ 7.5A
Outputs	+5 V @ 25 A (2.5 mm) +3.3 V @ 18 A (1.8 mm) +12 V @ 16 A (1.6 mm) -12 V @ 0.5 A +5 V @ 0.5 A +5 Vsb @ 2 A	+5 V @ 20 A (2.0 mm) +3.3 V @ 25 A (2.5 mm) +12 V @ 28 A (2.8 mm) -12 V @ 1.2 A +5 V @ 0.5 A +5 Vsb @ 2 A	+5 V @ 20 A (2.0 mm) +3.3 V @ 25 A (2.5 mm) +12 V @ 28 A (2.8 mm) -12 V @ 1 A +5 V @ 0.5 A +5 Vsb @ 2 A	+5 V @ 50 A (5.0 mm) +3.3 V @ 40 A (4.0 mm) +12 V @ 34 A (3.4 mm) -12 V @ 1 A +5 Vsb @ 1.2 A	+5 V @ 75 A (7.5 mm) +3.3 V @ 60 A (6.0 mm) +12 V @ 51 A (5.1 mm) -12 V @ 1.5 A +5 V @ 1.5 A +5 Vsb @ 1.8 A
MTBF (hrs)	100,000 @ 25C	100,000 @ 25C	100,000 @ 25C	100,000 @ 25C	100,000 @ 25C
Dimensions (H x W x D)	86 x 150 x 185 mm (3.39" x 5.91" x 7.29")	86 x 150 x 185 mm (3.39" x 5.91" x 7.29")	1757001757: 106 x 254 x 156.8 mm (4.17" x 10.34" x 7.31") 1757001760: 182 x 167 x 187.8 mm (7.20" x 6.57" x 7.39")	1757001758: 86 x 206 x 200 mm (3.74" x 14.02" x 8.00") 1757001761: 200.6 x 164 x 228 mm (7.90" x 6.46" x 9.00")	1757001759: 86 x 206 x 200 mm (3.74" x 14.02" x 8.00") 1757001767: 200.6 x 164 x 228 mm (7.90" x 6.46" x 9.00")
Safety	UL, TUV, CB, CCC	UL, TUV, CB, CCC	UL, TUV, CB, CCC	UL, TUV, CB, CCC	UL, TUV, CB, CCC
Compatible Chassis	ACP-3000, ACP-4000, ACP-4010, ACP-4300, ACP-4300, ACP-4300, PC-610, PC-611, PC-6808, PC-7250, PC-7143	ACP-4000, ACP-4010, ACP-4300, ACP-4300, PC-610, PC-611, PC-6808, PC-7250, PC-7143	1757001757, ACP-7380, PC-622, 1757001760, ACP-5380, PC-623	1757001758, ACP-7380, PC-623, 1757001761, ACP-5380, PC-623	1757001759, ACP-7380, PC-623, 1757001767, ACP-5380, PC-623
Single Power Module PIN	1757930060G	1757000276	1757940088G, ACP-7380, PC-622, 1757000296G, ACP-5380, PC-623	1757930076G, ACP-7380, PC-623, 1757000296G, ACP-5380, PC-623	1757930057G, ACP-7380, PC-623, 1757000296G, ACP-5380, PC-623

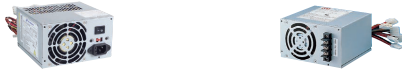
### Plus Bronze Power Supply



Model Name	PSB-300ATX- BE	PSB-400ATX- E	PSB-500ATX- E	PSB-700ATX- E
Wattage	300 W	400 W	500 W	700 W
Input Range	100 ~ 240 VAC 60 ~ 50 Hz 8 ~ 4A	100 ~ 240 VAC 60 ~ 50 Hz 8 ~ 4A	100 ~ 240 VAC 60 ~ 50 Hz 8 ~ 4A	100 ~ 240 VAC 60 ~ 50 Hz 12 ~ 6A
Outputs	+3.3 V @ 18 A, +5 V @ 19 A +12 V @ 11 A, +12 Vsb @ 11.5 A -12 V @ 0.5 A -5 V @ 0.5 A, +5 Vsb @ 2 A	+3.3 V @ 21 A, +5 V @ 20 A +12 V @ 18 A, +12 V @ 16 A -12 V @ 0.5 A -5 V @ 0.5 A, +5 Vsb @ 3 A	+3.3 V @ 24 A, +5 V @ 20 A +12 V @ 18 A, +12 V @ 16 A -12 V @ 0.5 A -5 V @ 0.5 A, +5 Vsb @ 4 A	+3.3 V @ 24 A, +5 V @ 20 A +12 V @ 18 A, +12 V @ 16 A +12 V @ 18 A, +12 V @ 16 A -12 V @ 0.5 A -5 V @ 0.5 A, +5 Vsb @ 4 A
MTBF (hrs)	100,000 @ 25°C	100,000 @ 25°C	100,000 @ 25°C	100,000 @ 25°C
Dimensions (H x W x D)	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")
Safety	UL, TUV, CB, CCC	UL, TUV, CB, CCC	UL, TUV, CB, CCC	UL, TUV, CB, CCC
Compatible Chassis	PC-602, PC-610, PC-610, PC-611, PC-619S, ACP-3000, ACP-4000, ACP-4010, ACP-4300, ACP-4300, PC-6080, PC-6088, PC-6122, PC-7130, PC-7132	PC-602, PC-610, PC-610, PC-611, PC-619S, ACP-3000, ACP-4000, ACP-4010, ACP-4300, ACP-4300, PC-6080, PC-6088, PC-6122, PC-7130, PC-7132	PC-610, PC-611, ACP-4000, ACP-4010, ACP-4300, ACP-4300	PC-610, PC-611, ACP-4000, ACP-4010, ACP-4300, ACP-4300

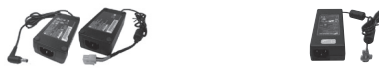
## Selection Guide Power Supplies

### PS Power Supplies



Model Name	PS-250ATX-E	PS-300ATX-DC48E
Wattage	250 W	300 W
Input Range	Selectable 115 V <sub>AC</sub> / 230 V <sub>AC</sub> , 60 / 50 Hz, 10 / 5 A	72 ~ 36 V <sub>DC</sub> , 1.5 A
Outputs	+5 V @ 27 A (0.5 A ripple) +3.3 V @ 20 A (0.7 A ripple) +12 V @ 13 A (1.4 A ripple) -12 V @ 0.8 A, -5 V @ 0.3 A, +5 V <sub>SB</sub> @ 2 A	+5 V @ 30 A (0.3 A ripple) +3.3 V @ 20 A (0.3 A ripple) +12 V @ 15 A (0.2 A ripple) -12 V @ 0.8 A, -5 V @ 0.3 A, +5 V <sub>SB</sub> @ 2 A
MTBF (hrs)	100,000 @ 25C	100,000 @ 25C
Dimensions (H x W x D)	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")	86 x 150 x 140 mm (3.39" x 5.91" x 5.51")
Safety	UL, TUV, CB, CCC	UL, TUV, CB, CCC
Compatible Chassis	ACP-2000, PC-602, PC-610, PC-611, PC-6600, PC-6608, PC-6908	ACP-2000, ACP-4000, ACP-4320, ACP-4360, PC-602, PC-610, ACP-6310, PC-6608, PC-6609, PC-6908, PC-7142, PC-7220

### Power Adapters



Model Name	1757003062 1757003063	1757003527
Wattage	60 W	90 W
Input Range	AC 100 ~ 240 V, 50 ~ 60 Hz, 1.5 A	AC 100 ~ 240 V, 50 ~ 60 Hz, 1.5 A
Outputs	+12 V @ 5.0 A	+19 V @ 4.74 A
Power Plug	1757003062: Drum, 1757003063: 4-pin 12V	Phoenix 2-pin
MTBF (hrs)	1757003062: 60,000 @ 25C, 1757003063: 50,000 @ 25C	50,000 @ 25C
Dimensions	31.5 x 63 x 110 mm	32.0 x 58.0 x 100.0 mm
Safety	UL, TUV, CB, CCC	UL, TUV, CB, CCC
Compatible Chassis	ARK-6320	ARK-6310 series

## Selection Guide CPU Coolers



Model Name	1960049408N001	1960047831N001	1960047669N001	1960047670N001
Thermal Dispatch Performance	Intel LGA1156 73W (up to Core i5-660)	LGA1156 95W	Intel LGA1156 95W	Intel LGA1156 95W
Fan	-	7 cm/35.50CFM 5,400 ± 10% RPM	8 cm/57.5 CFM 4,500 ± 10% RPM	8 cm/57.5 CFM 4,500 ± 10% RPM
Heatsink Material	Copper	Copper	Aluminum & Copper heat	Aluminum & Copper
Heatsink Dimensions	85 x 85 x 26 mm (3.35" x 3.35" x 1.02")	83 x 83 x 39.26 mm (3.27" x 3.27" x 1.54")	90 x 90 x 35 mm (3.54" x 3.54" x 1.38")	90 x 90 x 35 mm (3.54" x 3.54" x 1.38")
Dimensions	-	83 x 83 x 55.73 mm (3.27" x 3.27" x 2.17")	120 x 120 x 77 mm (4.72" x 4.72" x 3.03")	120 x 120 x 77 mm (4.72" x 4.72" x 3.03")
Weight	611 g	582 g	500 g	500 g
Minimum Chassis Height	1U	2U	4U	4U
Recommended Chassis	ACP-1010/1320	Backplane version of chassis	Motherboard version of chassis	mini-ITX Motherboard version of chassis
Supported Boards	AMB-580/780/781/782; PCE-5125/5126/5127/1271/275026	AMB-580/581/582/780/781/782; PCE-5125/5126/5127	AMB-580/581/582/780/781/782	AMB-280

### Intel Pentium GA



Model Name	1960013266T000	1750000332	1750000334
Thermal Dispatch Performance	Pentium 4: Up to 3.4 GHz 60 mm, 84 W, L2: 1 MB Core 2 Duo: Up to 3.33 GHz 85 mm, 65 W, L2: 4 MB	Pentium 4: Up to 3.8 GHz 80 mm, 115 W, L2: 1 MB Core 2 Duo: Up to 3.20 GHz 85 mm, 65 W, L2: 4 MB Core 2 Duo: Up to 3.33 GHz 85 mm, 60 W, L2: 4 MB	Pentium 4: Up to 3.8 GHz 80 mm, 115 W, L2: 1 MB Core 2 Duo: Up to 3.33 GHz 85 mm, 60 W, L2: 4 MB
Fan	-	7 cm / 35.5 CFM 5,400 ± 10% RPM	8 cm / 57.7 CFM 4,500 ± 10% RPM
Heatsink Material	Copper	Copper	Aluminum fins & copper heat
Heatsink Dimensions	80 x 80 x 27 mm (3.15" x 3.15" x 1.06")	83 x 83 x 15 ~ 29 mm (3.27" x 3.27" x 0.59" ~ 1.14")	80 x 80 x 22 mm (3.15" x 3.15" x 0.87")
Dimensions	90 x 82 x 26 mm (3.54" x 3.24" x 1.02")	82 x 82 x 55 mm (3.23" x 3.23" x 2.17")	110 x 110 x 67 mm (4.33" x 4.33" x 2.64")
Weight	554 g	580 g	550 g
Minimum Chassis Height	1U	2U	4U
Recommended Chassis	ACP-1320 series	Backplane version of chassis	Motherboard version of chassis
Supported Boards	AMB-766/764/762, PCA-6194/6011/6010, PCE-5124	PCA-6194/6011/6010, PCE-5124	AMB-250/590/564/562/766/764/763/762



## Selection Guide Accessories

### Slide Rail



- For U rac mount c assis**
- 26" P/N: 9680006902
  - Maximum acceptable load: 25kg

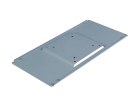


- For U an l g er ac mount c assis**
- 26" P/N: 9680006905
  - Maximum acceptable load: 45kg

### AR - Series Accessories



- AR - Series Wireless LAN 802.11 b/g module (USB connection)**
- 802.11b/g standard
  - USB 2.0 Interface
  - Range: Indoors up to 80m  
Outdoors up to 250m



- VESA mounting plate for ARK-6000 series (except for ARK-6610)**
- Dimensions (W x H x D):

### Industrial Disk Drive Bay



- Shockproof industrial hard disk drive tray with cooling fan and optional front USB and PS/2 interfaces**
- Accepted HDD: 1 x 3.5" (only for 9.5mm thickness)
  - Cooling Fan: 1 x 4 cm
  - Material: Heavy duty steel plate with coating
  - Color (Codes): Gray (414U), Black (4C2X)
  - Dimensions (W x H x D): 148.5 x 42.6 x 171 mm (5.85" x 1.68" x 6.73")
  - Weight: 400 g (0.88 lb)
  - P/N: IDT-5101, IDT-5101-BLK, IDT-5121, IDT-5121-BLK with dual USB & PS/2



- A frame to securely fix a 3.5" HDD in a 5.25" drive bay**
- Dimensions (W x H x D):



- A frame to securely fix two 2.5" HDDs in a 3.5" drive bay**
- Dimensions (W x H x D):



- Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays**
- Accepted HDD: 2 x 2.5" SATA HDD (only for HDD thickness with 9.6 mm)
  - Material: stainless steel
  - Dimensions (W x H x D): 25.4 x 101.6 x 147.5 mm
  - Does not support 2.5" SAS HDD



- Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD trays**
- Accepted HDD: 3 x 3.5" SAS/SATA HDD
  - Cooling Fan: 1 x 8 cm
  - Material: stainless steel
  - Dimensions (W x H x D): 86 x 148 x 224.7 mm



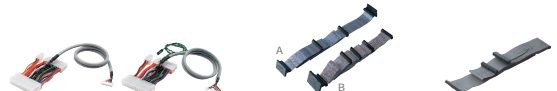
Model Name	1700008462	1700008461	1700100170	1700003195	1700100301	1700002204	
Description	USB cable with four ports		USB cable with dual ports		USB cable with dual ports		
Length	30.5 cm (12.01")	30.5 cm (12.01")	17.5 cm (6.89")	17.5 cm (6.89")	27 cm (11.92")	27 cm (11.92")	
Pins	10	9	10	9	10	9	
Supported Models	AMB-750 (A1E), AMB-740, PCA-6002, PCA-6178, PCA-6186, PCA-6190	AMB-762, AMB-763, AMB-764, AMB-766, AMB-767, AMB-768, AMB-780, AMB-793, AMB-795, PCA-6006, PCA-6180, PCA-6194, PCE-5125, PCE-5126, PCE-5127	AMB-750 (A1E), AMB-740, PCA-6002, PCA-6178, PCA-6186, PCA-6190, PCA-6190	AMB-762, AMB-763, AMB-764, AMB-766, AMB-767, AMB-768, AMB-780, AMB-793, AMB-795, PCA-6006, PCA-6180, PCA-6194, PCE-5125, PCE-5126, PCE-5127	AMB-750 (A1E), AMB-740, PCA-6002, PCA-6178, PCA-6186, PCA-6190	AMB-762, AMB-763, AMB-764, AMB-766, AMB-767, AMB-768, AMB-780, AMB-793, AMB-795, PCA-6006, PCA-6180, PCA-6194, PCE-5125, PCE-5126, PCE-5127	AMB-762, AMB-763, AMB-764, AMB-766, AMB-767, AMB-768, AMB-780, AMB-793, AMB-795, PCA-6006, PCA-6180, PCA-6194, PCE-5125, PCE-5126, PCE-5127



Model Name	1700008922
Description	24 pin to 20 pin DVI cable with bracket
Length	30 cm
Supported Models	PCE-5125, PCE-5126, PCE-5008, PCE-5127, PCE-7127, A9AMB-782



Model Name	1700006202	1700006201	1701260305
Description	Y cable for PS/2 mouse & keyboard for GPU card	Y cable for PS/2 mouse & keyboard for GPU card	Serial and parallel ports with cables and bracket



Model Name	1700006915	1700006916	A. 1701680670	B. 1700000182	1700340640
Function	Cable to activate front door LED based on ADP-400/MB chassis	Cable to activate front door LED based on IPC-610/MB-H chassis	68-pin SCSI LVDS cable: 2 male connectors & terminators	68-pin SCSI LVDS cable: 5 male connectors & 1 terminator	FDD cable for two 3.5" FDD
Length			67 cm (26.39")	125 cm (49.21")	
Supported Models	AMB-542, 562, 564, 763	AMB-542, 562, 564, 763			

# Server-grade IPCs

## Industrial Server Boards



Model Name	ASMB-3101R	ASMB-781
<b>Form Factor</b>	CEB	ATX
<b>Processor System</b>	<b>CPU</b> Intel Xeon E3/30/5500 Series <b>Socket</b> 2 socket L156 <b>Max. Speed</b> 2.53 GHz <b>Front Side Bus</b> QPI 6.4 GT/s <b>L3 Cache</b> 12 MB <b>Chipset</b> Intel 5520, Intel ICH10R <b>BIOS</b> AMI 32 Mbit, SPI	<b>CPU</b> Intel Xeon E3/2nd Gen. Core i3 Series <b>Socket</b> 1 socket L155 <b>Max. Speed</b> 3.4 GHz <b>Front Side Bus</b> - <b>L3 Cache</b> 8 MB/3 MB <b>Chipset</b> Intel C206 <b>BIOS</b> AMI 64 Mbit, SPI
<b>Expansion Slot</b>	<b>PCI</b> - <b>PCIe x16</b> 2 (auto switch to x8) <b>PCIe x8</b> 2 <b>PCIe x4</b> 1 (2 on ASMB-310 SKUs) <b>PCIe x1</b> -	<b>PCI</b> 1 <b>PCIe x16</b> 1 (auto switch to x8) <b>PCIe x8</b> 2 (auto switch to one x16) <b>PCIe x4</b> 1 <b>PCIe x1</b> 1
<b>Memory</b>	<b>Technology</b> DDR3 Non-ECC/DDR3 800/1066/1333 MHz <b>Max. Capacity</b> 96 GB Non-ECC/DDR3 DIMM <b>Socket</b> 6 x 240-pin DIMM <b>Controller</b> AST2060 <b>VRAM</b> DDR3 64 MB <b>LCD</b> - <b>TV-Out</b> - <b>HDMI</b> - <b>DVI</b> - <b>Dual Display</b> -	<b>Technology</b> DDR3 ECC/Non-ECC Unbuffer 800/1066/1333 MHz <b>Max. Capacity</b> 32 GB ECC/Non-ECC DIMM <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> AST2000/3000/64/62 <b>VRAM</b> DDR3 64 MB <b>LCD</b> - <b>TV-Out</b> - <b>HDMI</b> - <b>DVI</b> - <b>Dual Display</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> 1 x Intel 82574L, 1 x Intel 82571LM, 1 x Marvell 88E8053 (10/100/1000) (10/100/1000) (10/100/1000) (10/100/1000) <b>Connector</b> RJ-45 x 3 (1 x Mgmt LAN)	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> 1 x Intel 82578LM, 1 x Intel 82574L, Intel 82550/82562/82563/82564 <b>Connector</b> RJ-45 x 4 (64 SKUs) / x 2 (62 SKUs)
<b>TPM</b>	optional	optional
<b>SATA</b>	<b>Max. Data Transfer Rate</b> 300 MB/s <b>Channel</b> 6 <b>Max. Data Transfer Rate</b> 6 GB/s <b>Channel</b> 6	<b>Max. Data Transfer Rate</b> 300 MB/s for SATA2, 600 MB/s for SATA3 <b>Channel</b> 4 for SATA2, 2 for SATA3 <b>Max. Data Transfer Rate</b> - <b>Channel</b> -
<b>SAS</b>	<b>Max. Data Transfer Rate</b> 6 GB/s <b>Channel</b> 6	<b>Max. Data Transfer Rate</b> - <b>Channel</b> -
<b>Rear I/O</b>	<b>VGA/DVI/HDMI</b> 1 / - / - <b>Ethernet</b> 2 (4 G4 SkUs) <b>USB</b> 6 <b>Audio</b> - <b>Parallel</b> - <b>Serial</b> 1 RS-232 <b>PS/2</b> 2	<b>VGA/DVI/HDMI</b> 1 / - / - <b>Ethernet</b> 2 (4 G4 SkUs) <b>USB</b> 4 (2 USB 3.0; 2 USB 2.0) <b>Audio</b> - <b>Parallel</b> - <b>Serial</b> 1 RS-232 <b>PS/2</b> 2
<b>Internal Connector</b>	<b>LVDS &amp; Inverter</b> - <b>TV-Out</b> - <b>DVI</b> - <b>USB</b> 5 (USB 2.0; 2 USB 2.0 Type-A) <b>Serial</b> 1 <b>Parallel</b> 1 <b>IDE</b> - <b>SATA</b> 6 <b>SAS</b> 6 (ASMB-310R only) <b>Compact Flash</b> - <b>GPIO</b> 1 (SATA SSPIC) <b>Output</b> System reset <b>Interval</b> Programmable, 1 ~ 255 seconds	<b>LVDS &amp; Inverter</b> - <b>TV-Out</b> - <b>DVI</b> - <b>USB</b> 8 (6 USB 2.0; 2 USB 2.0 Type-A) <b>Serial</b> 1 <b>Parallel</b> 1 <b>IDE</b> - <b>SATA</b> 6 <b>SAS</b> 6 <b>Compact Flash</b> - <b>GPIO</b> 1 (SATA SSPIC) <b>Output</b> System reset <b>Interval</b> Programmable, 1 ~ 255 seconds

Model Name	ASMB-782	ASMB-820I	ASMB-920IR
<b>Form Factor</b>	ATX	ATX	EATX
<b>Processor System</b>	<b>CPU</b> Intel Xeon E3/30/5500 Series <b>Socket</b> 1 socket L155 <b>Max. Speed</b> 3.4 GHz/2.5 GHz/3.3 GHz/3.3 GHz <b>Front Side Bus</b> - <b>L3 Cache</b> 8 MB/8 MB/3 MB/3 MB <b>Chipset</b> Intel C216 <b>BIOS</b> AMI 64 Mbit, SPI	<b>CPU</b> Intel Xeon E5-2600 Series <b>Socket</b> 1 socket L156 <b>Max. Speed</b> 2.2 GHz <b>Front Side Bus</b> - <b>L3 Cache</b> 15 MB <b>Chipset</b> Intel C602J <b>BIOS</b> AMI 64 Mbit, SPI	<b>CPU</b> Intel Xeon E5-2600 Series <b>Socket</b> 2 socket 2011 <b>Max. Speed</b> 2.1 GHz <b>Front Side Bus</b> QPI 6.4 GT/s <b>L3 Cache</b> 20 MB <b>Chipset</b> Intel C602J <b>BIOS</b> AMI 64 Mbit, SPI
<b>Expansion Slot</b>	<b>PCI</b> - <b>PCIe x16</b> 2 <b>PCIe x8</b> 2 <b>PCIe x4</b> 2 <b>PCIe x1</b> -	<b>PCI</b> - <b>PCIe x16</b> 2 <b>PCIe x8</b> 1 <b>PCIe x4</b> 1 <b>PCIe x1</b> -	<b>PCI</b> - <b>PCIe x16</b> 3 (1 for PME) <b>PCIe x8</b> - <b>PCIe x4</b> - <b>PCIe x1</b> -
<b>Memory</b>	<b>Technology</b> DDR3 ECC/Non-ECC Unbuffer 1066/1333/1600 MHz <b>Max. Capacity</b> 32 GB ECC/Non-ECC DIMM <b>Socket</b> 4 x 240-pin DIMM <b>Controller</b> Intel HD Graphics 2500/3000/4000P <b>VRAM</b> 1 GB maximum shared memory with 2 GB and above system memory installed <b>LCD</b> - <b>TV-Out</b> - <b>HDMI</b> - <b>DVI</b> - <b>Dual Display</b> -	<b>Technology</b> DDR3 ECC/Non-ECC Unbuffer 1066/1333/1600 MHz <b>Max. Capacity</b> 96 GB Non-ECC/DDR3 DIMM <b>Socket</b> 6 x 240-pin DIMM <b>Controller</b> AST1300/AST2300 <b>VRAM</b> DDR3 64 MB <b>LCD</b> - <b>TV-Out</b> - <b>HDMI</b> - <b>DVI</b> - <b>Dual Display</b> -	<b>Technology</b> DDR3 Reg ECC/Non-ECC Unbuffer 1066/1333/1600 MHz <b>Max. Capacity</b> 128 GB Non-ECC/DDR3 DIMM <b>Socket</b> 8 x 240-pin DIMM <b>Controller</b> AST1300/AST2300 <b>VRAM</b> DDR3 64 MB <b>LCD</b> - <b>TV-Out</b> - <b>HDMI</b> - <b>DVI</b> - <b>Dual Display</b> -
<b>Ethernet</b>	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> 1 x Intel 82578LM, 1 x Intel 82574L, Intel 82550/82562/82563/82564 <b>Connector</b> RJ-45 x 4 (64 SKUs) / x 2 (62 SKUs)	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> 1 x Intel 82578LM + 1 x Intel 82574L, 1 x Intel 82574L, optional for 64 SKUs <b>Connector</b> RJ-45 x 4 (64 SKUs) / x 2 (62 SKUs)	<b>Interface</b> 10/100/1000 Mbps Gigabit Ethernet <b>Controller</b> 1 x Intel 82578LM + 1 x Intel 82574L, 1 x Intel 82574L, optional for 64 SKUs <b>Connector</b> RJ-45 x 3 (1 x PMM LAN)
<b>TPM</b>	optional	optional (1 x PMM LAN)	optional
<b>SATA</b>	<b>Max. Data Transfer Rate</b> 300 MB/s for SATA2, 600 MB/s for SATA3 <b>Channel</b> 4 for SATA2, 2 for SATA3 <b>Max. Data Transfer Rate</b> - <b>Channel</b> -	<b>Max. Data Transfer Rate</b> 300 MB/s for SATA2, 600 MB/s for SATA3 <b>Channel</b> 4 for SATA2, 2 for SATA3 <b>Max. Data Transfer Rate</b> - <b>Channel</b> -	<b>Max. Data Transfer Rate</b> 300 MB/s for SATA2, 600 MB/s for SATA3 <b>Channel</b> 4 for SATA2, 2 for SATA3 <b>Max. Data Transfer Rate</b> 6 GB/s <b>Channel</b> 4 for SATA2, 2 for SATA3
<b>SAS</b>	<b>Max. Data Transfer Rate</b> 6 GB/s <b>Channel</b> 6	<b>Max. Data Transfer Rate</b> - <b>Channel</b> -	<b>Max. Data Transfer Rate</b> 6 GB/s <b>Channel</b> 6 (ASMB-820I only)
<b>Rear I/O</b>	<b>VGA/DVI/HDMI</b> 1 / - / - <b>Ethernet</b> 2 (4 G4 SkUs) <b>USB</b> 4 (2 USB 3.0; 2 USB 2.0) <b>Audio</b> - <b>Parallel</b> - <b>Serial</b> 1 RS-232 <b>PS/2</b> 2	<b>VGA/DVI/HDMI</b> 1 / - / - <b>Ethernet</b> 2 (4 G4 SkUs) <b>USB</b> 4 (2 USB 3.0; 2 USB 2.0) <b>Audio</b> - <b>Parallel</b> - <b>Serial</b> 1 RS-232 <b>PS/2</b> 2	<b>VGA/DVI/HDMI</b> 1 / - / - <b>Ethernet</b> 2 <b>USB</b> 4 <b>Audio</b> - <b>Parallel</b> - <b>Serial</b> 1 RS-232 <b>PS/2</b> 2
<b>Internal Connector</b>	<b>LVDS &amp; Inverter</b> - <b>TV-Out</b> - <b>DVI</b> - <b>USB</b> 10 (2 USB 3.0; 6 USB 2.0; 2 USB 2.0 Type-A) <b>Serial</b> 1 <b>Parallel</b> 1 <b>IDE</b> - <b>SATA</b> 6 <b>SAS</b> 6 <b>Compact Flash</b> - <b>GPIO</b> 1 (SATA SSPIC) <b>Output</b> System reset <b>Interval</b> Programmable, 1 ~ 255 seconds	<b>LVDS &amp; Inverter</b> - <b>TV-Out</b> - <b>DVI</b> - <b>USB</b> 8 (6 USB 2.0; 2 USB 2.0 Type-A) <b>Serial</b> 1 <b>Parallel</b> 1 <b>IDE</b> - <b>SATA</b> 6 <b>SAS</b> 6 <b>Compact Flash</b> - <b>GPIO</b> 1 (SATA SSPIC) <b>Output</b> System reset <b>Interval</b> Programmable, 1 ~ 255 seconds	<b>LVDS &amp; Inverter</b> - <b>TV-Out</b> - <b>DVI</b> - <b>USB</b> 7 (6 USB 2.0; 1 USB 2.0 Type-A) <b>Serial</b> 1 <b>Parallel</b> - <b>IDE</b> - <b>SATA</b> 6 <b>SAS</b> 6 (ASMB-820I only) <b>Compact Flash</b> - <b>GPIO</b> 2 (1 SATA SSPIC + 1 SAS SSPIC) <b>Output</b> System reset <b>Interval</b> Programmable, 1 ~ 255 seconds

# Server-grade IPCs

## Industrial Server Chassis



Model Name		HPC-7280		HPC-7480	
Processor Support		Supports dual, single Intel processors		Supports dual, single Intel processors	
Form Factor Support		2U chassis support for max. motherboard size - 12" x 13" EATX		4U chassis support for max. motherboard size - 12" x 13" EATX	
Expansion Slots		3 x Full-height, Full-length (with riser card)		7 x Full-height, Full-length PCI expansion slots	
Drive Bay	Slim ODD Bay	1		-	
	5.25" (front-accessible)	-		3	
	3.5" (front-accessible)	8		8	
	3.5" (internal)	-		-	
	2.5" (front-accessible)	-		-	
	2.5" (internal)	-		-	
Cooling	Chassis Fan	2 (8 cm / CFM)		4 (8 cm / CFM)	
	Air Filter	-		Yes	
System Monitoring		Chassis intrusion switch		Chassis intrusion switch	
Front I/O Interface	USB	1		2	
	PS/2	-		-	
Miscellaneous	LED Indicators	Power, HDD activity, LAN		Power, HDD activity, LAN	
	Rear Panel	-		-	
Environment	Status	Operating	Non-Operating	Operating	Non-Operating
	Temperature	0 - 40° C (32 - 104° F)	-40 - 70° C (-40 - 158° F)	0 - 40° C (32 - 104° F)	-40 - 70° C (-40 - 158° F)
	Humidity	10 - 95% @ 40° C non-condensing	10 - 95% @ 40° C non-condensing	10 - 95% @ 40° C non-condensing	10 - 95% @ 40° C non-condensing
	Vibration (5-500 Hz)	0.25 Grms	0.5 Grms	0.5 Grms	2 Grms
	Shock	10 G	30 G	10 G	30 G
		(with 11 ms duration, half sine wave)		(with 11 ms duration, half sine wave)	
Physical Characteristics		Dimensions (W x H x D)		452 x 66 x 700 mm (24)	
		Weight		28 kg	
				29.84 kg	

# CompactPCI Platforms

## CompactPCI Enclosures



Model		MIC-3042		MIC-3043	
Backplane	EU Slot	System x 1, Peripheral x 7, Rear transition x 8 (60 mm, IEEE1101.11 compliant)		System x 1, Peripheral x 5, Rear transition x 6 (80 mm, IEEE1101.11 compliant)	
	Bus	Up to 64-bit/66 MHz PCI bus		32-bit/33 MHz, 64-bit/66 MHz CompactPCI Rev. 3.0, PCMCIA 9	
	R.110 CT Bus	No		Yes	
	V (I/O)	+3.3 V/+5 V (selectable)		+3.3 V/+5 V (selectable)	
Cooling	Fan	2 (front: 193 CFM, rear: 61.3 CFM)		2 (front: 193 CFM, rear: 61.3 CFM)	
	Power Supply	Input	AC 100 - 254 V @ 50 - 60 Hz, full range (MC-3042-IG)	Input	AC 100 - 240 V @ 50 - 60 Hz, full range (MC-3043-IG)
Power Supply	Output	AC-cPCI 250 W redundant power module		AC-cPCI 250 W redundant power module	
		+3.3 V, +5 V, +12 V, -12 V		+3.3 V, +5 V, +12 V, -12 V	
	Max. Load	36 A, 50 A, 10 A, 1 A		36 A, 50 A, 10 A, 1 A	
Min. Load	0 A, 2.0 A, 0 A, 0 A		0 A, 2.0 A, 0 A, 0 A		
Physical Characteristics	Dimensions (W x H x D)	440 x 177 x 350 mm (17.2" x 7" x 13.8")		440 x 177 x 350 mm (17.2" x 7" x 13.8")	
	Weight	18 kg (39.7 lb)		18 kg (39.7 lb)	

Selection Guide

# CompactPCI Platforms

## CompactPCI Boards



Model Name	MIC-3395	MIC-3393
<b>Processor System</b>		
CPU	Intel 2nd/3rd Gen Core i3/i5/i7	Intel Quad-Dual-Core Xeon
Max. Speed	2.2 GHz	2.80 GHz
Front Side Bus		1066/1333 MHz with parity protection
Chipset	Intel GM77	Intel S1000MCH/DGR
BIOS	Redundant AMI 8 Mbit SPI flash	Redundant AMI 2 Mbit SPI flash
<b>CompactPCI Interface</b>		
J1 Connector	32-bit PCI local bus	32-bit PCI local bus
J2 Connector	64-bit PCI local bus	64-bit PCI local bus
J3 Connector	PCIe2.16 + RTM area	PCIe2.16 + RTM
J4-J5 Connectors	RTM area	RTM
<b>XMC/PMC Socket</b>		
PCIe x8	4x2 (657W)	
PCI	64-bit/66 MHz	64-bit/66 MHz
<b>Memory</b>		
Technology	DDR3 1066/1333/1600 MHz, dual channel with ECC support	Dual channel DDR3 533/667 MHz with ECC
Max. Capacity	Up to 16 GB (8 GB on-board, 8 GB SODIMM)	Up to 6GB (2 GB on-board, 4 GB SODIMM)
On-board/socket	1 x 204-pin SODIMM	2 x 204-pin SODIMM
Controller	Intel embedded graphics controller HD3000/HD4000	X8 Intel 211 PCIe/Server graphics with 32 MB VRAM
<b>Graphics</b>		
VRAM	Dynamic	-
Resolution	Up to 2048 x 1536, 64k color at 70Hz	Up to 1600 x 1200, 64k color at 70Hz
<b>Ethernet</b>		
Controller-1	5 x Intel 82574L	2 x Intel 82574L
Interface	10/100/1000 Mbps	10/100/1000 Mbps
I/O Connector	2 x PCIe2.16 and RJ-45 (RTM), 2 x RJ-45 on front panel	1 x PCIe2.16, 1 x RJ-45 or 2 x RTM
Controller-2	1 x Intel 82574LM	Intel iXBMC (MAC) + Intel 82560DM
Interface	10/100/1000 Mbps	10/100/1000 Mbps
I/O Connector	1 x RJ-45 (front panel)	1 x RJ-45 or 1 x RTM
<b>Storage</b>		
Mode-1	SATA-II	SATA-I
Channels	Onboard SATA-II com	5
Storage Site	-	2
Mode-2	SATA-II	-
Channels	4	-
Storage Site	-	1
VGA	1 x DB-15	-
COM	1 x RS232 on RJ-45	1 x RS232 on RJ-45
USB 2.0	2 x type-A	2 x type-A
Ethernet	2	2
<b>Front Panel LEDs</b>	Hot Swap/LED, Master/Drone mode, BMC Heartbeat, Power	Hot Swap/LED, Master/Drone mode, BMC Heartbeat, Power
<b>Buttons</b>	CPU and BMC reset	CPU and BMC reset
USB2.0	4	4
COM	2	2
LAN	2	2
DVI-I-D	1/1	-
VGA	1	-
SATA	2	2
PCIe	4	2
Others	1 x PS/2	2 x PS/2
<b>Watchdog Timer</b>		
Output	Local Reset and Interrupt	Local Reset and Interrupt
Interval	Programmable 1s - 255s	Programmable 1s - 255s
Controller	Renesas iHS 2167, PMM v2.0 compliant	Renesas iHS 2167, PMM v1.5 compliant
<b>PMC/XMC</b>		
Site	1/1	-
Interface	EEE1386, 1.64-bit/66 MHz	-
Signal	+5V/-3.3V compliant	+5V/-3.3V compliant
<b>Operating System</b>		
Compatibility	Windows 7, Windows 2008, Windows 2003, Windows XP SP3, RHEL 6.1, VMware Es.x (on request)	Windows XP 32/64 bit, Windows Server 2008 32/64 bit, Linux
<b>Physical Characteristics</b>		
Dimensions (W x D)	233.35 x 160 mm (9.19" x 6.3")	60.71 slot width (44P), 233.35 x 160 x 20 mm (9.7" x 6.3" x 0.8") 60.2 slot width (84P), 233.35 x 160 x 40 mm (9.2" x 6.3" x 1.6")

MIC-3392L	MIC-3392Rev2	MIC-3392MIL	MIC-3325
<b>Processor System</b>			
CPU	Intel Celeron M	Intel Core 2 Duo/Core Duo/CeleronM 440	Intel Atom N455/DS25
Max. Speed	1.86 GHz	2.16 GHz	1.8 GHz
Front Side Bus	533 MHz	533/667 MHz	-
Chipset	Intel 945GM/ICH7M	Intel 945GM	Intel 945GM/ICH7M
BIOS	AMI 8 Mbit flash	AMI 8 Mbit flash	Award 4 Mbit flash
<b>CompactPCI Interface</b>			
J1 Connector	32-bit PCI local bus	32-bit PCI local bus	32-bit PCI local bus (COMA)
J2 Connector	64-bit PCI local bus	64-bit PCI local bus	64-bit PCI local bus
J3 Connector	PCIe2.16 + RTM area	PCIe2.16 + RTM area	PCIe2.16 + RTM area
J4-J5 Connectors	RTM area	RTM area	RTM area
<b>XMC/PMC Socket</b>			
PCIe x8	4x2 (657W)	4x2 (657W)	4x2 (657W)
PCI	64-bit/66 MHz	64-bit/66 MHz	64-bit/66 MHz
<b>Memory</b>			
Technology	DDR2 533/667 MHz	DDR2 533/667 SDRAM	DDR2 533/667 MHz
Max. Capacity	2 GB (1 GB on-board, 1 GB SODIMM)	3 GB (2 GB on-board, 1 GB SODIMM)	3 GB (2 GB on-board, 1 GB SODIMM)
On-board/socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM
Controller	Intel 945GM integrated	Intel 945GM integrated	Intel 945GM integrated
<b>Graphics</b>			
VRAM	Dynamic	Dynamic	Dynamic
Resolution	Up to 2048 x 1536, 64k color at 75 Hz	Up to 2048 x 1536, 64k color at 75 Hz	Up to 2048 x 1536, 64k color at 75 Hz
<b>Ethernet</b>			
Controller-1	2 x Intel 82578E	2 x Intel 82578E	1 x Intel 82571EB
Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps (on PS/2 channel)
I/O Connector	2 x RJ-45 on front panel	2 x RJ-45 on front panel	2 x PCIe2.16 and RJ-45 (RTM rear panel)
Controller-2	-	-	1 x Intel 82548EB
Interface	-	-	10/100/1000 Mbps (on PCI Slots/33MHz)
I/O Connector	-	-	2 x RJ-45 (RTM rear panel)
<b>Storage</b>			
Mode-1	SATA	SATA	SATA
Channels	2	1	2
Storage Site	1	1	1
Mode-2	-	-	IDE
Channels	-	-	1
Storage Site	-	-	-
VGA	1 x DB-15	1 x DB-15	1 x DB-15
COM	1 x RS232 on RJ-45	1 x RS232 on RJ-45	1 x DB-15
USB 2.0	2 x type-A	2 x type-A	2 x type-A
Ethernet	2	2	2
<b>Front Panel LEDs</b>	Hot Swap/LED, Master/Drone mode, BMC Heartbeat, Power	Hot Swap/LED, Master/Drone mode, BMC Heartbeat, Power	Hot Swap/LED, Master/Drone mode, BMC Heartbeat, Power
<b>Buttons</b>	CPU and BMC reset	CPU and BMC reset	Power, Hot Swap
USB2.0	4	2	4
COM	2	1	-
LAN	2	2	4
DVI-I-D	-	-	2/0
VGA	1	1	-
SATA	2	1	2
PCIe	4	4	-
Others	3 x PS/2	4 x PS/2	5 x PS/2
<b>Watchdog Timer</b>			
Output	Local Reset and Interrupt	Local Reset and Interrupt	Local Reset and Interrupt
Interval	Programmable 1s - 255s	Programmable 1s - 255s	Programmable 1s - 255s
Controller	Renesas iHS 2167, PMM v1.5 compliant	Renesas iHS 2167, PMM v1.5 compliant	Renesas iHS 2167, PMM v1.5 compliant
<b>PMC/XMC</b>			
Site	1	1	-
Interface	EEE1386, 1.64-bit/66 MHz	EEE1386, 1.64-bit/66 MHz	-
Signal	+5V/-3.3V compliant	+5V/-3.3V compliant	-
<b>Operating System</b>			
Compatibility	Windows XP/2000, Linux	Windows Vista/XP/2000, Linux	Windows XP/2000, Linux, Windows 6.4 (on request)
<b>Physical Characteristics</b>			
Dimensions (W x D)	233.35 x 160 mm (9.19" x 6.3"), 1-slot width	233.35 x 160 mm (9.19" x 6.3"), 1-slot width	233.35 x 160 mm (9.19" x 6.3")

Selection Guide

# Capture, Encoder, Decoder Cards



Model Name	DSPC-8601-USBE	DVP-2642AE	DVP-5642AE	DVP-7042AE
<b>Bus</b>	USB 2.0	PCI-164	PCIe x4	PCIe x4
<b>Video Standard</b>	Composite for NTSC/PAL	Composite for NTSC/PAL	Composite for NTSC/PAL	Composite for NTSC/PAL
<b>Video Inputs</b>	4	4	4	4
<b>Compression</b>	HW H.264/AVC	HW H.264	HW H.264	SW H.264/MPEG4
<b>Display Rate</b>	30/25 fps (NTSC/PAL/HD)	120/100 fps (NTSC/PAL/HD/CF)	120/100 fps (NTSC/PAL/HD/CF)	120/100 fps (NTSC/PAL/HD)
<b>Max. Rec. Rate</b>	30/25 fps (NTSC/PAL/HD)	120/100 fps (NTSC/PAL/HD)	120/100 fps (NTSC/PAL/HD)	120/100 fps (NTSC/PAL/HD)
<b>Dual Stream</b>	Yes	Yes	Yes	Yes
<b>Bit Rate Control</b>	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR
<b>OSD</b>	Graphic OSD	Graphic OSD	Graphic OSD	Graphic OSD
<b>Connector</b>	BNC, Male / 1.09p-p / 7.5Q	Pin	Pin	BNC, Male / 1.09p-p / 7.5Q
<b>Video Outputs</b>	-	-	-	-
<b>Audio Inputs</b>	1	4	4	4
<b>Compression</b>	PCM / G.711	PCM	PCM	PCM
<b>Connector</b>	Phone jack, female	Pin	Pin	RCA
<b>Card Stackable</b>	-	4	4	4
<b>GPIO</b>	-	Yes	Yes	Yes
<b>Watchdog</b>	-	Yes	Yes	Yes
<b>Operating Temperature</b>	0 ~ 70° C (32 ~ 158° F) (with air flow) 0 ~ 60° C (32 ~ 140° F) (without air flow)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)	-20 ~ 70° C (-4 ~ 158° F)
<b>Storing Temperature</b>	-10 ~ 80° C (-14 ~ 176° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)
<b>Dimensions (W x D)</b>	70 x 38 mm	96 x 88.0 mm	96 x 93.95 mm	120 x 96.4mm
<b>Safety</b>	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS
<b>System Requirement</b>	Intel Atom	Intel Pentium 4 2.0GHz	Intel Pentium 4 2.0GHz	Intel Pentium 4 2.0GHz
<b>Memory</b>	512MB	512MB	512MB	512MB
<b>VGA</b>	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above
<b>Operating System</b>	Windows XP/Vista/Win7	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux
<b>Supported Language</b>	VC++	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2



Model Name	DVP-7042AE	DVP-8622AE	DVP-8622AE	DVP-8622AE
<b>Bus</b>	PCIe x4	PCIe x4	PCIe x4	PCIe x4
<b>Video Standard</b>	Composite for NTSC/PAL	Composite for NTSC/PAL	Composite for NTSC/PAL	Composite for NTSC/PAL
<b>Video Inputs</b>	4	4	4	4
<b>Compression</b>	HW H.264	HW H.264	HW H.264 (Main Profile)	HW H.264 (Main Profile)
<b>Display Rate</b>	120/100 fps (NTSC/PAL/HD/CF)	120/100 fps (NTSC/PAL/HD/CF)	240/200 fps (NTSC/PAL/HD)	480/400 fps (NTSC/PAL/HD)
<b>Max. Rec. Rate</b>	120/100 fps (NTSC/PAL/HD)	480/400 fps (NTSC/PAL/HD)	240/200 fps (NTSC/PAL/HD)	480/400 fps (NTSC/PAL/HD)
<b>Dual Stream</b>	Yes	Yes	Yes	Yes
<b>Bit Rate Control</b>	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR / HBR
<b>OSD</b>	Graphic OSD	Graphic OSD	Graphic OSD	Graphic OSD
<b>Connector</b>	BNC, Male / 1.09p-p / 7.5Q	BNC, Male / 1.09p-p / 7.5Q	DVI	DVI
<b>Video Outputs</b>	4	4	16	4
<b>Audio Inputs</b>	4	4	16	4
<b>Compression</b>	PCM	PCM	PCM	PCM
<b>Connector</b>	RCA	RCA	DVI	HDMI
<b>Card Stackable</b>	4	4	4	4
<b>GPIO</b>	Yes	Yes	Yes	Yes
<b>Watchdog</b>	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)
<b>Storing Temperature</b>	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)
<b>Dimensions (W x D)</b>	121 x 85 mm	110 x 105 mm	168 x 111 mm	140 x 95 mm
<b>Safety</b>	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS
<b>System Requirement</b>	Intel Pentium 4 2.0GHz	Intel Pentium 4 2.0GHz	Intel Core 2 Duo E2200 2.2GHz	Intel Core 2 Duo E2200 2.2GHz
<b>Memory</b>	512MB	512MB	2GB	2GB
<b>VGA</b>	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above
<b>Operating System</b>	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux
<b>Supported Language</b>	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2

Noted :  
1. \* stands for "unlimited"



Model Name	DSPC-8661-PCXE	DVP-8612HAE	DVP-8622HAE	DVP-8642HAE
<b>Bus</b>	PCIe x1	PCIe x1	PCIe x4	PCIe x4
<b>Video Standard</b>	Composite for NTSC/PAL	HD-SDI	HD-SDI	HD-SDI
<b>Video Inputs</b>	16	1	2	4
<b>Compression</b>	HW H.264/MPEG4/AVC/RAW	HW H.264 (Main Profile)	HW H.264 (Main Profile)	HW H.264 (Main Profile)
<b>Display Rate</b>	480/400 fps (NTSC/PAL/HD)	30/25 fps (NTSC/PAL/HD/1080p)	60/50 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)
<b>Max. Rec. Rate</b>	480/400 fps (NTSC/PAL/HD)	30/25 fps (NTSC/PAL/HD/1080p)	60/50 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)
<b>Dual Stream</b>	Yes	Yes	Yes	Yes
<b>Bit Rate Control</b>	CBR / VBR	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR / HBR
<b>OSD</b>	Graphic OSD	Graphic OSD	Graphic OSD	Graphic OSD
<b>Connector</b>	DVI	HD-SDI	HD-SDI	HD-SDI
<b>Video Outputs</b>	16	1	2	4
<b>Audio Inputs</b>	16	1	2	4
<b>Compression</b>	ADPCM/MPEG2/G.711	PCM	PCM	PCM
<b>Connector</b>	DVI	HD-SDI	HD-SDI	HD-SDI
<b>Card Stackable</b>	4	4	4	4
<b>GPIO</b>	Yes	Yes	Yes	Yes
<b>Watchdog</b>	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10 ~ 80° C (-14 ~ 140° F) (Backless)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)
<b>Storing Temperature</b>	-20 ~ 70° C (-4 ~ 158° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)
<b>Dimensions (W x D)</b>	140 x 111 mm	155 x 101 mm	168 x 109 mm	168 x 109 mm
<b>Safety</b>	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS
<b>System Requirement</b>	Intel Pentium 4	Intel Pentium 4	Intel Core 2 Duo E2200 2.2GHz	Intel Core 2 Duo E2200 2.2GHz
<b>Memory</b>	512MB	512MB	2GB	2GB
<b>VGA</b>	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above
<b>Operating System</b>	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux
<b>Supported Language</b>	VC++	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2



Model Name	DVP-8612PHAE	DVP-8622PHAE	DVP-8622PHAE
<b>Bus</b>	PCIe x4	PCIe x4	PCIe x4
<b>Video Standard</b>	HD-SDI	HD-SDI	HD-SDI
<b>Video Inputs</b>	16	16	16
<b>Compression</b>	SW H.264/MPEG4	SW H.264/MPEG4	SW H.264/MPEG4
<b>Display Rate</b>	60/50 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)
<b>Max. Rec. Rate</b>	60/50 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)	120/100 fps (NTSC/PAL/HD/1080p)
<b>Dual Stream</b>	Yes	Yes	Yes
<b>Bit Rate Control</b>	CBR / VBR / HBR	CBR / VBR / HBR	CBR / VBR / HBR
<b>OSD</b>	Graphic OSD	Graphic OSD	Graphic OSD
<b>Connector</b>	HD-SDI	HD-SDI	HDMI
<b>Video Outputs</b>	16	4	4
<b>Audio Inputs</b>	16	4	4
<b>Compression</b>	PCM	PCM	PCM
<b>Connector</b>	HD-SDI	HD-SDI	HDMI
<b>Card Stackable</b>	4	4	4
<b>GPIO</b>	Yes	Yes	Yes
<b>Watchdog</b>	Yes	Yes	Yes
<b>Operating Temperature</b>	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)	0 ~ 70° C (32 ~ 158° F)
<b>Storing Temperature</b>	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85° C (-40 ~ 185° F)
<b>Dimensions (W x D)</b>	136x 101 mm	140 x 95 mm	140 x 95 mm
<b>Safety</b>	CE/FCC/RoHS	CE/FCC/RoHS	CE/FCC/RoHS
<b>System Requirement</b>	Intel Core 2 Duo E2200 2.2GHz	Intel Core 2 Duo E2200 2.2GHz	Intel Core 2 Duo E2200 2.2GHz
<b>Memory</b>	2GB	2GB	2GB
<b>VGA</b>	DirectX 9.0c or above	DirectX 9.0c or above	DirectX 9.0c or above
<b>Operating System</b>	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux	Windows XP/Vista/Win7, Linux
<b>Supported Language</b>	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2	VC++ / NET/BCB / VB / V4L2

Selection Guide

# Fanless Panel PC



Model Name		Fanless Panel Computer	
		PPC-L61T	PPC-L62T
<b>CPU Board</b>			
Processor		PCM-9679	PCM-8206
Size		AMD Geode LX 800 (500 MHz)	Intel Atom N455 (1.86 GHz)
Memory		128 MB - 1 GB DDR SDRAM	512 MB - 2 GB DDR3 SDRAM
Module Type		200-pin SODIMM x 1	204-pin SODIMM x 1
2nd Cache Memory		128 KB	512 KB
SSD/Type		Supports 1 Internal CompactFlash Type III socket	Supports one CFast socket
Display		6.5" TFT LCD	6.5" TFT LCD
Size/Type		6.5" TFT LCD	6.5" TFT LCD
Max. Resolution		640 x 480	640 x 480
Max. Colors		262K	262K
Pixel Pitch (mm)		0.207 x 0.207	0.207 x 0.207
Brightness (cd/m²)		700	700
Viewing Angle		160°/140°	160°/140°
Brightness Control		Option	Yes
Simultaneous Mode		Yes	Yes
Backlight MTBF		50,000 hrs	50,000 hrs
VGA Chipset		AMD CS5536	Intel ICH9M
VRAM		32 MB	Maximum 256 MB
HDD/Type		1 x 2.5" drive Optional	1 x 2.5" drive Optional
FDD/Type		-	-
PCMCIA Slot		-	-
CD-ROM/Combo Drive		-	-
DVD-ROM, DVD±R, RW Drive Option		-	-
I/O Ports		2 x COM ports, VGA port, 2 x USB	2 x COM ports, 2 x DSub LAN, 4 x USB, Audio In/Out
Bus Expansion		1 x miniPCIe	1 x miniPCIe
Network (LAN)		10/100 Base-T Ethernet	2 x 10/100/1000 Base-T Ethernet
VGA Transmission		-	-
Power		Output Rating: 90 W Input Voltage: 12 - 30 Vdc	90 W 15 - 24 Vdc
Touchscreen		Technology: Resistive Control Ports: RS-232 Light Transmission: 80% OS Support: Windows CE, XPE, XP Durability (Touches): 10 million 250 Level	Technology: Resistive Control Ports: RS-232 Light Transmission: 81% OS Support: Windows CE, XPE, XP, Win 7 Durability (Touches): 35 million 250 Level
Working Temperature		0 - 50° C (32 - 122° F)	0 - 50° C (32 - 122° F)
Front Panel Protection		IP65 compliant	IP65 compliant
Certifications		CE, FCC Class B, UL, BSMI, CCC	CE, FCC Class B, UL, BSMI, CCC
Dimensions (W x H x D)		202 x 148 x 49 mm (7.9" x 5.82" x 1.92")	202 x 148 x 49 mm (7.9" x 5.82" x 1.92")
Weight		1.2 kg (2.66 lb)	1.5 kg (3.31 lb)

Model Name		Fanless Panel Computer			
		PPC-L106T	PPC-L126T	PPC-L157T	PPC-L158T
Processor		PCM-9679	PCM-8201	PCM-8201	PCM-8204
Size		AMD Geode LX 800 (500 MHz)	Intel Atom Processor N270 1.6 GHz	Intel Atom Processor N270 1.6 GHz	Intel Atom processor dual-core D525 1.86 GHz
Memory		128 MB - 1 GB DDR SDRAM (Standard 256 MB built-in)	DDR2 533 Up to 2 GB	DDR2 533 Up to 2 GB	DDR3 800 MHz up to 4 GB (2 GB each socket)
Module Type		200-pin SODIMM x 1	200-pin SODIMM x 1	200-pin SODIMM x 1	204-pin SODIMM x 2
2nd Cache Memory		128 KB	512 KB	512 KB	1 MB
SSD/Type		Supports 1 Internal CompactFlash Type III socket	Supports one CompactFlash Type II socket	Supports one CompactFlash Type II socket	Supports one CFast Type II socket
Display		10.4" TFT LCD	12.1" Color TFT LCD	15" Color TFT LCD	15" Color TFT LCD
Size/Type		10.4" TFT LCD	12.1" Color TFT LCD	15" Color TFT LCD	15" Color TFT LCD
Max. Resolution		800 x 600	1024 x 768	1024 x 768	1024 x 768
Max. Colors		262K	262K	262K	262K
Pixel Pitch (mm)		0.264 x 0.264	0.297 x 0.297	0.297 x 0.297	0.297 x 0.297
Brightness (cd/m²)		230	450/600	350	350
Viewing Angle		140°/120°	160°/160°	160°/130°	160°/130°
Brightness Control		Yes	Yes	Yes	Yes
Simultaneous Mode		Yes	Yes	Yes	Yes
Backlight MTBF		30,000 hrs	50,000 hours	50,000 hours	50,000 hours
VGA Chipset		AMD CS 5536	Intel 945GSE + Intel ICH7M	Intel 945GSE + Intel ICH7M	D525 + ICH9M
VRAM		32 MB	128MB	128MB	128MB
HDD/Type		1 x 2.5" drive	One internal SATA interface- 2.5" Type	One internal SATA interface- 2.5" Type	One internal SATA interface- 2.5" Type
FDD/Type		-	-	-	-
PCMCIA Slot		-	-	-	-
CD-ROM/Combo Drive		-	-	-	-
DVD-ROM, DVD±R, RW Drive Option		-	Optional	Optional	Optional
I/O Ports		4 x COM ports, 1 x parallel port, 4 x USB (2 external, 2 internal), Mic-In/Line-out, PS/2 mouse & KB, VGA port	3 Serial Ports: RS-232 x 2, RS-232/422/485 x 1, 1 GPO port, 1 VGA Port, PS/2 Mouse and Keyboard, Line-In/Line-Out/Mic-In, Built-in 1W x 2 speakers, USB 2.0 ports x 4	3 Serial Ports: RS-232 x 2, RS-232/422/485 x 1, 1 GPO port, 1 VGA Port, PS/2 Mouse and Keyboard, Line-In/Line-Out/Mic-In, Built-in 1W x 2 speakers, USB 2.0 ports x 4	4 x COM ports, 2 x RS-232 (8 channels, TTL level), 4 x USB 2.0 ports, Mic-In/Line-Out, 1W speaker, 2 x Gigabit Ethernet ports, 1 x 3.5" HDD BAY port, 1 x PS/2 mouse and 1 keyboard interface
Bus Expansion		1 x miniPCIe	1 x expansion slot for PCI/PCIe card, 1 x Mini PCIe slot	1 x expansion slot for PCI/PCIe card, 1 x Mini PCIe slot	1 x expansion slot for PCI/PCIe card, 1 x Mini PCIe slot
Network (LAN)		10/100 Mbps Ethernet	2 x 10/100/1000 Mbps (RJ-45)	2 x 10/100/1000 Mbps (RJ-45)	2 x 10/100/1000 Mbps (RJ-45)
VGA Transmission		-	-	-	-
Power		85 W 100 - 240 Vdc 50 - 60 Hz	90 W 12 - 24 Vdc	90 W 12 - 24 Vdc, 15-24 Vdc, with battery pack	100 W AC Mode: 100W 100 - 250 Vdc, 50 - 60 Hz DC Mode: 50W 15 - 24 Vdc
Touchscreen		Technology: Resistive Control Ports: RS-232 (COM 4) Light Transmission: 80% OS Support: Windows CE, XPE, XP Durability (Touches): 35 million 255 Level	Technology: Resistive Control Ports: USB Light Transmission: 80% OS Support: Windows XPE/XP Pro, Vista, Win7, CE6.0 Durability (Touches): 35 million 255 Level	Technology: Resistive Control Ports: USB Light Transmission: 80% OS Support: Windows XPE/XP Pro, Vista, Win7, CE6.0 Durability (Touches): 35 million 255 Level	Technology: Resistive Control Ports: USB Light Transmission: 80% OS Support: Windows XPE/XP Pro, Vista, Win7, CE6.0 Durability (Touches): 35 million 255 Level
Working Temperature		0 - 45° C (32 - 113° F)	0 - 45° C (32 - 113° F)	0 - 50° C (32 - 122° F) 0 - 50° C with battery	0 - 50° C (32 - 122° F) 0 - 50° C with battery
Front Panel Protection		IP65 compliant	IP65 compliant	IP65 compliant	IP65 compliant
Certifications		CE, FCC Class B, UL, BSMI, CCC	CE, FCC Class B, UL, BSMI, CCC	CE, FCC Class B, UL, BSMI, CCC, CB, VCCI	CE, FCC Class B, UL, BSMI, CCC, CB, VCCI
Dimensions (W x H x D)		342 x 265 x 92.4 mm (13.5" x 10.4" x 3.64")	340.5 x 269 x 93.5 mm (13.41" x 10.6" x 3.70")	386.5 x 177.6 x 74.8 (15.21" x 6.99" x 2.95")	386.5 x 217.6 x 74.8 (15.21" x 8.57" x 2.95")
Weight		3.2 kg (7.1 lb)	3.63 kg (7.98 lb)	6 kg (13.2 lb)	6 kg (13.2 lb)

# Building Automation Systems

## Energy Data Concentrators



Model	BEMG-4110	BEMG-4220	BEMG-4221	BEMG-4222
Description	Building Energy Data Concentrator with 4 COM, 1 LAN	Building Energy Data Concentrator with 4 COM, 2 LAN	Building Energy Data Concentrator with 4 COM, 2 LAN	Building Energy Data Concentrator with 4 COM, 2 LAN
CPU	AMD Geode LX800 500MHz	Celeron M, 1GHz	Atom N450, 1.67 GHz	Atom Dual Core D510, 1.67GHz
Memory	256 MB DDR SDRAM	512 MB DDR SDRAM	2G DDR2 SDRAM	2G DDR2 SDRAM
Display	VGA	VGA	VGA	VGA
Serial Ports	2 x RS232/485	2 x RS232	2 x RS232/485	6 x RS232/485
USB Ports	2 x RS232/422/485	2 x RS232/422/485	2 x RS232/422/485	2 x RS232/422/485
Network (LAN)	1 x 10/100Base-T	2 x 10/100Base-T	2 x 10/100/1000Base-T	2 x 10/100/1000Base-T
CompactFlash	1G Compact Flash	1G Compact Flash	1G Compact Flash	1G Compact Flash
Printer Ports	-	1	1	-
Watchdog Timer	Yes	Yes	Yes	Yes
Power Input Range	10-48 Vdc	9-36 Vdc	9-36 Vdc	9-36 Vdc
Power Consumption	15W	24W	12W	16W
Operating Temperature	-10 ~ 50°C (14 ~ 131°F)	-20 ~ 50°C (4 ~ 122°F)	-10 ~ 70°C (14 ~ 158°F)	-10 ~ 70°C (14 ~ 158°F)
Dimensions (W x D x H)	188.8 x 108.5 x 26.5 mm (7.5" x 4.3" x 1.4")	255 x 152 x 38 mm (10" x 6.0" x 2.0")	255 x 152 x 38 mm (10" x 6.0" x 2.0")	255 x 152 x 38 mm (10" x 6.0" x 2.0")
Software Specification				
Operating System	WinCE 5.0	WinCE 5.0	WinCE 5.0	WinCE 5.0
Web Clients	2	2	2	2
Number of devices connected	64	128	128	128
Configure & service	Web configure & service			
Certification	CE, FCC Class A, FCC			
Ingress Protection (Front Panel)	EC 60969-2-2, EC 60969-2-6	EC 60 2-27, EC 60 2-64	EC 60069-2-2, EC 60069-2-64	EC 60069-2-2, EC 60069-2-64
Protocols for meters	03/7645-1597, CU7189-2004, 03/7682-2008, Modbus			
Web functions with host	Command Received, Alarm reporting, Data encapsulation, Data store and forward, DNS supporting			

## Power Meters



Model	PME-1130	PME-1210	PME-1230
Description	3-Phase kWh & kWh Energy Meter	1-Phase Multirange Power Meter	3-Phase Multirange Power Meter
Power Supply	110 Vdc: 90 to 126 Vdc 220 Vdc: 187 to 253 Vdc	110 Vdc: 90 to 126 Vdc 220 Vdc: 187 to 253 Vdc	110 Vdc: 90 to 126 Vdc 220 Vdc: 187 to 253 Vdc
Power Consumption	5W	5W	5W
Bus	Photo-isolated RS-485	Photo-isolated RS-485	Photo-isolated RS-485
Protocol	Modbus/RTU (format: 8/N/1)	Modbus/RTU (format: 8/N/1)	Modbus/RTU (format: 8/N/1)
Interface	0 - 254	0 - 254	0 - 254
Meter ID	-	-	-
Phase/Wire	-	1P2W	1P2W/3P2W/3P4W
Voltage Measurement	-	80 - 350 Vdc	80 - 350 Vdc
Accuracy	-	±0.5% full scale	±0.5% full scale
Current Measurement (Std. SA CT)	-	1 mA	1 mA
Resolution	-	5 mA - 5 A	5 mA - 5 A
Accuracy	-	±0.5% full scale	±0.5% full scale
Power Measurement (Total)	-	1W (per phase)	1W (per phase)
Resolution	1% full scale	1% full scale	1% full scale
Energy Measurement (Total)	-	0.1 kWh (Range 0 - 9,999,999.9kWh)	0.1 kWh (Range 0 - 9,999,999.9kWh)
Record Resolution	-	0.01 kWh (Range 0 - 9,999,999.99kWh)	0.01 kWh (Range 0 - 9,999,999.99kWh)
kWh Accuracy	-	1% with PF 0.5 - 1.0	1% with PF 0.5 - 1.0
Operating Temperature	-	-10 ~ 70°C (14 ~ 158°F)	-10 ~ 70°C (14 ~ 158°F)
Operating Humidity	-	0 - 90% RH non-condensing	0 - 90% RH non-condensing
Communication	-	RS485/Modbus	RS485/Modbus
Reliability	-	ESD1000-4-4 1kV	ESD1000-4-4 1kV
Surge Test	-	ESD1000-4-4 1kV	ESD1000-4-4 1kV
EFT Test	-	ESD1000-4-4 1kV	ESD1000-4-4 1kV
Dimensions (W x H x D)	-	110 x 50 x 115 mm	110 x 50 x 115 mm

## Web-enabled HMI



Model	WebView-1206	WebView-1210	WebView-1212	WebView-1215
Description	Web-enabled HMI	Web-enabled HMI	Web-enabled HMI	Web-enabled HMI
CPU	Intel® Atom™ 1.33 GHz	Intel® Celeron® M, 1GHz	Intel® Celeron® M, 1GHz	Intel® Celeron® M, 1GHz
Memory	1G DDR2 SDRAM	512 MB DDR SDRAM	1G DDR SDRAM	1G DDR SDRAM
Display	VGA	-	VGA	VGA
Display	Size	5.7"	10.4"	12.1"
	Resolution	640 x 480	800 x 600	800 x 600
Communications	Serial Ports	1 x RS232, 1 x RS485	2 x RS232, 1 x RS232/422/485	3 x RS232, 1 x RS232/422/485
	USB Ports	2	2	4
Network (LAN)	2 x 10/100/1000Base-T	2 x 10/100Base-T	2 x 10/100Base-T	1 x (10/100Base-T) 1 x (10/100/1000Base-T)
CompactFlash	1G Compact Flash	1G Compact Flash	1G Compact Flash	1G Compact Flash
Watchdog Timer	Yes	Yes	Yes	Yes
Power Input Range	18-32 Vdc	18-32 Vdc	18-32 Vdc	18-32 Vdc
Power Consumption	17W	41W	40W	42W
Operating Temperature	-20 ~ 60°C (4 ~ 140°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)
Dimensions (W x D x H)	195 x 148 x 58 mm (7.68" x 5.83" x 2.28")	286 x 226 x 58 mm (11.26" x 8.9" x 2.28")	311 x 237 x 52.3 mm (12.24" x 9.33" x 2.06")	383 x 307 x 64.5 mm (15.08" x 12.09" x 2.54")
Software Specification				
Operating System	WinCE 5.0			
Certifications	CCC, CE, FCC, UL			
Configure & service	Web configure & service			
Web Clients	2			
IO Tag Number	600			
Alarm Logging	1000			
Action Logging	1000			
Number of Graphic	100			
Number of data logging	50			
Recipes per Project	100			
Time Zone Groups	99			
Device Loop Groups	99			
Equipment Groups	99			

Selection Guide

# Intelligent Operator Panel



Model		WOP-2040T		WOP-2050T		WOP-2070T	
Ordering Information		WOP-2040T-S1AE	WOP-2040T-N1AE	WOP-2050T-S1AE	WOP-2050T-N1AE	WOP-2070T-S2AE	WOP-2070T-N2AE
CPU		RISC 32bit, 200MHz					
Battery Backup Memory		128KB					
Working Memory		32 MB SDRAM		8MB NOR Flash		64 MB SDRAM	
Flash Memory		-	128M NAND flash	128M NAND flash	-	128M NAND flash	-
Operating System		HM RTOS, WebOP Designer 2.0					
Display	Type	WVGA(16:9) TFT LCD		Similar WVGA TFT LCD		WVGA(16:9) TFT LCD	
	Size	4.3"		5.6"		7"	
	Max. Resolution	480 x 272		320 x 234		800 x 480	
	Max. Colors	65,536 colors					
	Luminance (cd/m <sup>2</sup> )	400		330		300	
	Viewing Angle (H/V)	100/95		130/110		140/130	
	Backlight Life (hur)	LED 20,000					
Dimming	Adjustable						
Touchscreen	4 Wires Analog Resistive						
Power-On LED	Yes						
Communication LED	No						
Communication Interface	COM1	RS232/422/485 (DB9 Female)					
	COM2	RS422/485 (5 Pin Plug Connector)					
	COM3	RS232 (COM1: Pin6,7,8)					
	Ethernet (RJ45)	-	10/100-BaseT	-	-	10/100-BaseT	-
I/Os	USB Client	Yes					
	USB Host	Yes					
	Micro-SD Slot	-	Yes	Yes	-	Yes	-
Power Supply Voltage	24Vdc ±10%						
Power Consumption	5W		10W		10W		
Dimension W x H x D (mm)	130 x 106.2 x 36.4 mm (5.11" x 4.18" x 1.43")		188 x 143.3 x 30 mm (7.4" x 5.64" x 1.18")		188 x 143.3 x 30 mm (7.4" x 5.64" x 1.18")		
Cut-out Dimension W x H (mm)	116.5 x 92.5mm (4.60" x 3.64")		175 x 132.5mm (6.89" x 5.21")		175 x 132.5mm (6.89" x 5.21")		
Front Panel Thickness (mm)	5 mm		6 mm		6 mm		
Net Weight	0.3 kg		0.51kg		0.6kg		
Operating Temperature	0 ~ 50°C (32 ~ 122°F)						
Storage Temperature	-20 ~ 60°C (-4 ~ 140°F)						
Humidity	10% ~ 90% RH @ 40°C, non-condensing						
Ingress Protection	Front Panel: NEMA4/IP66						
Certification Approval	CE/FCC/BSMI/CCC/UL						



Model		WOP-2080T		WOP-2100T		WOP-2121V	
Ordering Information		WOP-2080T-S2AE	WOP-2080T-N2AE	WOP-2100T-S2AE	WOP-2100T-N2AE	WOP-2121V-N4AE	
CPU		RISC 32bit, 200MHz					
Battery Backup Memory		128KB					
Working Memory		64 MB SDRAM		8MB NOR Flash		10MB NOR Flash	
Flash Memory		-	128M NAND flash	-	128M NAND flash	-	-
Operating System		HM RTOS, WebOP Designer 2.0					
Display	Type	SVGA TFT LCD		Similar WVGA TFT LCD		SVGA TFT LCD	
	Size	8"		10.1"		12.1"	
	Max. Resolution	800 x 600		1024 x 600		800 x 600	
	Max. Colors	65,536 colors					
	Luminance (cd/m <sup>2</sup> )	250		350		350	
	Viewing Angle (H/V)	140/130		140/110		130/110	
	Backlight Life (hur)	LED 30,000		LED 30,000		CFL 30,000	
Dimming	Adjustable						
Touchscreen	4 Wires Analog Resistive		4 Wires Analog Resistive		8 Wires Analog Resistive		
Power-On LED	Yes						
Communication LED	No						
Communication Interface	COM1	RS232/422/485 (DB9 Female)					
	COM2	RS422/485 (5 Pin Plug Connector)					
	COM3	RS232 (COM1: Pin6,7,8)					
	Ethernet (RJ45)	-	10/100-BaseT	-	10/100-BaseT	-	10/100-BaseT
I/Os	USB Client	Yes					
	USB Host	Yes					
	Micro-SD Slot	-	Yes	-	Yes	-	-
Power Supply Voltage	24Vdc ±10%						
Power Consumption	10W		10W		25W		
Dimension W x H x D (mm)	221.5 x 174.6 x 37 mm (8.71" x 6.87" x 1.46")		269.8 x 212 x 37.4 mm (10.62" x 8.39" x 1.47")		315 x 241 x 54.5 mm (12.4" x 9.48" x 2.14")		
Cut-out Dimension W x H (mm)	221 x 164 mm (8.70" x 6.46")		259.5 x 201.5 mm (10.22" x 7.93")		301.5 x 228 mm (11.87" x 8.97")		
Front Panel Thickness (mm)	6 mm		6 mm		6 mm		
Net Weight	0.93 kg		1.2 kg		1.55 kg		
Operating Temperature	0 ~ 50°C (32 ~ 122°F)						
Storage Temperature	-20 ~ 60°C (-4 ~ 140°F)						
Humidity	10% ~ 90% RH @ 40°C, non-condensing						
Ingress Protection	Front Panel: NEMA4/IP66						
Certification Approval	CE/FCC/BSMI/CCC/UL						



Selection Guide

# Automation Panel PC



Model Name	TPC-1780H/ TPC-1704H	TPC-1571H	TPC-1271H	TPC-1071H	TPC-671H	TPC- 651H/1251H/1551H	
CPU	Intel® Core™ i3-6100 1.5 GHz/Intel® Core™ M 1.8 GHz	Intel® Atom™ D525 1.8 GHz	Intel® Atom™ D525 1.8 GHz	Intel® Atom™ D525 1.8 GHz	Intel® Atom™ Z510 1.1 GHz	Intel® Atom™ Z520 1.3 GHz	
Memory	2 GB DDR3 SDRAM (up to 4 GB DDR3 SDRAM)	4 GB DDR3 SDRAM	4 GB DDR3 SDRAM	4 GB DDR3 SDRAM	1 GB DDR3 SDRAM	1 GB DDR3 SDRAM	
Display	Type	SVGA TFT LCD	XGA TFT LCD	SVGA TFT LCD	SVGA TFT LCD	VGA/DVGA/XGA TFT LCD	
	Size	17"	15"	12.1"	10.4"	6.5"	5.7"/9.1"/15.1"
	Max. Resolution	1280 x 1024	1024 x 768	800 x 600	800 x 600	640 x 480	640 x 480/ 800 x 600/1024 x 768
	Max. Colors	16.7M	262 K	262 K	262 K	262 K	262 K
	Luminance (cd/m²)	300	350	450	400	700	700/450/350
	Viewing Angle (°V°)	160/160	160/140	160/140	120/100	160/140	160/140
Backlight Life (hrs)	50,000	50,000	50,000	50,000	50,000	50,000	
Touchscreen	8-wire Resistive	5-wire Resistive	5-wire Resistive	5-wire Resistive	5-wire Resistive	5-wire Resistive	
Flash Memory	N/A	N/A	N/A	N/A	N/A	N/A	
HDD	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" SATA (optional)	N/A	1 x 2.5" SATA Bundled with Expansion HDD Kit (optional)	
Network (LAN)	10/100/1000Base-T x 2	10/100/1000Base-T x 2	10/100/1000Base-T x 2	10/100/1000Base-T x 2	10/100/1000Base-T x 1	10/100/1000Base-T x 2	
I/O Ports	RS-232 x 3 PS/2 x 1 USB 2.0 (Host) x 4 Audio I/O MDC x 1, Line-in x 1, Line-out x 1 PS/2 x 2 (Mouse)	Serial Port x 3 RS-232 x 2 and RS-422/485 x 1 USB 2.0 (Host) x 4 PS/2 x 1 DIDO x 8	Serial Port x 3 RS-232 x 2 and RS-422/485 x 1 USB 2.0 (Host) x 4 PS/2 x 1 DIDO x 8	Serial Port x 3 RS-232 x 2 and RS-422/485 x 1 USB 2.0 (Host) x 4 PS/2 x 1 DIDO x 8	Serial Port x 2 RS-232 x 1 and RS-422/485 x 1 USB 2.0 (Host) x 2	Serial Port x 2 RS-232 x 1 and RS-422/485 x 1 USB 2.0 (Host) x 2	
CompactFlash Slots	Type II x 1	Type II x 1	Type II x 1	Type II x 1	Type II x 1	Type II x 1	
PCMCIA Slots	N/A	N/A	N/A	N/A	N/A	N/A	
Expansion Slots	PCI (4 optional) RS-422/485 (optional)	PCI-E x 1 or Mini PCI-E x 1	PCI-E x 1 or Mini PCI-E x 1	PCI-E x 1 or Mini PCI-E x 1	Mini PCI-E x 1	N/A	
Power Input Voltage	18 ~ 32 Vdc	10 ~ 29 Vdc	10 ~ 29 Vdc	10 ~ 29 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	
Dimension	414 x 347.5 x 93 mm (16.3" x 13.68" x 3.68")	383 x 307 x 78.5 mm (15.08" x 12.09" x 3.09")	311 x 237 x 71.6 mm (12.24" x 9.33" x 2.82")	288 x 227 x 70.3 mm (11.34" x 8.94" x 2.78")	195 x 148 x 58 mm (7.68" x 5.83" x 2.29")	195 x 148 x 58 mm (7.68" x 5.83" x 2.29") 311 x 227 x 54 mm (12.24" x 8.93" x 2.13") 383 x 307 x 58.1 mm (15.08" x 12.09" x 2.29")	
Weight (Net)	8 kg (17.64 lbs)	5.5 kg (12.13 lbs)	4.57 kg (10.07 lbs)	3.5 kg (7.72 lbs)	0.95 kg (2.1 lbs)	1.43 kg (3.15 lbs) 2.5 kg (5.51 lbs) 3.4 kg (7.51 lbs)	
Front Cover	Die-Cast Aluminum Alloy	Die-Cast Aluminum Alloy	Die-Cast Aluminum Alloy	Die-Cast Aluminum Alloy	ABS + PC	PC + ABS (TPC-651H) Die-Cast Aluminum Alloy	
Operating Temperature	0 ~ 45°C (32 ~ 113°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	-20 ~ 60°C (-4 ~ 140°F)	
Ingress Protection (Front Panel)	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	
Certification	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	
Operating System	Windows XP/MES3009/ MES/CE 5.0/6.0/ MES/TPC-1780H/ Linux (TPC-1770H)	Windows XP/ MES3009/MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/ MES3009/MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/ MES3009/MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/ MES3009/MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/ MES3009/MES7/ Windows CE 5.0/6.0/ Linux	

TPC- 1250H/1550H/1750H	TPC-650H	TPC-61T	TPC-31T	TPC-66SN/TPC-66T	TPC-30T/32T
Intel® Atom™ N270 1.6 GHz	Intel® Atom™ N270 1.6 GHz	TI AM517 600 MHz	TI AM517 600 MHz	Intel® PXA270 616 MHz/ Intel® PXA270 312 MHz	Intel® PXA270 312 MHz
2 GB DDR2 SDRAM	1 GB DDR2 SDRAM	DDR2 256 MB on board	DDR2 256 MB on board	64 MB SDRAM on board	64 MB SDRAM on board
SVGA/XGA/DVGA TFT LCD	VGA TFT LCD	DVGA TFT LCD	DVGA TFT LCD	DVGA CSTN LCD	DVGA TFT LCD
12.1"/15.1"/17"	5.7"	5.7"	3.5"	5.7"	3.5"
800 x 600/1024 x 768/ 1280 x 1024	640 x 480	320 x 240	320 x 240	320 x 240	320 x 240
262 K	262 K	64K	64K	64 K	64 K
450/550/550	700	800	200	400/300	200
160/140, 160/140, 170/160	160/140	160/140	120/110	100/55, 140/120	120/110
50,000	50,000	50,000	30,000	60,000 / 30,000	30,000
5-wire Resistive	5-wire Resistive	4-wire Resistive	4-wire Resistive	4-wire Resistive	4-wire Resistive
N/A	N/A	N/A	N/A	64 MB on board	32 MB on board
1 x 2.5" SATA Bundled with Expansion HDD Kit (optional)	N/A	N/A	N/A	N/A	N/A
10/100/1000Base-T x 2	10/100/1000Base-T x 1	10/100Base-T x 1	10/100Base-T x 1	10/100Base-T x 1	10/100Base-T x 1
Serial Port x 2 (RS-232 x 1, RS-422/485 x 1) USB x 2 (Host)	Serial Port x 2 (RS-232 x 2) USB x 2 (Host)	Serial Port x 2 (RS-232 x 2, RS-422/RS-485 x 1) USB x 2 (Host)	Serial Port x 1 (RS-232/RS-485 x 1) USB2.0 (Host) x 1	Full RS-232 x 2 TPC-66SN 4-pin RS-232/485 x 1, USB 2.0 (Host) x 1, (Client) x 1 TPC-66T RS-232/485 x 1, USB x 2 (Host x 1)	USB x 1 (Host) TPC-30T RS-232/485 x 1 TPC-32T CAN Bus/RS-232 x 1
CFast x 1	Type II x 1	SD x 1	SD x 1	Type II x 1	SD x 1
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
18 ~ 28 Vdc (TPC-1750H)	18 ~ 28 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	8 ~ 28 Vdc
311 x 227 x 54 mm (12.24" x 8.93" x 2.13") 383 x 307 x 58.1 mm (15.08" x 12.09" x 2.29")	195 x 148 x 58 mm (7.68" x 5.83" x 2.29")	195 x 148 x 44.4 mm (7.68" x 5.69" x 1.75")	120.79 x 85.5 x 26.5 mm (4.76" x 3.37" x 1.04")	195 x 148 x 44.4 (7.68" x 5.83" x 1.75")	120.8 x 85.5 x 26.5 (4.76" x 3.37" x 1.04")
2.5 kg (5.51 lbs) 3.4 kg (7.51 lbs)	1.43 kg (3.15 lbs)	0.8 kg (1.76 lbs)	0.25 kg (0.55 lbs)	0.8 kg (1.76 lbs)	0.25 kg (0.55 lbs)
Die-Cast Aluminum Alloy	PC + ABS	ABS	ABS	ABS	ABS
0 ~ 45°C (32 ~ 113°F)	0 ~ 45°C (32 ~ 113°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)
NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
Windows XP/MES3009/ MES/CE 5.0/6.0/ Linux	Windows XP/MES3009/ MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/MES3009/ MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/MES3009/ MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/MES3009/ MES7/ Windows CE 5.0/6.0/ Linux	Windows XP/MES3009/ MES7/ Windows CE 5.0/6.0/ Linux

# Selection Guide Industrial Monitor



Model	FPM-3121G/3151G	FPM-3171G/3191G	FPM-5151G/5171G/5191G	FPM-5152G/5172G/5192G
Display	Display Type	SVGA TFT LCD	SVGA TFT LCD	NGA/SGA TFT LCD
	Display Size	12.1"15"	17"19"	15"17"19"
	Max. Resolution	800 × 600/1024 × 768	1280 × 1024	1024 × 768
	Max. Colors	16.2M	16.2M/16.7M/16.2M	16.2M/16.7M/16.2M
	Luminance cd/m <sup>2</sup>	450/350	380/300	250/300/300
	Viewing Angle (H/V)°	160/140	170/160	140/120, 160/160, 170/178
	Backlight MTBF (hrs)	50000hrs	50000hrs	50000hrs
Video Port	VGA & DVI-D	VGA & DVI-D	VGA & DVI-D	Display port
Touchscreen (optional)	Resistive	Resistive	Resistive	Resistive
OSD (onscreen display)	YES	YES	NO	NO
Touchscreen Sensor	AMT	ELO	AMT	AMT
Touchscreen Driver	Penmount 6000	GLTODUCH	Penmount 6000	Penmount 6000
Inverter	-	TDK	TDK	TDK
Power Adapter (Voltage/AC)	100 ~ 240 V <sub>AC</sub>	100 ~ 240 V <sub>AC</sub>	100 ~ 240V Optional	100 ~ 240V Optional
DC Power Input (voltage)	24 V <sub>DC</sub>	N/A	10 ~ 30 V	10 ~ 30 V
Ingress Protection (Front Panel)	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Enclosure	Front panel: Aluminum Rear cover: Stainless steel chassis	Front panel: Aluminum Rear cover: Stainless steel chassis	Front panel: Aluminum and flat-sealed Rear cover: Anti-rust coating	Front panel: Aluminum and flat-sealed Rear cover: Anti-rust coating
Mounting	Panel, VESA arm, or wall & desktop mount & optional mounting kit 19" rackmount (P151G)	Panel, wall, desktop, VESA arm & 19" rackmount (3171G)	Panel, wall, VESA arm, or stand, 19" rackmount & optional mounting kit	Panel, wall, VESA arm, or stand, 19" rackmount & optional mounting kit
Operating temperature	-20 ~ 60°C (-4 ~ 140°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)
Storage temperature	-30 ~ 80°C (-22 ~ 176°F)	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)
Dimension	312 x 224 x 60 mm (12.2" x 8.8" x 2.3") 422 x 310 x 70 mm (16.6" x 12.2" x 2.7")	482 x 354.8 x 63.5 mm (18.9" x 13.9" x 2.5") 482 x 358.2 x 66 mm (18.9" x 15.7" x 2.6")	450 x 315 x 52 mm (17.7" x 12.4" x 2.0") 482 x 358 x 58 mm (18.9" x 14" x 2.3") 482 x 385 x 58 mm (18.9" x 15.1" x 2.3")	450 x 316 x 53 mm (17.7" x 12.4" x 2.0") 482 x 358 x 58 mm (18.9" x 14" x 2.3") 482 x 385 x 58 mm (18.9" x 15.1" x 2.3")
Weight	3121G: 4.07 kg (8.975 lbs) 3151G: 7.73 kg (17.04 lbs)	3171G: 6.25 kg (13.78 lbs) 3191G: 15 kg (33.07 lbs)	6 kg (13.22 lbs) 8 kg (17.63 lbs) 10 kg (22.04 lbs)	6 kg (13.22 lbs) 8 kg (17.63 lbs) 10 kg (22.04 lbs)
Certification	CE, FCC, BSM, CCC, UL	CE, FCC, BSM, CCC, UL	CE, FCC, BSM, CCC, UL	CE, FCC, BSM, CCC, UL



Model	FPM-3151SR	TPC-1251SR/1551SR	IPDC-8151S	FPM-3171S/3191S	FPM-8192V
CPU	-	Intel® Atom™ E 380 with 512KB cache	Intel® Celeron M 1.00GHz 1MB L2 on board	-	-
Memory	-	1GB SO-DIMM DDR2 667 SDRAM	1GB SO-DIMM DDR2 200pin 667MHz (80 to 4GB)	-	-
Display	Display Type	VGA TFT LCD	SVGA TFT LCD	XGA TFT LCD	SVGA TFT LCD
	Display Size	15"	12.1"15"	15"	17"19"
	Max. Resolution	1024 × 768	800 × 600/1024 × 768	1024 × 768	1280 × 1024
	Max. Colors	16.2M	16.2M	16.2M	16.2M
	Luminance cd/m <sup>2</sup>	1000	1000	350	380/300
	Viewing Angle (H/V)°	125/140	110/160, 120/140	140/125	170/160, 178/178
	Backlight MTBF (hrs)	50000hrs	50000hrs	50000hrs	50000hrs
Video Port	VGA & DVI-D	-	-	VGA & DVI-D	VGA, DVI-D, Composite Video, S-Video
Touchscreen	Resistive	Resistive	Resistive	Resistive	Resistive
Network (LAN)	YES	2 x 10/100/1000Base-T	2 x 10/100/1000Base-T	-	-
I/O ports	AMT	1 x RS-232 (with isolated), 1 x RS-422/485 (with isolated), 2 x USB 2.0 (Host)	3 x RS-232, 4 x USB 2.0, 2 x PS/2 (Keyboard, Mouse), 1 x VGA Port, Mic-in, Line-in, Line-out	-	-
HDD (Optional)	Penmount 6000	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	-	-
OSD (onscreen display)	-	-	-	YES	YES
CompactFlash Slots	-	1 x CompactFlash™ Slot	1 x CompactFlash™ Slot	-	-
Expansion Slots	-	-	1 x half-length PCI Slot	-	-
Power Input Voltage	100 ~ 240 V <sub>AC</sub>	18 ~ 32 V <sub>DC</sub>	10 ~ 30 V <sub>DC</sub> , 15A	100 ~ 240 V <sub>AC</sub>	100-240V Optional
DC Power Input (voltage)	24 V <sub>DC</sub>	24 V <sub>DC</sub>	N/A	N/A	24 V <sub>DC</sub>
Ingress Protection (Front Panel)	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Enclosure	Front panel: Aluminum Rear cover: Stainless steel chassis	Front bezel: Die-cast aluminum alloy Back housing: SECC	Frontless with stainless steel	Front panel: Stainless steel Rear cover: Stainless steel chassis	Aluminum with coating
Mounting	Panel, VESA arm, or wall & desktop mount & optional mounting kit 19" rackmount	Desktop, wall or panel mount	Desktop, wall or panel mount	Panel, wall, desktop, VESA arm	Panel
Operating temperature	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)	0 ~ 50°C (32 ~ 122°F)	-20 ~ 60°C (-4 ~ 140°F)	-10 ~ 50°C (14 ~ 122°F)
Storage temperature	-30 ~ 80°C (-22 ~ 176°F)	-30 ~ 80°C (-22 ~ 176°F)	-20 ~ 60°C (-4 ~ 140°F)	-30 ~ 80°C (-4 ~ 140°F)	-40 ~ 70°C (-40 ~ 140°F)
Dimension	422 x 310 x 70 mm (16.61" x 12.2" x 2.78")	311 x 227 x 54 mm (12.2" x 8.9" x 2.1") 383 x 278 x 58 mm (15.1" x 12.1" x 2.3")	400 x 314 x 90 mm (15.7" x 12.4" x 3.6")	483 x 378 x 64 mm (18.2" x 15" x 2.5") 482 x 386 x 66 mm (18.9" x 15.2" x 2.6")	483 x 444 x 75 mm (19" x 17.5" x 1.9")
Weight	7.73 kg (17.04 lbs)	2.5 kg (5.51 lbs) 3 kg (6.61 lbs)	12 kg (26.45 lbs)	13.1 kg (28.88 lbs) 15 kg (33.07 lbs)	14.5 kg (31.96 lbs)
Certification	CE, FCC, CCC, UL	BSM, CCC, CE, FCC Class A, UL	UL, CE, FCC Class A, CCC, BSM, CE, FCC, BSM, CCC, UL	UL, CE, FCC, DNV, IEC 60945, IACS E10	CCC, CE, FCC, DNV, IEC 60945, IACS E10
Operating System	-	Windows XP/Win7/WinCE/Linux	Windows 2000, XP Professional and WinPE	-	-

# Digital Healthcare

## Enhancing Digital Healthcare

Medical, clinical and healthcare settings have unique requirements for electronic products in terms of sealed units, thermal and acoustic properties, electromagnetic interference control, longevity, certification, and adherence to strict rules and regulations. Certifications such as UL60601-1, EN60601-1, and ISO 13485, ensure the quality of design and manufacturing of medical devices. Advantech has been a leader in providing a wide range of certified computing systems and services for the world's largest medical technology providers for many years. We have a full roster of medical products to fit all requirements, R&D teams dedicated to medical technology research and implementation, extensive customization capabilities, and a global sales and service organization that guarantees rapid time-to-market and dedicated local support.



**Critical Care**  
Critical care usually takes place in an intensive care unit (ICU), emergency department, or surgical area and trauma center. The real-time monitoring systems play a critical role in closely tracking patient vital signs and translating patient physiological data into clinical information.

**Mobile Nursing Care**  
Mobile nursing care enhances the patient care process and eases the demanding jobs of clinicians who require technologies that are accurate, reliable, highly integrated, mobile and cost effective. Advantech Mobile point-of-care systems are designed to move with busy healthcare professionals, and streamline workflow, providing accurate data recording, and reduced medication errors.

**Bedside and Clinical Care**  
The all-in-one bedside terminal makes hospital stay easier by providing multimedia entertainment and communications choices. The terminal also benefits medical staff by providing secure access to electronic patient data remotely with an optimized hospital workflow as a professional diagnosis aid.

# In-vehicle and Portable Computing

## Industrial Computing Platforms for Mobile Applications

Advantech in-vehicle computing solutions provide a wide range of products for a variety of vertical markets. Advantech offers integrated solutions for all aspects of in-vehicle computing; systems that work under a wide range of temperatures; certified power systems; x86 and RISC-based architectures; a full suite of RF protocols; standardized vehicle diagnostic tools; rich I/O connectors; vibration and shock resistance; and a comprehensive software developer kit to facilitate application development, speeding up time-to-market for system integrators, and helping reduce costs.



**Fleet Management**  
Advantech fleet management solutions help promote safety, efficiency, and profitability by capturing real-time data about cargo, trucks, deliveries and workers. They ultimately increase productivity and lower operating costs by delivering information about who is driving what, where, and when.

**Logistics and Warehousing**  
With the integration of mobile data capture technology and WMS (Warehouse Management System) software, Advantech logistics & warehousing solutions help customers better control their supply chains and inventories, allowing them to move products faster while saving time and increasing productivity.

**Off-road and Heavy Duty**  
Advantech's vehicle mounted computer systems placed in off-road & heavy duty vehicles must be rugged in design, and able to operate in extreme conditions. These systems assist personnel with asset management and real-time monitoring and communications.

**Public Safety**  
Advantech's vehicle mounted computers carry several certifications subject to dirt, dust, drops, vibration, shocks and rough handling. Whether mounted in an emergency vehicle and used to communicate between ambulance and ER, or displayed as a hand-held data transmission terminal for firefighters, Advantech is always your best choice.

### Product Solutions

<p><b>Point-of-Care Terminals</b></p>  <p><b>POC-W211</b> 22" Point-of-Care Terminal with WSXGA TFT LCD</p>	<p><b>Patient Infotainment Terminals</b></p>  <p><b>PI-T1703</b> 17" Patient Infotainment Terminal with Touchscreen</p>	<p><b>Mobile Clinical Assistants</b></p>  <p><b>MICA-101</b> 10.4" Fanless Mobile Clinical Assistant</p>	<p><b>Computerized Medical Carts</b></p>  <p><b>AMIS-50, AMIS-60</b> Computerized Medical Cart</p>	<p><b>Medical Image Displays</b></p>  <p><b>PDC-190</b> 15" Medical Display</p>
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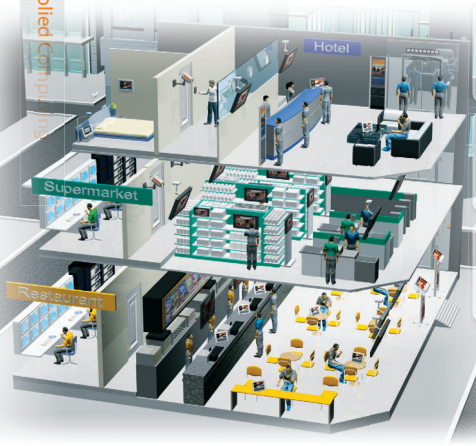
### Product Solutions

<p><b>NEW</b></p>  <p><b>TREK-722/723</b> 5.7" RISC All-in-one Mobile Data Terminal</p>	<p><b>In-vehicle Computers</b></p>  <p><b>TREK-668</b> In-vehicle Surveillance with Fleet Management Computing Box</p>	 <p><b>MTC6</b> Fully-rugged vehicle-mounted Terminal</p>	 <p><b>M4115</b> Heavy-duty vehicle-mounted Terminal</p>	<p><b>NEW</b></p>  <p><b>PWS-770</b> 10.4" Rugged Tablet PC</p>	 <p><b>P37B</b> 3.7" Ultra Rugged PDA</p>
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# Retail, Self Service, and Hospitality

Driving Digital Content Wherever It Is Needed

Advantech is putting significant investment into developing application-specific technology for digital signage, self service, interactive display, retail, hospitality, healthcare & medical, and public service markets. Advantech has assembled a portfolio of application-ready and service-ready computing platforms to offer customer-centric solutions that are flexible and scalable. Advantech signage players are designed for 24/7 operation and come with a standard 2-year warranty that is extendable up to 5 years. These world-class hardware solutions are backed by local product support teams to ensure a smooth, successful roll-out of customer self service and digital signage network implementations.



**Self-service and Interactive Kiosk**  
The Ubiquitous Touch Computer series is an all-in-one computing system equipped with a wide format, touch based and all-flat LCD panel. The simple, slim and stylish design makes it easy to fit in the various application scenarios as an customer self-service interactive kiosk, shelf signage, and dynamic presentation medium.

**Digital Signage**  
From the digital signage media player to the all-in-one digital signage display and station series, the product series can integrate the digital signage computing modules into an engine to manage dynamic multimedia content for retail, enterprise, hospitality museum, education, entertainment applications.

**Intelligent Home**  
Combining technology with a sense of comfort, home residential terminals enable users to manage and control a variety of audio/video environmental and communication technologies through a single system approach from homes or hotel suites.

## Memo

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### Product Solutions

Digital Signage Media Players



**ARK-D5762**  
3rd Generation Intel® Core™ i7 / 6/13 Digital Media Player with 3 x HDMI

RISC Based In-Wall Touch Terminals



**UDIQ-481**  
11.6" Full-Flat In-Wall Touch Computer For Scenario, Hospitality and Residential

Hospitality Infotainment Terminals



**HIT-W181**  
18.5" Full-Flat Touch Computer for Healthcare and Hospitality

**NEW**

Ubiquitous Touch Computers



**UTC-S20A/B/C**  
21.5" All-in-one Self-service Terminal

# Selection Guide Mobile Data Terminals



NEW

Model Name	TREK-723	TREK-722	TREK-723	TREK-303RL	TREK-303RH	TREK-303DH
Processor	Industrial grade Intel Atom XE Z510PT 1.1 GHz (Z520PT 1.3 GHz as option)	TI/ARM Cortex-A8 AM3703 800 MHz				
Design Compatible Models	-	Paired with TREK-510 Paired with TREK-550 TREK-668 Paired with TREK-550 TREK-668				
OS	WinCE 6.0 and Ubuntu Linux 10.04	WinCE 6.0 & optional Android 2.3.4				
Memory	Size	One 200-pin SODIMM socket, Supports up to 2 GB DDR2 400/533 memory module (WinCE only 512MB)				
	Module type	1 x 200-pin SODIMM				
Storage	Size/Type	On board LPDDR				
	Max. Resolution	1 x external accessible SD slot, 1 x external accessible CF slot	On board NAND type 258 for boot loader, operating system & customer apps, 1 x push-push type SD slot			
Display	Size/Type	7" (16:9) TFT LCD	5" TFT LCD	7" TFT LCD	7" (16:9) TFT LCD	
	Max. Resolution	800 x 480	800* 480	800* 480	480 x 234	800 x 480
	Brightness (cd/m <sup>2</sup> )	400 with TS (typical)	350 with TS (typical)	400 with TS (typical)	450 with TS (typical)	400 with TS (typical)
	Backlight MTBF	50,000 hrs	20,000 hrs	10,000 hrs	50,000 hrs	
Touchscreen	Technology	4-wire resistive type, optional support for sunlight readable feature by IR touch solution	4-wire resistive type			4-wire resistive type
	Brightness Control	2 x touchkeys in front panel, built-in light sensor for auto backlight adjustment	Built-in light sensor for auto backlight adjustment			Built-in light sensor for auto backlight adjustment
I/O Port	3 x USB host, 2 x RS-232 with DC-out, 1 x RS485, 1 x CAN w/ J1939, 1 x J1708, 4 x isolated DVI-D	2 x USB host, 2 x RS-232, 1 x CAN with J1939 protocol, 2 x DVI-D				
Audio	Built-in 2 watt speaker, 1 x line-in, 1 x line-out, 1 x MIC input	Built-in 2 watt speaker			Built-in 2 watt speaker	
Video Input	1 x CVBS	1 x CVBS, 1 x S-video				
RF	GPRS - Criterion MC351 dual bands CDMA - Sierra Wireless MC3729V HSPA - Sierra Wireless MC3729V WLAN - 802.11 b/g/n BT Class 2, Version 2.0+EDR	GPRS - Criterion TX23 dual bands CDMA - Sierra Wireless MC3729V HSPA - Criterion P18 BT Class 2, Version 2.0+EDR				
Network (LAN)	1 x 10/100/1000 Mbps	-				
Power	12V/4V car power design, DC-input RV - 30V with ISO-7637-2, SAE J1113 & E-mark, option to support 48V car power system	12V/4V car power design, DC-input RV - 30V with ISO-7637-2, SAE J1113 & E-mark			12V + 5% Powered by Trek Box	
Operating Temperature	-30° C - 60° C	-20° C - 60° C (TREK-722) -30° C - 70° C (TREK-723)			-30° C - 70° C	
Certifications	CE, FCC, CCC, UL, CB, E-mark	CE, FCC, CCC, UL, CB, E-mark			CE, FCC, CCC, UL, CB	
Shock/Vibration	ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)	ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)			ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)	
Dimensions (W x H x D)	256 x 161 x 56 mm	165 x 115 x 43 mm (TREK-722) 213 x 145 x 43 mm (TREK-723)			244 x 160 x 41 mm	
Weight	2.2 kg	0.65 kg (TREK-722)/ 0.85 kg (TREK-723)			0.8 kg	



NEW

Model Name	TREK-510	TREK-550	TREK-668	
Processor	STM ST2062 ARM-based 333 MHz RISC SoC	Industrial grade Intel Atom XE Z510PT 1.1 GHz (Z520PT 1.3 GHz as option)	Intel Atom N2600 1.86 GHz (Dual core)	
OS	WinCE 6.0	Win CE 6.0, WinCE 2009, and Linux (Ubuntu 10.04.2 & 3.4)	WinCE7/Ubuntu Linux Ubuntu 12.04 LTS	
Memory	Mobile DDR 128 MB	One 200-pin SODIMM socket, Supports up to 2 GB DDR2 400/533 memory module (WinCE only support upto 512MB)	One 200-pin SODIMM socket, Supports up to 2 GB DDR2 800MHz memory module	
Video	CRT	-	1 x VGA output by DB-15 (supports different content with UDS port)	
	LVDS	Yes	1 x (supports different content with CRT port)	
Video In	-	2 x composite analog video input ports for real time rear-view monitor feature (doesn't support video recording)	1 x VGA output by DB-15 (supports different content with UDS port)	
Audio	Micro-in, Line-out, SPK-out	Micro-in, Line-out, SPK-out	Micro-in, Line-out, SPK-out	
	Ethernet	1 x 10/100/1000 Mbps Ethernet (with LEDs)	1 x RS-485, 1 x 10/100/1000 Mbps, supports IEEE 802.3x cameras compliant IEEE 802.3af and provides up to 15.4 watts power output	
I/O Interface	USB	2 x USB host ports, 1 x USB client port	4 x USB host ports	4 x USB host ports
	Serial Ports (J1708)	2 x full function RS-232 with DC Output, 1 x 4-wire RS-232/485	2 x full function RS-232 with DC Output, 1 x 4-wire RS-232, 1 x RS-485, 1 x J1708	2 x full function RS-232, (one supports 12V/0.5A via DB9 DC output), 2 x RS-485, 1 x J1708
	DVI	4 x isolated dry contact digital inputs and 4 x isolated relay driver output	4 x isolated dry contact digital inputs and 4 x isolated relay driver output	8 x isolated dry contact digital inputs and 4 x isolated relay driver output
	CAN	CAN 2.0 A/B (J1939 protocol support)	CAN 2.0 A/B (J1939 protocol support)	CAN 2.0 A/B (J1939 protocol support)
G-sensor	-	Built-in for auto SOS	Built-in for auto SOS	
GPS	3D Channel GPS engine embedded in SoC, optional to support u-blox LEA-5S	50-Channel u-blox LEA-4S with AGPS as default, u-blox LEA-4R with AGPS & dead-reckoning feature built-in Gyro & speed sensor as option	50-Channel u-blox LEA-4S with AGPS as default, u-blox LEA-4R with AGPS & dead-reckoning feature built-in Gyro as option	
RF	GPRS - Criterion MC351 dual bands CDMA - Sierra Wireless MC3729V HSPA - Sierra Wireless MC3729V WLAN - 802.11 b/g/n BT Class 2, Version 2.0+EDR	GPRS - Criterion MC351 dual bands CDMA - Sierra Wireless MC3729V HSPA - Sierra Wireless MC3729V WLAN - 802.11 b/g/n BT Class 2, Version 2.0+EDR	GPRS - Criterion MC351 dual bands CDMA - Sierra Wireless MC3729V HSPA - Sierra Wireless MC3729V WLAN - 802.11 b/g/n BT Class 2, Version 2.0+EDR	
Storage	On-Board Flash	2 GB on-board flash	-	-
	SD	1 x external accessible port (for memory mode only)	-	1 x external accessible port (for memory mode only)
	CF	-	1 x external accessible port (for memory mode only)	-
	SATA	-	Option to support built-in 2.5" SSD (other solution with CF slot)	2x key-lock protection external accessible 2.5" SATA storage feature, optional to support industrial grade MLC or SSD
Power	12V/4V car power design, DC-input RV - 30V with ISO-7637-2, SAE J1113 & E-mark	12V/4V car power design, DC-input RV - 30V with ISO-7637-2, SAE J1113 & E-mark	12V/4V car power design, DC-input RV - 32V with ISO-7637-2, SAE J1113 E-mark	
Operating Temperature	-30° C - 70° C	-30° C - 70° C	-30° C - 60° C	
Certifications	CE, FCC, CCC, UL, CB, E-mark	CE, FCC, CCC, UL, CB, E-mark	CE, FCC, CCC, UL, CB, E-mark	
Shock/Vibration	ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)	ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)	ML-STD-810G, SAE J1455, EN60721-3-5 (EMC)	
Dimensions (W x H x D)	261 x 125 x 57 mm	266 x 149 x 68 mm	346 x 197 x 196.2 mm	
Weight	1.0 kg	1.2 kg	5.7 kg (including 2 HDD)	

Selection Guide

# Vehicle Mount Computers



Model Name		XMT-5	MTC-6	MPC-6
System	CPU	Marvell PXA220 up to 800 MHz	Intel Atom™ 1.0 GHz AMD G516G, 1 GHz	1 GHz Ultra Low Voltage, Intel Core Duo L2400 Low Voltage 1.66 GHz
	Memory	256 MB SDRAM / 256 MB Flash	1 GByte with Intel CPU 2 GByte with AMD CPU	512 MB up to 1 GB DDR2
	Storage	extended memory (EMC) for backup and restore	starting at 4 GB CFast media	Starting at 2 GB CF media
Housing		coated aluminum, fanless design	coated aluminum, fanless design	coated aluminum, fanless design
Dimensions/Weight		XMT 5/7: 158 x 289 x 71 mm; 6.2 x 11.4 x 2.8 in, 2.5 kg / 4.8 lbs XMT 5/10: 285 x 220 x 62 mm; 11.2 x 8.1 x 2.2 in, 3.0 kg / 6.6 lbs	MTC 6/10: 285 x 229 x 78 mm, 3 kg / 11.2 x 9.0 x 3.1 in, 6.6 lbs MTC 6/2: 395 x 258 x 79 mm, 5.5 kg / 12.4 x 10.1 x 3.1 in, 7.7 lbs MTC 6/15: 388 x 350 x 62, 4.9 kg / 10.3 x 13.3 x 2.0 in, 10.78 lbs	MPC 6/10: 220 x 260 x 60 mm / 8.9 x 11 x 2.3 in, 4 kg / 8.8 lbs MPC 6/2: 261 x 219 x 100 mm / 10.3 x 12.5 x 3.9 in, 4.7 kg / 10.4 lbs
Display		7" LED, WGA 800 x 480, convertible design: frontal and landscape use 10.4" LED, SVGA 800 x 600	10.4" LED, SVGA 800 x 600 12.1" LED, XGA 1024 x 768 15" LED, XGA 1024 x 768	10.4" SVGA 800 x 600 12.1" XGA 1024 x 768
Touch Screen		DLG-specific resistive Touch Screen	DLG-specific resistive Touch Screen	DLG-specific resistive Touch Screen
Software	Operating System	MS Windows CE 6.0	MS Windows XP Professional, XP Embedded, WES 7, Win 7 Pro	MS Windows XP Professional, XP Embedded, WES 7, or Windows 7 pro
	Emulations	VT100, VT220, IBM S/387, TN 3270, Citra CA Client, RDP Client	VT100, VT220, IBM S/387, TN 3270, Citra CA Client, RDP Client	VT100, VT220, IBM S/387, TN 3270, Citra Client, Freefloat Access One
Communication	WLAN	IEEE 802.11 b/g with diversity antenna, optional	IEEE 802.11 a/b/g/n with diversity antenna, optional	IEEE 802.11b/g, a/b/g/n with diversity antenna
	WWAN	GSM-Quadband 850/900/1800/1900, EDGE 2.3G, optional	-	-
	GPS	A-GPS, accuracy 2.5 m (EPA), optional	-	-
	CAN Bus	optionally: CAN 2.0A, CAN 2.0B, J1939 protocol ready	-	-
	LAN	RJ45 10/100 Mbps	RJ45 10/100/1000 Mbps	Ethernet 10/100 MBits
Interfaces	Serial	1 x RS-232 interface, optionally 2 x RS-232 or 1 x RS-232 and 1 x RS-422/485 COM 1 optionally 5V or 12V	1 x RS-232, COM 1 optionally 5V	2 x RS-232, alternatively 1 x RS-232 and 1 x RS-422/485 1 x COM 1, optionally 5V or 12V
	USB	2 x USB 2.0 Host; 1 x USB 2.0 Client; 1 x Standard USB 2.0	1 x Service USB 2.0 2 x USB 2.0	2 x USB 2.0
	PS2	-	-	Standard 6 pin Mini DIN connector, keyboard/mouse
	Ports	-	-	2 x PCI Slot 32 Bit, Rev. 2.2 compatible for ultra-short card (max. length 141mm / 5.55 in)
Audio/Voice	DLG Voice Kit	speaker integrated Voice over IP (VoIP), option	speaker integrated, Voice over IP (VoIP), option	Speaker integrated, option Voice over IP (VoIP), option
Power Supply	AC	-	-	110/230 VAC, 100 W, 50 to 60 Hz
	DC	12/24 or 24/48 Vdc, galvanically isolated voltage drops down to 50% can be handled	12/24 Vdc or 24/48 Vdc, galvanically isolated voltage drops down to 50% can be handled	12 Vdc or 24/48 Vdc, galvanically isolated, Voltage drops down to 50% can be handled
Environmental	IP protection class	360° IP 67 and IP 68 (contains P 65 and P 54)	360° IP 67 and P 66 (contains P 65 and IP 54)	360° IP 67 and P 66 (contains P 65 and IP 54)
	Certifications	CE/FCC Class A	CE/FCC Class B	CE Immunity Class A, Emission Class B / FCC Class B
	Operating temperature	-30 to +50 °C / 22 to 122 °F	-30 to +50 °C / 22 to 122 °F	0 to +50 °C / 32 to +122 °F, with optional temp. extension: -30 to +60 °C / 22 to +122 °F
	Relative humidity	10 to 90% @ 40 °C, non condensing	10 to 90% at 40 °C, non condensing	10 to 90% at 40 °C, non condensing
	Shock/Vibration	Class SM3 according DIN EN 60721-3-5 and MIL-STD 810F (S/Highway Truck)	Class SM3 according DIN EN 60721-3-5 and MIL-STD 810F (S/Highway Truck)	Class SM3 according to EN 60721-3-5 and US Highway Truck as MIL-STD 810F

Selection Guide

# Industrial PCs for Stationary



Model Name		IPC7
System	CPU	1 GHz Ultra Low Voltage, Intel Core Duo L2400 Low Voltage 1.66 GHz
	Memory	512 MB up to 1 GB DDR2
	Hard disc drive	40 GByte (Shock/Vibration up to class SM3)
	Storage	CF card up to 32 GByte
Housing		coated aluminum, fanless design
Dimensions/Weight		326 x 395 x 121 mm / 12.8 x 15.6 x 4.8 in, 6.3 kg / 13.9 lbs
Display		-
Touch Screen		DLG-specific resistive Touch Screen
Software	Operating System	MS Windows XP Professional, XP Embedded, Windows 7, WES 7
	Emulations	VT100, VT220, IBM S/387, TN 3270, Freefloat Access One, Citra Client
Communication	WLAN	IEEE 802.11b/g, a/b/g/n with diversity antenna
	WWAN	-
	GPS	-
	CAN Bus	optional
	LAN	Ethernet 10/100 MBits
Interfaces	Serial	2 x RS-232, alternatively 1 x RS-232 or 1 x RS-422/485 COM 1 optionally 5 V or 12 V
	USB	2 x USB 2.0 (H-SPEED™)
Ports	PS2	keyboard/mouse, standard 6 pin Mini DIN connector
	PCI	2 x PCI Slot 32 Bit, Rev. 2.2 compatible for short card (max. length 174mm / 6.85 in)
	Internal PCMCIA	1 PCMCIA for type IV (16/32 Bit), optional
Audio/Voice	DLG Voice Kit	-
	AC	110/230 VAC, 100 W, 50 to 60 Hz
Power Supply	DC	12 Vdc or 24/48 Vdc, galvanically isolated, Voltage drops down to 50% can be handled
	IP protection class	360° IP 67 and P 66 (contains P 65 and P 54)
Environmental	Certifications	CE/FCC Class A
	Operating temperature	0 to +50 °C / 32 to 122 °F, with optional temp. extension: -10 to +50 °C / 14 to 122 °F
	Relative humidity	10 to 90% @ 40 °C, non condensing
	Shock/Vibration	Class SM3 according DIN EN 60721-3-5 and MIL-STD 810F (S/Highway Truck)

## Selection Guide Tablet PCs



Item/ Model Name		Tablet PCs	
		S10A	PWS-770
Processor	<b>CPU</b>	Intel Atom Z5300, 1.6 GHz	Intel Atom N2600 1.6 GHz
	<b>Companion Chipset</b>	USB5W XL	Intel® MM10
Memory		DDR3 1G, Up to 2GB	SO DIMM DDR3 to 2 GB
Storage		CF Card: 4GB/ 8GB/ 16GB/ 32GB SD/ SDHC/ SDXC MLC/ SLC/ NAND HDD/ SSD	Supports mSATA, SSD 32 GB - 128 GB
	<b>Size/ Type</b>	10.4" Transflective TFT LCD	10.4" VGA (1024 x 768) (Transflective) LCD
Display	<b>Max. Resolution</b>	VGA 1024 x 768	VGA 1024 x 768
	<b>Brightness (cd/m2)</b>	300 cd/m2 LED back light	300 cd/m2 LED back light
Touch Panel		4-wire resistive touch panel / Pen reflection resistive touch panel (optional)	4-wire resistive touch panel
Application Buttons		5 x function key buttons (F1/F2/F3/S1/S2) 1 x power button 1 x enter key button 1 x software keyboard button 1 x Mode key	Power button x 1 (L side) ; Function keys x 5 (F1-F3) Tablet PC keyboard x 1; Mode key x 1; Enter key x 1; Activate key x 2 (S1 & S2); Activate barcode reader, CCD camera & dimming adjustment required to control the brightness.
IO Ports		1 x RS-232 2 x USB 2.0 ports, 1 x SD card slot (1.0) 2 x 1/8" internal stereo speakers, 1 x internal mono microphone 1 x PDA/MCA Type I/IIc, supported Cartridges 2.1 1 x VGA DB15 1 x DC-in jack 1 x docking connector 1 x Audio-in jack 1 x Audio out Jack	USB 2.0 x 2 Serial port RS-232 x 1 VGA port x 1 Audio in jack x 1 Audio out Jack x 1 Internal mono microphone x 1 DC-in x 1 Docking port (32-pin, USB/PC/VIDEO/SM slot with WLAN option)
Communication and Device	<b>Standard</b>	802.11 b/g/n Bluetooth V2.0 + EDR CCD camera, 2M pixel Fingerprint	802.11b/g/n WLAN built-in with integrated antenna Bluetooth class 2, 4.0 built-in with integrated antenna Finger Scanner CCD camera, 2M
	<b>Factory Options (optional)</b>	RFID 13.56MHz (ISO 14443/15693) Barcode 1D (Hardware decoder) RS-172-2 track CCD + Barcode	WiFi/WLAN Module CCD camera, 2M 1D/2D Barcode MSP, RFID
Dimensions & Weight		264 x 213 x 18 mm, 1.2 kg	264 (L) x 213 mm (W) x 18 (H), under 1.2 kg without rubber bumper & optional devices
Power	<b>Battery</b>	Rechargeable Li-ion smart battery, 11.1V @ 1900 mAh (Internal battery) 11.1V @ 3800 mAh (External battery)	Main battery: 3SP 11.1V 1900 mAh Hot Swap 2nd battery (External battery): 3SP 11.1V 5000 mAh
	<b>Power Adapter</b>	Universal AC 100V - 240V, 50 - 60 Hz Input 19 V, 3.16 A output	AC Adapter AC 100V-240V 50/60Hz, 19V@3.0A/RW, Auto Sensing/Switching worldwide power supply Car Adapter AC 120V-550V
Environment	<b>Operating Temperature</b>	0° - 40° C	0 to 40° C; discharge: -10 to 50° C
	<b>Storage Temperature</b>	-20 - +60° C	-20 to +60° C
OS		Windows XP Embedded Windows XP Pro Windows 7 Embedded Windows 7 Pro	Windows 7 Embedded Windows 7 Pro
	<b>Rugged Certification</b>	IP54 rating (H) 3 Feet drop onto plywood	IP54, ESD-IP-328 3 Feet drop onto Plywood, MIL-STD-810G
Certifications		CE, FCC, CCC, DO-160, RoHS, WEEE, UL254, UL94V-0, TLE1	CE, FCC, CCC, ESM, UL, CB
Accessories		Carrying bag + shoulder strap Hand strap + shoulder strap VESA-mount (M & W) Stand Cradle Car adaptor	AC adaptor (19V, 65W) VESA Mounting Bracket Carrying Bag Hand strap Docking stand 2nd battery (5000mAh)

## Selection Guide Handheld Terminals



Item/ Model Name		Handheld Terminal		Industrial PDA
		H35B	P37B	
Processor	<b>CPU</b>	Marvell PXA270 624MHz	Intel PXA270 624MHz	
	<b>Memory</b>	128 MB SDRAM on board	256 MB SDRAM on board	
Storage		1G Flash ROM on board	1 GB Flash ROM on board	
Audio System		AC-97 codec, built in internal speaker	AC-97, built-in internal microphone and one speaker	
Display	<b>Size/ Type</b>	3.5" transflective TFT LCD	3.7" transflective TFT LCD	
	<b>Max. Resolution</b>	QVGA 240 x 320	VGA 480 x 640 / QVGA 240 x 320	
	<b>Brightness (cd/m2)</b>	100 cd/m2 LED back light	100 cd/m2 LED back light	
Touch Panel		4-wire resistive touch panel	4-wire resistive touch panel	
Application Buttons		28 keys including navigation, function and numeric keys 37 keys including navigation, function, ON/OFF, and numeric keys (optional) Two side buttons for Barcode scan (optional)	1 x power on/suspend button 1 x software reset switch Navigation key and four function keys 1 x HW reset key located right side door 1 x button for backlight on/off (using power on/suspend button)	
IO Ports		1 x USB type A connector, USB 1 host 1 x USB mini type B connector, USB 1 slave USB 1 share 1 x RS-232 (full) 1 x SD slot 1 x PDA/MCA/PC slot (option) 1 x stereo headphone jack 1 x microphone jack 1 x cradle connector (USB host x 1, USB slave x 1, RS232 x 1 (full), DG)	2 x USB type A connectors, USB 1 host 1 x USB mini type B connector, USB 1 slave 1 x RS-232 (full) 1 x RS-232C/485 (optional) 1 x RJ-45 for 10/100/1000 ethernet (GigE port) 1 x CF slot 1 x stereo headphone jack 1 x microphone jack 1 x DO-16 connector	
Communication and Device	<b>Standard</b>	802.11b/g/n WLAN module built in Bluetooth class 2, v1.2 built-in with integral antenna	802.11b/g/n WLAN module built in Bluetooth class 2, v1.2 built-in with integral antenna	
	<b>Factory Options (optional)</b>	Barcode 1D	GPS & GALILEO receiver with antenna built-in GPS/GPRS/WiMAX/WCDMA/CDMA, (3.5G) internal module (for data transmission only)	
Dimensions & Weight		210 x 100 x 43 mm, 570 g	155 x 96 x 42 mm, 650 g	
Power	<b>Battery</b>	Rechargeable Li-ion smart battery, 7.4 V, 1900 mAh, TP25, 20 x 34 x 50 mm	Rechargeable Li-ion smart battery, 7.4 V, 1880 mAh, 2SP, 59 x 38 x 25 mm	
	<b>Power Adapter</b>	Universal AC 100 V - 240 V, 47 - 63 Hz input, 12 V, 2 A output	Universal AC 100 V - 240 V, 47 - 63 Hz input, 12 V, 3.5 A output	
Environment	<b>Operating Temperature</b>	-20 - +60° C	-20 - +60° C	
	<b>Storage Temperature</b>	-40 - +70° C	-40 - +70° C	
OS		5% - 95%	5% - 95%	
	<b>Operating Humidity</b>	5% - 95%	5% - 95%	
Rugged Certification		Windows CE 5.0	Windows CE 5.0	
Certifications		IP65 rating 5 Feet drop to concrete MIL-STD-810F	IP65 5 Feet drop to concrete MIL-STD-810F MIL-STD-810F	
Accessories		CE, FCC, CCC	CE, FCC, CCC	Military connector Hand strap Vehicle mount Cradle

(\*) RFID Module: ISO14443A, ISO14443B, ISO15693 & antenna built in (reading distance 4 - 6 cm)  
 (\*\*) RFID Module: EPC-Gen2 Class 1, ISO 18000-6C & reading distance 1 - 2.1 m

Selection Guide

# Medical Point-of-Care Slime Series



Category	Attribute	POC-W211	POC-W211C	POC-W181
Computing Systems	Chipset	Intel QM67	AMD 600/690 + A54E	Intel QM67
	CPU	Intel Core i7-2655LE Processor (4 M Cache, 2.20GHz) Intel Core i5-2300LE Processor (3 M Cache, 1.30GHz)	AMD Dual Core 159N 1.65 GHz (Dual Core 18W TDP)	Intel Core i7-2610LE Processor (4 M Smart Cache, 1.50GHz) Intel Core i5-2300LE Processor (3 M Smart Cache, 1.30GHz)
	Front Side Bus	-	-	-
	Memory	Up to 16GB DDR3 1333MHz SDRAM (Optional)	Up to 8GB DDR3 1333MHz SDRAM (Optional)	Up to 16GB DDR3 1333MHz SDRAM (Optional)
Display	Graphics	Integrated Intel HD Graphics	ATI Radeon RV740/Support DirectX 11.UMD3	Intel HD Graphics 3000
	Operating System	XPP/Win 7	XPP/Win 7	XPP/Win 7
	Size/Display Type	21.5" wide TFT color LCD (16:9)	21.5" wide TFT color LCD (16:9)	18.5" TN Model LED panel, Normally White
	Max. Resolution	1600 x 1080 (H x V)	1601 x 1080 (H x V)	1366 x 768 (H x V)
	Max. Colors	16.7M colors (RGB 8-bit)	16.7M colors (RGB 8-bit)	16.7M colors (RGB 8-bit + 1H-FRC)
	Pixel Pitch (mm)	0.2465x0.2465	0.2465x0.2465	0.292 x 0.292
	Viewing Angle	178°/178°	178°/178°	170°/160°
	Luminance	250 cd/m <sup>2</sup>	250 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>
	Backlight Lifetime	-	-	50,000 hours
	LED MTBF	30,000 hrs	30,000 hrs	30,000 hrs
Expansion Slot	*Mini PCI	5,000 : 1	5,000 : 1	1,000 : 1
	*Mini PCI-E	Mini PCIe slot x 1	Mini PCIe slot x 1	Mini PCIe slot x 1
Storage	HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD
	Serial Port	1xRS232(isolate), and 1xRS232C422/485 (isolate) serial port	1xRS232C422/485(isolate) serial port	1xRS232(isolate) and 1xRS232C422/485 (isolate) serial port
I/O Port	USB Port	4 (Rear x 2, Rear x 2)	8 (Rear x 4)	4 (Rear x 4)
	VGA/DVI/HDMI Port	1 x HDMI & VGA port	1 x DVI port	1 x DVI VGA port
	Micro-in/Line-in/Line-out	-	-	-
	Speakers (W)	2	2	2
Cooling Fan	LAN	2 x Gigabit Ethernet (optional) interfaces (RJ-45)	2 x Gigabit Ethernet (optional) interfaces (RJ-45)	2 x Gigabit Ethernet (optional) interfaces (RJ-45)
	Fanless	Yes	Yes	Yes
Power Supply	AC / DC Model	AC/DC adapter (Sipro Model no.HPU101-107)	AC/DC adapter (Sipro Model no.HPU101-107)	AC/DC adapter (Sipro Model no.HPU101-107)
	Input Voltage	90 ~ 280V AC, 47 ~ 63 Hz, 1.35 ~ 0.5 A	90 ~ 280V AC, 47 ~ 63 Hz, 1.35 ~ 0.5 A	90 ~ 280V AC, 47 ~ 63 Hz, 1.35 ~ 0.5 A
	Output Voltage	+18 Vdc, 5.55 A max. (100 watts)	+18 Vdc, 5.55 A max. (100 watts)	+18 Vdc, 5.55 A max. (100 watts)
	WLAN	Integrated Wireless 802.11 a/b/g/n connection & internal antenna	Integrated Wireless 802.11 a/b/g/n connection & internal antenna	Integrated Wireless 802.11 a/b/g/n connection & internal antenna
Optional Functions	*Battery	333P 4200mAh, Support 0.5 hr backup operation	333P 4200mAh, Support 0.5 hr backup operation	333P 4200mAh, Support 0.5 hr backup operation
	Type	Analog Resistive	Analog Resistive	Analog Resistive
	Light Transmission	80%±3	80%±3	80%±3
	Controller	COM interface	USB interface	USB interface
IP Rating	Durability	35 million touches	35 million touches	35 million touches
	Front Panel	IP54	IP54	IP54
	Whole System	IPX1	IPX1	IPX1
	CE	Yes	Yes	Yes
Certifications	FCC	Yes	Yes	Yes
	*EN60601-1	Yes	Yes	Yes
	*UL 60601-1	Yes	Yes	Yes
	*CCC	Yes	Yes	No
Environment	Temperature	0 ~ 40°C (32 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)
	Humidity	10 ~ 95% @ 40°C (non-condensing)	10 ~ 95% @ 40°C (non-condensing)	10 ~ 95% @ 40°C (non-condensing)
	Shock Resistance	20G peak acceleration (11 ms duration)	20G peak acceleration (11 ms duration)	20G peak acceleration (11 ms duration)
	Dimensions (W x H x D)	550 x 360 x 65 mm (21.65" x 14.17" x 2.56")	550 x 360 x 65 mm (21.65" x 14.17" x 2.56")	454 x 304 x 55 mm
Physical Characteristics	Weight	6.9 kg	6.9 kg	5.8 kg
	VESA Mounting	-	VESA 75/100mm	-

Category	Attribute	POC-S196F	POC-S197F	POC-S177	POC-S157
Computing Systems	Chipset	QM67	GS45+ICH9M-SFF	GS45+ICH9M-SFF	GS45+ICH9M-SFF
	CPU	Soldered Type Intel Core 2 Duo 1.2 GHz	Soldered Type Intel Core 2 Duo 1.2 GHz	Soldered Type Intel Core 2 Duo 1.2 GHz	Soldered Type Intel Core 2 Duo 1.2 GHz
	Front Side Bus	-	800MHz	800MHz	800MHz
	Memory	Up to 16 GB DDR3 1333 MHz SDRAM	Supports up to 4 GB DDR3 800MHz/1066MHz	Supports up to 4 GB DDR3 800MHz/1066MHz	Supports up to 4 GB DDR3 800MHz/1066MHz
Display	Graphics	Integrated Intel HD Graphics	Graphics Controller Intel GS45 integrated	Graphics Controller Intel GS45 integrated	Graphics Controller Intel GS45 integrated
	Operating System	XPP/Win 7, WES7P, XPE	XPP/Win 7, WES7P, XPE	XPP/Win 7, WES7P, XPE	XPP/Win 7, WES7P, XPE
	Size/Display Type	19" TFT color LCD	19" TFT color LCD	17" TFT color LCD	15" TFT color LCD
	Max. Resolution	1280 x 1024	1280 x 1024	1280x1024	1024 x 768
	Max. Colors	16.7 M	16.7 M	16.7 M	262k
	Pixel Pitch (mm)	0.294 x 0.294	0.294 x 0.294	0.264 x 0.264	0.297 x 0.297
	Viewing Angle	178° / 178°	160° / 160°	160° / 160°	140°/120°
	Luminance	300 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>
	Backlight Lifetime	50,000 hours	50,000 hours	50,000 hours	50,000 hours
	LED MTBF	50,000 hours	50,000 hours	50,000 hours	50,000 hours
Expansion Slot	*Mini PCI	2,000 : 1	1,800 : 1	800 : 1	700 : 1
	*Mini PCI-E	0	0	1	1
Storage	HDD	1	1	1	1
	Serial Port	One 2.5" SATA HDD	One 2.5" SATA HDD	One 2.5" SATA HDD	One 2.5" SATA HDD
I/O Port	USB Port	2 RS-232 x 1, RS-232C422/485 x 1	2 RS-232 x 1, RS-232C422/485 x 1	2 RS-232 x 1, RS-232C422/485 x 1	2 RS-232 x 1, RS-232C422/485 x 1
	VGA/DVI/HDMI Port	4	3	3	3
	Micro-in/Line-in/Line-out	1 (DM-I)	1 (DM-I)	1 (DM-I)	1 (DM-I)
	Speakers (W)	No	Yes	Yes	Yes
Cooling Fan	LAN	2	2	2	2
	Fanless	Gigabit LAN x 2	Gigabit LAN x 2	Gigabit LAN x 2	Gigabit LAN x 2
Power Supply	AC / DC Model	12-24V wide range DC power input Adapter, 100 Watts	12-24V wide range DC power input Adapter, 100 Watts	12-24V wide range DC power input (15 ~ 24 V with battery option) Adapter, 100 Watts	12-24V wide range DC power input (15 ~ 24 V with battery option) Adapter, 100 Watts
	Input Voltage	+18 Vdc, 5.55 A	+18 Vdc, 5.55 A	+18 Vdc, 5.55 A	+18 Vdc, 5.55 A
	Output Voltage	+18 Vdc, 5.55 A max. (100 watts)	+18 Vdc, 5.55 A max. (100 watts)	+18 Vdc, 5.55 A max. (100 watts)	+18 Vdc, 5.55 A max. (100 watts)
	WLAN	EEE 802.11 b/g/n	EEE 802.11 b/g/n	EEE 802.11 b/g/n	EEE 802.11 b/g/n
Optional Functions	*Battery	-	-	6300 mAh Li-ion battery pack	6300 mAh Li-ion battery pack
	Type	Analog Resistive	Analog Resistive	Analog Resistive	Analog Resistive
	Light Transmission	81%	81%	75%	75%
	Controller	RS-232 interface (uses COM B)	RS-232 interface (uses COM B)	RS-232 interface (uses COM B)	RS-232 interface (uses COM B)
IP Rating	Durability	36 million touches	36 million touches	30 million touches	30 million touches
	Front Panel	IP54	IP54	IP54	IP54
	Whole System	IPX1	IPX1	IPX1	IPX1
	CE	Yes	Yes	Yes	Yes
Certifications	FCC	Yes	Yes	Yes	Yes
	*EN60601-1	Yes	Yes	Yes	Yes
	*UL 60601-1	Yes	Yes	Yes	Yes
	*CCC	Yes	Yes	Yes	Yes
Environment	Temperature	0 ~ 40° (32operating)	0 ~ 40° (32operating)	0 ~ 40° (32operating)	0 ~ 40° (32operating)
	Humidity	10 ~ 95% @ 40° C, non-condensing	10 ~ 95% @ 40° C, non-condensing	10 ~ 95% @ 40° C, non-condensing	10 ~ 95% @ 40° C, non-condensing
	Shock Resistance	20G peak acceleration (11 ms duration)	20G peak acceleration (11 ms duration)	20G peak acceleration (11 ms duration)	20G peak acceleration (11 ms duration)
	Dimensions (W x H x D)	471.5 x 416.2 x 102.4 mm	471.5 x 416.2 x 102.4 mm	436.5 x 376.5 x 81.4 mm	417.3 x 342.3 x 89.3 mm
Physical Characteristics	Weight	7.4 kg (16.06 lb)	7.4 kg (16.06 lb)	7.1 kg (15.65 lb)	5.4 kg
	VESA Mounting	-	-	75 x 75 mm, 100 x 100 mm	-



Selection Guide

# Medical Point-of-Care Series

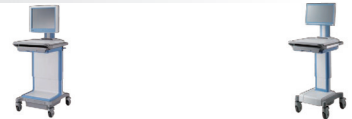


Category	Attribute	POC-22/G	POC-17B	POC-17C	POC-15B	POC-12.7
Computing Systems	Chipset	Intel® Core™	Intel® Core™	Intel® Core™	Intel® Core™	Intel® Core™
	CPU	Intel SL9400 Core2 Duo processor, up to 1.86 GHz	Soldered Type Intel® T5500 2.5 GHz	Intel Core 2 Duo T1400 Processor up to 1.8 GHz	Soldered Type Intel® T5500 2.5 GHz	Intel® Processor M1 (200MHz)
	Front Side Bus	1600 MHz FSB	1600 MHz FSB	667 MHz FSB	1600 MHz FSB	667 MHz FSB
Display	Memory	Supports up to 8 GB DDR3 1066 MHz (2GB RAM)	Up to 16 GB DDR3 1333 MHz (8GB RAM)	Supports up to 4 GB DDR3 1333 MHz (2GB RAM)	Up to 16 GB DDR3 1333 MHz (8GB RAM)	Supports up to 2 GB DDR3 667 MHz RAM
	Graphics	-	Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics	-
	Operating System	XPS Win 7	XPS Win 7, WEBCP, XPE	XPS Win 7, WEBCP, XPE	XPS Win 7, WEBCP, XPE	XPS Win 7
	Size/Display Type	22 inch wide (E16) PMVA TFT Color LCD	17" TFT Color LED	17" TFT Color LED	15" TFT Color LED	12.1" TFT color LED panel
	Max. Resolution	1600 x 1050 (WXGA)	1280 x 1024	1280 x 1024	1024 x 768	1024 x 768
	Pixel Pitch (mm)	0.292 x 0.292	0.264 x 0.264	0.264 x 0.264	0.267 x 0.267	0.264x 0.264
	Viewing Angle	170°/170°	170°/170°	160°/160°	160°/160°	160°/160°
	Luminance	300 cd/m2	350 cd/m2	300 cd/m2	400 cd/m2	600 cd/m2
	Backlight Lifetime	50,000 Hours	50,000 Hours	50,000 Hours	50,000 Hours	50,000 Hours
	LED MTBF	50,000 Hours	50,000 Hours	50,000 Hours	50,000 Hours	50,000 Hours
	Contrast Ratio	2000:1	800:1	800:1	700:1	700:1
	PC/E	PC-E v4	PC-E	PC-E	PC-E	PC-E
	PC/E	PC-E v4	PC-E	PC-E	PC-E	PC-E
	Expansion Slot	"Mini PCI	-	-	-	-
"Mini PCI-E		-	-	-	-	-
HDD		One SATA 2.5" HDD (up to 500GB)	One SATA 2.5" HDD	One SATA 2.5" HDD	One SATA 2.5" HDD	One SATA 2.5" HDD
Storage	Optical Device	1 x DVD-RW SATA; Blue-ray (RM option)	DVD-RW	DVD-RW Slim Type	DVD-RW	-
	"DOM (Disk on Module)	-	-	-	-	-
	Serial Port	4 isolated (RS-232 v3, RS232C/422/485 v1)	4 isolated (RS-232 v3, RS232C/422/485 v1)	4 isolated (RS-232 v3, RS232C/422/485 v1)	3 isolated (RS-232 v3, RS232C/422/485 v1, RS-232)	2 isolated (RS-232 v1, RS232C/422/485 v1)
I/O Port	USB Port	5	4	4	6	4
	IEEE 1394a Port	1	1394b x1	1	3	1
	PS/2 Mouse and Keyboard Interface	1	0	1	1	1
Cooling Fan	VGA/DMI Port	DVI-I	VGA & HDMI	DVI-I	VGA & HDMI	VGA
	Parallel Port	-	-	-	-	-
	Micro-USB/Line-out	Yes	Yes	Yes	Yes	Yes
Power Supply	Speakers (TW)	2	2	2	2	2
	"Smart Card Reader	Yes	Yes	Yes	Yes	option
	LAN	Gigabit LAN v2, isolated	Gigabit LAN v2, isolated	Gigabit LAN v2, isolated	Gigabit LAN v2, isolated	Gigabit LAN v1, isolated
Optional Features	Fanless	Yes	Yes	Yes	Yes	Yes
	AC/DC Model	AC Model, 300 Watts	AC Model, 300 Watts	AC Model, 300 Watts	AC Model, 100 Watts	AC Adapter 60W or 100W
	Input Voltage	Input Voltage: 100-240 Vdc, 5.2A max. @ 50/60 Hz	Input Voltage: 100-240 Vdc, 5.2A max. @ 50/60 Hz	Input Voltage: 100-240 Vdc, 5.2A max. @ 50/60 Hz	Input Voltage: 100-240 Vdc, 4.2A max. @ 50/60 Hz	1.25/0.5A max. @ 50/60 Hz
IP Rating	Output Voltage	12Vdc, 25A Max(3000)	3.3V & +5V & +12V @ 1.0A, +12V @ 1.0A	3.3V & +5V & +12V @ 1.2A, +12V @ 1.0A	+5V @ 12A, +12V @ 1.2A, +3.3V @ 16.0A, +5V @ 2.0A, +12V @ 0.8A @ 100W rating	18Vdc, 3.5A max (100W) 18Vdc, 5.5A max (100W)
	WLAN	IEEE 802.11 b/g/n	IEEE 802.11 b/g/n or IEEE 802.11 b/g/n	IEEE 802.11 b/g/n or IEEE 802.11 b/g/n	802.11 b/g	IEEE 802.11 b/g/n
	"Battery	-	-	-	-	-
Optional Touchscreen Features	"Stylus & RFD	Yes	Yes	Yes	Yes	Yes
	Type	SSiF	Resistive	Resistive	Resistive	Resistive
	Light Transmission	92%	75%	75%	75%	80%
Certifications	Controller	RC-232 Interface	RC-232 Interface	RC-232 Interface	RC-232 Interface	RC-232 Interface
	Front Panel	IP65	IP65	IP65	IP65	IP65
	"UL 60950-1	Yes	Yes	Yes	Yes	Yes
Environment	Temperature	0 ~ 40° C (32 ~ 104° F)	0 ~ 40° C (32 ~ 104° F)	0 ~ 40° C (32 ~ 104° F)	0 ~ 40° C (32 ~ 104° F)	0 ~ 40° C (32 ~ 104° F)
	Humidity	10 ~ 95% @ 40° C	10 ~ 95% @ 40° C	10 ~ 95% @ 40° C	10 ~ 95% @ 40° C	10 ~ 95% @ 40° C
	Shock Resistance	30G peak acceleration	30G peak acceleration	30G peak acceleration	30G peak acceleration	30G peak acceleration
Physical Characteristics	Dimensions (W x H x D)	530 x 430 x 156 mm	420 x 320 x 150 mm	420 x 320 x 150 mm	414 x 320 x 115 mm	340 x 280 x 95 mm
	Weight	12kg (26.4lbs)	10 kg (22.05 lb)	10 kg (22.05 lb)	6.5 kg (14.4 lb)	4.5 kg (9.92 lbs)
	VESA Mounting	-	75 x 75 mm, 100 x 100 mm	-	-	75 x 75 mm

Intelligent Building Solutions

Selection Guide

# Computerized Medical Cart



Category	Attribute	AMIS-60	AMIS-50
Base Cart	Footprint	20.5" x 24.7" (520.7 x 627.3 mm)	18.7" x 18.5" (500 mm x 470 mm)
	Casters	Medical casters, two front locking, two non-locking	125 mm x 125 mm Medical casters, two locking, two non-locking
Work Surface	Work Surface	18.5" x 18.3" (469.9 x 469.9 mm) Weight Capacity (based on std. 400N) Up to 17.0 lbs/kg	18.5" x 18.3" (469.9 x 469.9 mm) Weight Capacity (based on std. 400N) Std. Spring (Up to 17.0 lbs/kg) Max. (Up to 38.4 lbs/kg)
	Keyboard & Mouse Area	Keyboard Size: Up to 380 x 140 x 25 mm Keyboard LED Light, Mouse Tray	Keyboard Size: Up to 380 x 140 x 25 mm Keyboard LED Light Mouse Tray
	Height Adjustment Range	31.3" ~ 45.1" (795 ~ 1145 mm)	32.0" ~ 45.8" (813 ~ 1163 mm)
	Display Holder	Standard VESA Mount (ESA: 75/75; VESA: 100/100)	Standard VESA Mount (ESA: 75/75; VESA: 100/100)
Dashboard	Dashboard	Battery Power Button Computer Power Button LED for Battery Capacity Indication	Battery Power Button Computer Power Button LED for Battery Capacity Indication
	Accessory Extend Used	Neck, Dove Tail Work Surface; DIN Rail (Right, Left and Rear)	Neck, Dove Tail Work Surface; DIN Rail (Right, Left and Rear)
I/O Ports	USB 2.0 Ports	USB 2.0 ports x 4 Gigabit Ethernet Interface (RJ-45) x 1	USB 2.0 ports x 4, Gigabit Ethernet Interface (RJ-45) x 1
	CPU	Intel Atom D510 1.66 GHz	Intel Atom D525 1.8 GHz
Memory	2 GB DDR3 SODIMM max.	2 GB DDR3 SODIMM max.	2 GB DDR3 SODIMM max.
	2.5" SATA HDD 160 GB	2.5" SATA HDD 160 GB	2.5" SATA HDD 160 GB
	2.5" SSD 16/32/64 GB (Optional)	2.5" SSD 16/32/64 GB	2.5" SSD 16/32/64 GB (Optional)
Storage	VGA x 1 (2048 x 1536 @ 60Hz)	DVI x 1 (1920 x 1200 @ 60Hz) Ethernet 2 USB x 4 (USB 2.0) Audio x 3 (MIC-In, Line-out, Line-In)	DVI x 1 (2048 x 1536 @ 60Hz) Ethernet 2 USB x 4 (USB 2.0) Audio x 3 (MIC-In, Line-out, Line-In)
	RS232 v2 (1 of RS-232C/422/485) DC Jack x 1	RS232 v2 (1 of RS-232C/422/485) DC Jack x 1	RS232 v2 (1 of RS-232C/422/485) DC Jack x 1
	WLAN	802.11 a/b/g/n	802.11 a/b/g/n
Operating System (Optional)	Supports Microsoft XP Professional, XP Embedded, Vista, Windows 7	Supports Microsoft XP Professional, XP Embedded, Vista, Windows 7	Supports Microsoft XP Professional, XP Embedded, Vista, Windows 7
	Battery capacity indicator Alert (Battery capacity, temperature) Battery Usage Statistics Report & Log File Client Installation Server Installation (Optional)	Battery capacity indicator Alert (Battery capacity, temperature) Battery Usage Statistics Report & Log File Client Installation Server Installation (Optional)	Battery capacity indicator Alert (Battery capacity, temperature, warning) Battery Usage Statistics Report & Log File Client Installation Server Installation (Optional)
	Multi-language support, including Chinese Traditional, Chinese Simplified, English, German and Dutch	Multi-language support, including Chinese Traditional, Chinese Simplified, English, German and Dutch	Multi-language support, including Chinese Traditional, Chinese Simplified, English, German and Dutch
Capacity	400 kWh	420Wh	420Wh
	90 V ~ 264 V, 57 ~ 63 Hz 57/60 Hz	100 ~ 240 V, 50 ~ 60 Hz, Max 4.5A	100 ~ 240 V, 50 ~ 60 Hz, Max 4.5A
	Power Input	LiFePO4 (Lithium-Iron Phosphate) LFP	Lithium-Iron Phosphate
Battery Runtime (Depends on system configuration)	3 ~ 6 Hours	8 ~ 10 Hours	8 ~ 10 Hours
	Battery Charge Time	> 6 Hours	< 3hr DOD 100%
	Certifications	EN60950-1, UL60950-1, CE, FCC Class B, Medical CB	EN60950-1, UL60950-1, CE, FCC Class B, Medical CB
Medical Display (Optional)	Size	17"	19"
	Type	LCD	LED
	Resolution	1280 x 1024	1920 x 1080
Touchscreen	Analog Resistive Type (Optional)	-	PCAP (Optional)

Selection Guide Medical Point-of-Care Series / Computerized Medical Cart

Selection Guide

# Healthcare Infotainment Terminals



Model Name		UTC-W101/ UTC-W101B	HIT-W121	HIT-W151/ HIT-W151B	HIT-W181/ HIT-W182	HIT-W221/ HIT-W222
System	CPU	Atom Z530 1.6GHz / Atom N590 Dual Core 1.86GHz	Atom D510 Dual Core 1.67 GHz	Atom D510 Dual Core 1.67 GHz / Atom D525 Dual Core 1.8 GHz	Atom D525 Dual Core 1.8 GHz / Intel® Core™ i3 1.5 GHz	Atom D525 Dual Core 1.8 GHz / Intel® Core™ i3 1.5 GHz
	Chipset	Z530P + US39P / N5900 + MMIO	D510 + ICH8M	D510 + ICH8M / D525 + ICH8M	D525 + ICH8M / 2610UE + QM67	D525 + ICH8M / 2610UE + QM67
	Memory	1GB (up to 2GB)	1GB (up to 4GB)	1GB (up to 4GB)	DDR3 1GB (up to 4GB) / DDR3 1GB (up to 16GB) - 2	DDR3 1GB (up to 4GB) / DDR3 1GB (up to 16GB) - 2
	Storage	CF	CF or 2.5" HDD SATA	CF or 2.5" HDD SATA	CF or 2.5" HDD SATA	CF or 2.5" HDD SATA
	Camera	2 Megapixel (optional by demand)	2 Megapixel	2 Megapixel	2 Megapixel	2 Megapixel
Display	Size	10.1" (16:9)	11.6" (16:9)	15.0" (16:9)	18.5" (16:9)	21.5" (16:9)
	Max Resolution	1024 x 600	1366 x 768	1366 x 768	1366 x 768	1920 x 1080
	Brightness	200 cd/m <sup>2</sup>	200 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>	250 cd/m <sup>2</sup>
	Contrast Ratio	400:1	400:1	500:1	1000:1	500:1
Touch Screen	Type	Film Analog Resistive	Full-Fat Analog Resistive	Full-Fat Analog Resistive	Full-Fat Analog Resistive	Full-Fat Analog Resistive
	Light Transmission	80%	80%	80%	80%	80%
I/O	Durability	30 million touches	30 million touches	30 million touches	30 million touches	30 million touches
	USB	4 (Rear x 4)	3 (Side x 2, Rear x 1)	5 (Side x 1, Rear x 4)	3 (Down x 2, Rear x 1)	4 (Down x 2, Rear x 2) / D525 6 (Down x 2, Rear x 4) - 1
	COM Port	2	1 (Isolated)	W151: 2 (non-isolated) / W151B: 2 (Isolated)	1 (Isolated)	2 (Isolated)
	VGA Output	-	Optional (by demand)	1	1 (Optional)	1
	GPIO	-	-	1	-	-
	Smart Card Reader	-	1 (Removable)	1 (Removable)	1	1
	RFID	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)
Network	LAN	2 (10/100/1000 Mbps)	1 (10/100/1000 Mbps)	W151: 2 ports / W151B: 1 port (Isolated) (all are 10/100/1000 Mbps)	1 (10/100/1000 Mbps)	2 (10/100/1000 Mbps)
	WLAN	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
Emergency Alarm	Hockey	6	5	5 or 8 (2pins)	5	5
	LED Light Indicator	1	1	-	1 (3 colors)	1 (3 colors)
Expansion	Mini-PCI	-	-	-	-	-
	Mini-PCIe	1	2	1	2	2
Mechanical	Dimensions (WxHxD)	258 x 199 x 38.3mm	302.5 x 220.25 x 43 mm	400 x 285 x 50.3 mm	460 x 328 x 49 mm	460 x 328 x 49 mm
	Weight	1.2 kg	2.3 kg	5 kg	6.5 kg	6.8 kg
IP Rating	Front Panel	IP65	IP65	IP65	IP65	IP65
	All Around	-	IPX1	-	IPX1	IPX1
Optional Accessory	MSR	-	Yes	Yes	Yes	Yes
	Barcode Scanner	-	Yes	Yes	Yes	Yes
	TV Tuner	-	Yes	-	Yes	Yes
	Handset Kit	-	Yes	-	Yes	Yes
	Remote Control	-	-	-	Yes (8 keys)	Yes (8 keys)
	Swing Arm	Yes	Yes	Yes	Yes	Yes
PCT Multi Touch	-	Yes	Yes	Yes	Yes	

PIT-1502W	PIT-1503W	PIT-1702	PIT-1703
15.6" Patient Infotainment Terminal	15.6" Patient Infotainment Terminal	17" Patient Infotainment Terminal	17" Patient Infotainment Terminal
Atom D510 Dual Core 1.67 GHz	Atom D510 Dual Core 1.67 GHz	Core 2 Duo 1.06GHz / Celeron M 1.06 GHz	Atom D525 Dual Core 1.8 GHz / Intel® Core™ i3 1.5 GHz
D510 + ICH8M	D510 + ICH8M	945GM	D525 + ICH8M / 2610UE + QM67
1GB (up to 2GB)	1GB (up to 2GB)	1GB (up to 2GB)	DDR3 1GB (up to 4GB) / DDR3 1GB (up to 16GB) - 2
CF or 2.5" HDD SATA	CF or 2.5" HDD SATA	CF or 2.5" HDD SATA	CF or 2.5" HDD SATA
2 Megapixel	2 Megapixel	2 Megapixel	2 Megapixel
15.6" (16:9)	15.6" (16:9)	17"	17"
1366 x 768	1366 x 768	1280 x 1024	1280 x 1024
300 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>
500:1	500:1	800:1	800:1
Analog Resistive	Full-Fat Analog Resistive	Analog Resistive	Full-Fat Analog Resistive
80%	80%	80%	80%
30 million touches	30 million touches	30 million touches	30 million touches
3 (Down x 2, Rear x 1)	3 (Down x 2, Rear x 1)	3 (Down x 2, Rear x 1)	3 (Down x 2, Rear x 1)
1 (Isolated)	1 (Isolated)	-	-
1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)
-	-	-	-
1	1	1	1
1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)
-	-	-	-
1 (10/100/1000 Mbps)	1 (10/100/1000 Mbps)	1 (10/100 Mbps)	1 (10/100/1000 Mbps)
802.11 b/g/n	802.11 b/g/n	802.11 b/g	802.11 b/g/n
1	5	1	5
2	2	2	2
-	-	1	-
1	1	-	2
416 x 308 x 75 mm	416 x 308 x 75 mm	448 x 393 x 73.5 mm	448 x 393 x 73.5 mm
4.8 kg	4.8 kg	6.8 kg	6.8 kg
IP65	IP65	IP65	IP65
IPX1	IPX1	IPX1	IPX1
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes (8 keys)	Yes (8 keys)	Yes (8 keys)	Yes (8 keys)
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes

Selection Guide

# In-Wall Touch Computers



Model Name		UbIQ-481	UbIQ-480
Processor		TI OMAP 3530 600 MHz	Freescale i.MX31 523 MHz
Memory	Size	512MB	256 MB
	Module Type	Mobile DDR	Mobile DDR
OS Support		Windows CE 6.0	Windows CE 5.0
Display	Size/Type	11.6" TFT color LCD	7" TFT color LCD
	Max. Resolution	1366 x 768	800 x 480
	Brightness (cd/m2)	200 cd/m2	320 cd/m2
	Viewing Angle	160/160	160/160
Brightness Control		PWM	PWM
	Chipset	CPU built-in	CPU built-in
Storage / Type		*NAND 256 MB flash on board SD Slot (optional, up to 32GB)*	*NAND 256 MB flash on board SD Slot (optional, up to 32GB)*
I/O Port	Rear I/O	USB 2.0 Host x2/Client x1, Line-in/out, RS-232 / RS-485 x1, Video-in connector, IR Receiver, 4 TTL level D+, 4 TTL level D-, USB 2.0 Client x1 (Embedded for connector type)	RS-232 x1, RS-485 x1, Video-in connector x1, USB2.0 Host x1, Line-in/out x1, 1 x 4 TTL level D+, 4 TTL level D-
	Front I/O	mini-USB 2.0 Host port x1	USB2.0 Host x1 (Below Cover)
Mechanical		In-Wall/ Wall Mounting/ VESA Standard	In-Wall/ Wall Mounting/ VESA Standard
Dimensions (W x H x D)		324.05 x 214.05 x 37.8 mm	261.26 x 199.36 x 43.5 mm
	Camera	2M Pixels CMOS camera	1.3M Pixels CMOS camera
Hot Key		Power x1/ Emergency Hot Key x1	Six programmable function keys
LED		4	6
RF Wireless		IR receiver x 1	IR receiver x 1
Network (LAN)		10/100 Mbps Ethernet (RJ-45) x 2	10/100 Mbps Ethernet (RJ-45) x 2
Audio	Chipset	Standard US audio codec with sleeping amplifier control	WOLFSON_WM8750
	SPK / MIC	Speaker x2 output / Microphone x1 input	Speaker x1 output / Microphone x1 input
Power	Output Rating	10-24 W, 2A	12-24 W, 2A
	Input Voltage	100 - 240 Vdc	100 - 240 Vdc
	Battery	-	-
Touch screen	Technology	Resistive(controller)	Resistive(controller)
	Touch Life Cycle	10 million touches	10 million touches
Temperature	Operating	0 - 40° C	0 - 40° C
	Storage	-20° C - 60° C	-20° C - 60° C
Certificates		CE/FCC Class B, BSM, UL	CE/FCC Class B, CCC, BSM, UL
Option	WiFi	802.11 b/g	802.11 b/g
	PoE	-	-
	Cradle	-	-
	ZigBee	Yes	By Project
Bracket		316 x 204 x 25.5mm	252 x 190.12 x 18.5mm
Wall Box		274.6 x 178.6x 88mm	251.2 x 183.62 x 120mm

Model Name		UbIQ-480K	UbIQ-360	UbIQ-231
Processor		Freescall i.MX31 523 MHz	Freescall i.MX31 523 MHz	TI OMAP 3530 600 MHz
Memory	Size	256 MB	256 MB	256MB
	Module Type	Mobile DDR	Mobile DDR	Mobile DDR
OS Support		Windows CE 5.0	Windows CE 5.0	Windows CE 6.0
Display	Size/Type	7" TFT color LCD	7" TFT color LCD	4.3" TFT color LCD
	Max. Resolution	800 x 480	800 x 480	480x272
	Brightness (cd/m2)	320 cd/m2	280 cd/m2	500cd/m2
	Viewing Angle	160/160	130/110	130/105
Brightness Control		PWM	PWM	PWM
	Chipset	CPU built-in	CPU built-in	CPU built-in
Storage / Type		*NAND 256 MB flash on board SD Slot (optional, up to 32GB)*	*NAND 256 MB flash on board SD Slot (optional, up to 32GB SDHC)*	*NAND 256 MB flash on board SD Slot (optional, up to 32GB)*
I/O Port	Rear I/O	RS-232 x1, RS-485 x1, Video-in connector x1, USB2.0 Host x1, Line-in/out x1, 1 x 4 TTL level D+, 4 TTL level D-	USB 2.0 Port x1 (Support Host & Client)*	RS-485 x1
	Front I/O	USB2.0 Host x1 (Below Cover)	-	*USB 2.0 Host x1/Client x1 (Below Cover)
Mechanical		In-Wall/ Wall Mounting/ VESA Standard	Portable/Cradle	In-Wall/ Wall Mounting
Dimensions (W x H x D)		261.26 x 199.36 x 43.5 mm	230.0 x 148.5 x 30.5mm	106.7 x 174.7 x 34.6 mm
	Camera	-	-	-
Hot Key		-	Five programmable function keys	Touch Button x 2
LED		6	3	Red / Green
RF Wireless		IR receiver x 1	IR sender x 1, IR receiver x 1	IR receiver x 1
Network (LAN)		10/100 Mbps Ethernet (RJ-45) x 2	-	10/100 Mbps Ethernet (RJ-45) x 1
Audio	Chipset	WOLFSON_WM8750	WOLFSON_WM8750	-
	SPK / MIC	Speaker x1 output / Microphone x1 input	Speaker x1 output / Microphone x1 input	Speaker x1 output
Power	Output Rating	12-24 W, 2A	19 W, 2A	10-24 W, 2A
	Input Voltage	100 - 240 Vdc	100 - 240 Vdc	100 - 240 Vdc
	Battery	-	Battery hard Pack (3.7V, 2100 mAh)	-
Touch screen	Technology	Resistive(controller)	Resistive(controller)	Resistive(controller)
	Touch Life Cycle	10 million touches	10 million touches	10 million touches
Temperature	Operating	0 - 40° C	0 - 40° C	0 - 40° C
	Storage	-20° C - 60° C	-20° C - 60° C	-20° C - 60° C
Certificates		CE/FCC Class B, CCC, BSM, UL	CE/FCC Class B, CCC, BSM, UL	CE/FCC Class B, CCC, BSM, UL
Option	WiFi	802.11 b/g	802.11 b/g	-
	PoE	-	Yes	-
	Cradle	-	Yes	-
	ZigBee	By Project	-	By Project
Bracket		252 x 190.12 x 18.5mm	-	147 x 97 x 14.3mm
Wall Box		251.2 x 183.62 x 120mm	-	99.4 x 128.4 x 52mm

Selection Guide

# Interactive Signage



Model Name	UTC-512A	UTC-512B	UTC-515A	UTC-515B
<b>Processor</b>	AMD® G-Series T40E Dual-core 1.8 GHz	Intel Atom Dual Core D2550 1.8 GHz	AMD® G-Series T40E Dual-core 1.8 GHz	Intel Atom Dual Core D2550 1.8 GHz
<b>Memory</b>	2G (up to 4G)	2G (up to 4G)	2G (up to 4G)	2G (up to 4G)
<b>Module Type</b>	1 x SO-DIMM DDR3 1066 MHz	1 x SO-DIMM DDR3 1066 MHz	1 x SO-DIMM DDR3 1066 MHz	1 x SO-DIMM DDR3 1066 MHz
<b>OS Support</b>	Windows XP® / 7 / Embedded Standard 7	Windows XP® / 7 / Embedded Standard 7	Windows XP® / 7 / Embedded Standard 7	Windows 7 / Embedded Standard 7
<b>Display</b>	Size/Type: 11.6" TFT LCD Max. Resolution: 1366 x 768 Brightness (cd/m2): 300 cd/m2 Viewing Angle: 170°/160°	Size/Type: 11.6" TFT LCD Max. Resolution: 1366 x 768 Brightness (cd/m2): 300 cd/m2 Viewing Angle: 170°/160°	Size/Type: 15.6" TFT LCD Max. Resolution: 1366 x 768 Brightness (cd/m2): 300 cd/m2 Viewing Angle: 170°/160°	Size/Type: 15.6" TFT LCD Max. Resolution: 1366 x 768 Brightness (cd/m2): 300 cd/m2 Viewing Angle: 170°/160°
<b>VGA</b>	T40E + ASBM	Intel Atom D2550 + Intel NM10	T40E + ASBM	Intel Atom D2550 + Intel NM10
<b>Storage / Type</b>	Chasis	Chasis	1 x 2.5 Internal SATA HDD bay	1 x 2.5 Internal SATA HDD bay
<b>IO Port</b>	Rear I/O: 3 x COM port, 4 x USB 2.0 ports, 2 x Gigabit Ethernet Ports, 1 x VGA & HDMI (Optional), Audio Line-out x 1, Mic in x 1	Rear I/O: 3 x COM port, 4 x USB 2.0 ports, 2 x Gigabit Ethernet Ports, 1 x VGA & HDMI (Optional), Audio Line-out x 1, Mic in x 1	Rear I/O: 3 x COM port, 4 x USB 2.0 ports, 2 x Gigabit Ethernet Ports, 1 x VGA & HDMI (Optional), Audio Line-out x 1, Mic in x 1	Rear I/O: 3 x COM port, 4 x USB 2.0 ports, 2 x Gigabit Ethernet Ports, 1 x VGA & HDMI (Optional), Audio Line-out x 1, Mic in x 1
<b>Mechanical</b>	Mounting type: Desktop Stand/ Wall Mounting/ VESA Standard Dimension (W x H x D): 305mm (L) x 198mm (H) x 4.5 (D) mm	Mounting type: Desktop Stand/ Wall Mounting/ VESA Standard Dimension (W x H x D): 305mm (L) x 198mm (H) x 4.5 (D) mm	Mounting type: Desktop Stand/ Wall Mounting/ VESA Standard Dimension (W x H x D): 389.81 mm (L) x 240.12 mm (H) x 43.5 mm (D) (15.35" x 9.45" x 1.71")	Mounting type: Desktop Stand/ Wall Mounting/ VESA Standard Dimension (W x H x D): 389.81 mm (L) x 240.12 mm (H) x 43.5 mm (D) (15.35" x 9.45" x 1.71")
<b>L2 Cache</b>	2 x 512 KB	1MB	2 x 512 KB	1MB
<b>Bus Expansion</b>	MINI PCIe (option WiFi module)	MINI PCIe (option WiFi module) UTC-512B with SM Holder	MINI PCIe (option WiFi module)	MINI PCIe (option WiFi module) UTC-515B with SM Holder
<b>Network (LAN)</b>	2 x Gigabit Ethernet ports (Supports Wake on LAN)	2 x Gigabit Ethernet ports (Supports Wake on LAN)	2 x Gigabit Ethernet ports (Supports Wake on LAN)	2 x Gigabit Ethernet ports (Supports Wake on LAN)
<b>Power</b>	Input Rating: Typical 20W, Max 20W Power Consumption: Typical 20W, Max 20W	Input Rating: 12V DC Power Consumption: Typical 20W, Max 20W	Input Rating: 12V DC Power Consumption: Typical 20W, Max 20W	Input Rating: 12V DC Power Consumption: Typical 20W, Max 20W
<b>Touch screen</b>	Technology: Resistive/Controller/PCT Controller: USB Interface	Technology: Resistive/Controller/PCT/Glass Controller: USB Interface	Technology: Resistive/Controller/PCT/Glass Controller: USB Interface	Technology: Resistive/Controller/PCT/Glass Controller: USB Interface
<b>Environment</b>	Operating Temp: 0 - 40° C (32 - 104° F) Relative Humidity: 10 - 95% @ 40° C non-condensing	Operating Temp: 0 - 40° C (32 - 104° F) Relative Humidity: 10 - 95% @ 40° C non-condensing	Operating Temp: 0 - 40° C (32 - 104° F) Relative Humidity: 10 - 95% @ 40° C non-condensing	Operating Temp: 0 - 40° C (32 - 104° F) Relative Humidity: 10 - 95% @ 40° C non-condensing
<b>Certificates</b>	CE, FCC, UL, CCC, CB, BSM	CE, FCC, UL, CCC, CB, BSM	CE, FCC, UL, CCC, CB, BSM	CE, FCC, UL, CCC, CB, BSM

## Flexible Peripheral Series



UTC-P01-A0E	UTC-P02-A0E	UTC-P03-A0E	UTC-P06-A0E	UTC-P07-A0E	UTC-P21-A0E
2M camera module	Magnetic Stripe Card reader	NFC/RFID module	Smart Card reader module	Barcode module	RFID + Barcode scanner + Smart Card reader + MCR (4 I/O in module kit)
- Auto focusing on 40-90cm - Video format: 1080i, 1080p - USB connection to UTC	- Card standard: ANSI, ISO, ABA - Reading speed: 2-10ips - Head life: 1,000,000 times - USB connection to UTC - RS232 optional	- 13.56MHz frequency - Read mode: ISO 15693, 14443A/B, 18000-3, Felica - Reading range: 3-4 x 1cm	- User card friction type (ID-1), 3000,000 cycles - SAM card: 5000 insertion - Compliant CPU card and memory card	- 2D mode scan rate: 56 images - Linear emulation scan rate: 200 images/sec - Optical resolution: 750x400 pixels, 256 gray levels	- Dimension: 300x50x40mm - USB connection to UTC

## Stylish Stand Series



UTC-S20-STAND1E	UTC-K01-STANDE	UTC-K02-STANDE	UTC-R01-STANDE
Desktop Stand	Cross Feet Stand	H-shaped Feet Stand	Triangle Feet Stand

## Advantech Headquarters

No. 1, Alley 20, Lane 26, Ruelguang Road Neihu District, Taipei, Taiwan 11491  
Tel: 886-2-2792-7818 Fax: 886-2-2794-7301  
www.advantech.com

### Greater China

**Regional Service Center, China Kunshan Manufacturing Center**  
No. 1001, Xian Yu Road, Yu Guan  
Kunshan, Jiang Su, China  
Tel: 86-512-3779-9566  
Fax: 86-512-3778-5388

**Regional Service Center, Taiwan Taipei Manufacturing Center**  
75 No. 1, Lane 149, Kang'ning Street,  
Sheng Shue, New Taipei City, Taiwan  
Tel: 886-2-2692-2762  
Fax: 886-2-2692-2762

**Advantech China 800-810-0245**  
**Beijing Office**  
10th Street No. 2, Zhang Di Zone,  
Hai Dian District  
100085 Beijing, China  
Tel: 86-10-4298-4346  
Fax: 86-10-4298-4342  
Email: sales@advantech.com.cn  
www.advantech.com.cn

**Shanghai Office**  
1364 Jiaochang Three Road Zhabei  
District 200436 Shanghai, China  
Tel: 86-21-36321616  
Fax: 86-21-36321636-3394

**Shenzhen Office**  
81811-P-181124 Tan An  
Cyber Park High-tech Tower, Futian  
District, 518066 Shenzhen, China  
Tel: 86-755-8212-4222  
Fax: 86-755-2586-7910

**Advantech Malaysia**  
Room 403, Building No. 2 Hangtong International  
Square, High-tech Zone NO.800 TianFu  
Avenue, Chengdu  
(the opposite of software park)  
Tel: 86-28-8546-0188  
Fax: 86-28-8545-5101

**Hong Kong Office**  
Flat 1108, 11/F, No. 113 Angle Street,  
Mong Kok, Kowloon, Hong Kong  
Tel: 852-2720-5118  
Fax: 852-2720-9813

**Advantech Taiwan 0800-777-111**  
**Taipei Media Office**  
No. 1, Alley 20, Lane 26, Ruelguang Road,  
Neihu District, Taipei 11491, Taiwan  
Tel: 886-2-2792-7818  
Fax: 886-2-2794-7302  
Tel Free: 0800-777-111  
Email: sales@advantech.com.tw  
www.advantech.com.tw

**Taipei Media Office**  
4F No. 108-3, Minquan Road,  
Xindai Dist., New Taipei City, Taiwan 231  
Tel: 886-2-2218-4567  
Tel Free: 0800-777-111  
Email: marketing\_ztw@advantech.com.tw

**Taipei Media Office**  
1/F, 2, No. 497, Zhongxing South Road,  
Taichung City, Taiwan 403  
Tel: 886-4-2378-6200  
Fax: 886-4-2378-6200

**Kaohsiung Office**  
11F, 7, No. 56, Hsiangsheng 1st Rd., Xinsing Dist.,  
Kaohsiung City 800, Taiwan  
Tel: 886-7-229-3000  
Fax: 886-7-227-0217

**Sydney Office**  
Unit 1, 14 Lightton Place  
Hornby NSW 2077, Australia  
Tel: 61-2-9476-9300  
Fax: 61-2-9477-5251

**Advantech Indonesia**  
Ediprasta Building, 11F Floor, Suite 1A JI RS  
Farmahendri No.99, Cilincik Barat, Jakarta  
Selatan, 12430  
Tel: 62-21-769-0525  
Fax: 62-21-766-9127  
aid.cs@advantech.co.id

### Asia Pacific

**Advantech Japan 0800-500-1055**  
**Tokyo Office**  
6-16-3, Ashikusa Taitoh-ku,  
Taitoh, 111-0072, Japan  
Tel: 81-3-6802-1021  
Fax: 81-3-6802-1022  
Email: aip\_sales@advantech.com  
http://www.advantech.co.jp

**Osaka Office**  
6F Minami Senri M21 Bldg,  
1-10-20 Minami Senri,  
Chiryu-ku, Osaka, 565-0883 Japan  
Tel: 81-6-6287-1887  
Fax: 81-6-6287-1886  
Email: osaka@advantech.co.jp

**Advantech Korea 080-363-9494**  
11282 Aek Techno Tower, 684-1  
Daemjeong-ro 3 Dong, Kangseo-ku,  
Seoul 137-721, Korea  
Tel: 82-2-3663-9494  
Fax: 82-2-3663-9495  
Email: korea@advantech.co.kr  
www.advantech.co.kr

**Advantech Singapore**  
4, Serangoon North Ave 5, #03-08 East  
Lobby, Singapore 554810  
Tel: 65-6440-1800  
Fax: 65-6440-1001  
Email: sg@advantech.com  
www.advantech.com.sg

**Advantech Malaysia 1800-88-1809**  
**Kuala Lumpur Office**  
L3-03 / 53A, Wisma BUK, No 11,  
Labai, Bandar Utama, 47800 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia  
Tel: 60-3-7728-1571  
Fax: 60-3-7728-1571  
Email: my@advantech.com.my  
www.advantech.com.my

**Penang Office**  
No. 17 B, 111 Ground Floor,  
Jalan Perumahan Gemilang 1,  
Pusat Perumahan Gemilang,  
14000 Bukit Mertajam, Penang  
Tel: 60-4-217-9188  
Tel: 60-4-618-1271  
Fax: 60-2-246-2424  
Email: sales@advantech.com  
http://www.advantech.com

**Advantech Thailand 245** Chiaman Phetjai Business Center  
45/005 Rama 9 Road, Huay Kwang,  
Bangkok 10330 Thailand  
Tel: 66-2-246-2424  
Fax: 66-2-246-2424  
Email: sales@advantech.com  
http://www.advantech.com

**Advantech India 1800-425-5070**  
**Bangalore Office**  
Kasturji Plaza, No. 3M-409, 2nd Floor, 3rd Main  
Road, East of NSR Layout, Kotturbanahalli,  
Bangalore - 560043, India  
Tel: 91-80-2545-0206  
Fax: 91-80-2545-0317  
Tel Free: 240-425-5070  
Email: info@advantech.com  
www.advantech.in

**Advantech Australia 1300-360-031**  
**Melbourne Office**  
Unit 1, 9 Sutherland Close,  
Kaysborough VIC 3173, Australia  
Tel: 61-3-9797-0199  
Fax: 61-3-9797-0199  
Email: info@advantech.net.au  
www.advantech.net.au

**Sydney Office**  
Unit 1, 14 Lightton Place  
Hornby NSW 2077, Australia  
Tel: 61-2-9476-9300  
Fax: 61-2-9477-5251

**Advantech Indonesia**  
Ediprasta Building, 11F Floor, Suite 1A JI RS  
Farmahendri No.99, Cilincik Barat, Jakarta  
Selatan, 12430  
Tel: 62-21-769-0525  
Fax: 62-21-766-9127  
aid.cs@advantech.co.id

### Europe

**Advantech Europe B.V. 0800-0-216-8080**  
**Amsterdam Office**  
Email: CustomerCare@advantech.eu  
www.advantech.eu

**Advantech European Head Office & Regional Service Center**  
Ekkeler#1 5708 Science Park Endhoven  
5202 EF Eindhoven, The Netherlands  
Tel: 31-40-267-7000  
Fax: 31-40-267-7001  
Email: customer.care@advantech.eu

**Advantech Europe Design Center**  
Kugentstr. 6, 70224 Aalenberg, Germany  
Tel: 49-9621-9732-100  
Fax: 49-9621-9732-109  
Email: CustomerService.eu@advantech.com

**Advantech Eastern Europe Service Center**  
14, Malszewska 14, Budyniek C2,  
03-876, Warszawa, Poland  
Tel: 48-22-33-23-710  
Fax: 48-22-33-23-712  
Email: Sales.EE@advantech.eu  
emas@advantech.pl

**Advantech Benelux & Nordics**  
**Brussels Office**  
Bijster 20A, 4817 HX Breda,  
The Netherlands  
Tel: 31-76-5233100  
Fax: 31-76-5233119  
Email: customer.care@advantech.eu  
www.advantech.eu

**Rosendal Office**  
Vlaanderen 7A, 4704 SB Rosendal,  
The Netherlands  
Tel: 31-165-555-505  
Fax: 31-165-557-504  
Email: customer.care@advantech.eu  
www.advantech.eu

**Advantech France Paris Office**  
718 Route de Paris, Nanterre, Nanterre Cedex  
92737, France  
Tel: 33-1-41-19-4660  
Fax: 33-1-41-19-7929  
www.advantech.com

**Advantech Germany Munich Office**  
Industriest. 17  
82110 Germering, München, Germany  
Tel: 49-89-12599-0  
Fax: 49-89-12599-220  
Tel Free: 0800-2426-8080  
Email: customer.care@advantech.eu  
www.advantech.eu

**Düsseldorf Office**  
Hochstraße 14  
40724 Hilden, Germany  
Tel: 49-2123-97-885-19  
Fax: 49-2123-97-885-19  
Tel Free: 0800-2426-8080  
Email: customer.care@advantech.eu  
www.advantech.eu

**Advantech Italy Milano Office**  
14 Bivio Strozzi,  
20090 Casina del Pecciò, Milano, Italy  
Tel: 39-02-9544-961  
Fax: 39-02-9544-9600  
Email: customer.care@advantech.eu  
www.advantech.it

**Advantech Poland Warsaw Office**  
Ul. Malszewska 14, Budyniek C2,  
03-876, Warszawa, Poland  
Tel: 48-22-33-23-710 / 41  
Fax: 48-22-33-23-712  
Email: customer.care@advantech.eu  
www.advantech.com.pl

**Advantech UK**  
Unit 13, Safford Business Park  
Safford Park Avenue  
Reading, Berkshire, RG6 1AZ  
United Kingdom  
Tel: 44-0118-928-4560  
Fax: 44-0118-928-4551  
Tel Free: 0800-2426-8080  
Email: customer.care@advantech.eu  
www.advantech.co.uk

**Advantech Russia**  
Room 648, 4F, Profsoyuznaya Str., 108  
Moscow 119121, Russian Federation  
Tel: 7-495-232-1692  
Fax: 7-495-232-1693  
Tel Free: 8-800-535-61-50  
Email: info@advantech.ru  
www.advantech.ru

### Americas

**Regional Service Center, N. America**  
380 Fairview Way  
Plymouth, CA 95553, USA  
Tel: 1-408-519-3800  
Fax: 1-408-519-3801  
Email: hq@advantech.com

**1-800-576-9668**  
**Regional Service Center Advantech North America**  
11300 Reed-Herman Highway  
Cincinnati, OH 45241, USA  
Tel: 1-813-742-8895  
Fax: 1-813-742-8892  
Tel Free: 1-800-800-6889  
800/tech Support: 1-877-451-4968  
Email: info@advantech.com  
www.advantech.com/na

**Niagara Office**  
380 Fairview Way,  
Plymouth, CA 95553, USA  
Tel: 1-408-519-3800  
Fax: 1-408-519-3801  
Tel Free: 1-888-576-9668  
Email: hq@advantech.com

**Irvine Office**  
131 Midway  
Irvine, CA 92618 USA  
Tel: 1-949-420-2500  
Fax: 1-949-420-2501  
Tel Free: 1-800-856-6008  
Email: ICI@advantech.com  
www.advantech.com

**Advantech South America Mexico Office**  
Bajo California Avenue 245, Colonia Condesa  
Hidalgo, Cuahutemoc Delegacion, 03000 ad  
in Mexico City Mexico  
Tel: 52-55-6275-2777  
Tel Free: 020-55-6275-2727  
Tel Free: 1-800-467-2415  
Email: info@advantech.com.mx

**Advantech Brazil 0800-770-5355**  
Rua Pádua da Saúde, 165 - 13º  
andar - Conjunto 128  
Sulda - São Paulo  
CEP 04144-020, Brazil  
Tel: 55-11-5510-5355  
Fax: 55-11-5510-5351  
Email: vendas@advantech.com.br

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