



RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION



HAVE QUESTIONS
ABOUT RFID
SMART LABEL TECHNOLOGY?

PRINTRONIX
HAS THE ANSWERS.

PRINTRONIX®
RFID
((SMART))™

PRINTRONIX.
THE FIRST NAME IN SMART LABEL TECHNOLOGY

- FIRST TO DELIVER A UHF PRINTER FOR ENCODING EPC-COMPLIANT LABELS
- FIRST SMART LABEL DEVELOPER'S KIT
- FIRST TO PROVIDE CERTIFIED SMART LABELS

RFID

RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION INCREASED SUPPLY CHAIN VISIBILITY RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION

Printronix has been a global leader in providing intelligent industrial and back-office enterprise printing solutions for 30 years. During this period we have earned a reputation as a technology innovator by offering a full selection of well-designed product solutions and unsurpassed service. We continue that tradition in the emerging field of RFID (radio frequency identification) technology.



For example, Printronix was the first to:

- Ship UHF, Class 1, EPC-compliant RFID Smart™ label solutions to help companies and their suppliers conform to emerging specifications
- Offer a Smart Label Developers Kit (SLDK™)
- Deliver a Smart Label Pilot Printer (SLPP™) product offering to make it easy to expand pilot programs
- Deliver a multi-protocol smart label printer supporting all existing EPC classes

In addition, Printronix offers innovations such as:

- RFID print-and-apply solutions that address compliance and automated application requirements
- Certified smart labels that ensure accurate reading, encoding and printing performance
- Certified RFID Integrator Program to access leading RFID experts and technicians who will help you seamlessly integrate and deploy RFID smart label solutions

As part of our pioneering efforts, Printronix is a founding member of EPCglobal, an international organization responsible for creating RFID industry standards and specifications.



Whether you have questions about the best RFID solution for your company, how to initiate a pilot program or how to deploy RFID throughout your supply chain, you can look to Printronix for experienced-based answers.

PROTECTING YOUR TECHNOLOGY INVESTMENT

As a founding member of EPCglobal, Printronix is working to establish industry standards that will ensure your RFID printers integrate smoothly into your current IT network and supply chain operations.

We recognize that RFID standards will continue to evolve over the next few years, and protecting your investment in RFID technology today is a key design goal for our products and services. Printronix helps protect your technology investment by including a flexible upgrade path that includes software-upgradeable reader technology. We have also created unique models of our thermal printers that can be field-upgraded to support RFID technology.



SMART LABEL DEVELOPER'S ENVIRONMENT

One of the important first steps in developing an RFID pilot program is creating a smart label development environment. This will allow you to experiment with, test and measure smart labels to find the ideal RFID solutions for your company without disrupting your current operations.

Printronix makes it easy for you to initiate your pilot program by offering a comprehensive, best-of-breed Smart Label Developer's Kit (SLDK). The kit includes everything you need—printer, encoder, software, certified smart labels, manuals and support—to create your RFID development environment right out of the box. It allows you to:

- Print and encode smart labels
- Test read ranges, read speeds and data capture
- Determine optimum label placement
- Establish the best locations for fixed reader terminals
- Check for radio frequency interference

Once you're satisfied that your test environment has provided enough insight into your smart labeling requirements, you can define and start your pilot program.



RFID SMART PRINTERS

Smart labels come from smart printers, and Printronix offers a range of world-class UHF printers and solutions that provide maximum versatility and flexibility. The SmartLine™ of RFID printers includes models that support multi-protocol reader technology for maximum flexibility as well as models with reader technology focused on optimizing the EPC Class 1 protocol. The SmartLine of RFID printers also supports a range of smart label sizes and antenna configurations to provide customers with the choices they need to implement RFID in their various applications. And all Printronix RFID printers support software upgrades to keep up with evolving EPC standards.



CERTIFIED RFID SMART LABELS

Printronix certified smart labels combine the technology of thermal-transfer, pressure-sensitive labels with RFID. We have gone to great lengths to ensure that our smart labels—with their many different sizes and antenna configurations—provide the finest RF performance possible when used with our printers. Under software control, the printer writes data to the RFID tag, then validates that the EPC information



can be read reliably. After completing this validation process, the printer prints the human-readable and bar code data. If for any reason the encoding process cannot be validated, the label is printed with an overstrike pattern to prevent it from entering your supply chain.



SOFTWARE MIGRATION TOOLS

Printronix has developed a set of Software Migration Tools (SMT™) that enable our printers to automatically encode smart labels from your existing UPC label bar code application. The SMT encodes bar code data from your current data stream to the smart label via a selection of label templates. The Printronix SMT resides in the printer and allows you to use existing label design software with no modifications to create encoded smart labels. Once selected, the tools automatically print existing bar code labels and encode the GTIN, UPC or SSCC number in the smart label.



SMART PRODUCTS MAKE IT EASY TO USE RFID SMART LABELS

- RUGGED CONSTRUCTION
- MULTI-PROTOCOL AND CLASS 1 MODELS
- SMART LABEL VERIFICATION
- EASILY UPGRADEABLE

RFID

RADIO FREQUENCY IDENTIFICATION ENHANCED DATA ACQUISITION AND ACCURACY RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION

SmartLine RFID PRINTER ADVANTAGE

A solid, reliable smart label printer is the foundation of any RFID system. Printronix adds 30 years of know-how in providing tough industrial printers that endure the harshest environments (e.g., paper mills and loading docks) where dust, dirt and temperature extremes stop ordinary printers. Only rugged, heavy-duty SmartLine RFID printers offer all these advantages:

- **915MHz UHF EPC-compliant 4" thermal printers.**
- **Wide range of smart label sizes** Includes 4x2, 4x4, 4x6, 4x8 and 3x3 with various antenna configurations.
- **Multi-protocol (MP)* configuration** Supports EPC Class 0, 0+, and 1 standards.
- **Class 1 (C1) configuration** Optimized for EPC Class 1 standard.
- **Aluminum die-cast design** Dampens vibration and maintains precise printer alignment.
- **Unique dual-motor-driven ribbon system** Uses a revolutionary motor-driven ribbon system that eliminates clutch replacement and greatly reduces the risk of ribbon wrinkle for superior print quality.
- **Cantilever head mechanism design** Makes it easy to sideload, clean and maintain.
- **Exclusive snap-in printhead** Allows operators to easily change print heads (reducing service calls) and change from 203dpi to 300dpi printing without firmware or software changes.
- **Ventless system** Operates in environments with airborne particulate matter without compromising performance.
- **Wireless/Ethernet option** Provides real-time data access and local printing flexibility.
- **AutoPort switching** Allows printers to accept and print jobs from one to three input ports without manual intervention.
- **Optional GPIO external interface** Offers greater flexibility in controlling external devices like applicators.
- **Larger ribbon capacity** Uses 625m ribbons to make unattended printing more efficient. Operators can run four full rolls of media without changing the ribbon. This 4:1 ratio is the highest in the industry.

* Class 0 and 0+ support will be available via a software upgrade. Please contact Printronix or a Printronix Certified RFID Integrator for availability.



WIRELESS RFID PRINTING

Today's just-in-time (JIT) manufacturing and logistics environments require advanced printers that can perform where and when they are needed. Although wireless LAN technology provides a viable solution, it also increases the need for true printer management to ensure consistency and diagnostic control.

Printronix SmartLine Mobile Print System (MPS) addresses this need. Combined with our RFID printer, MPS delivers smart labels directly to locations that need it the most. Its ergonomic design, durable steel frame and heavy-duty wheels combine maximum maneuverability with minimal maintenance to offer these benefits:

- Reduced centralized printing and manual distribution by printing smart labels on the spot
- Scalable deployment for maximum printing flexibility at compliance locations
- Elimination of expensive, time-consuming, hard-cabled system reconfigurations when changeovers occur
- Centralized control, consistency and diagnostics previously available only in hard-cabled managed systems
- Optimized cost efficiency and productivity
- Higher return on investment (ROI) due to accelerated data and inventory movement



PrintNet ENTERPRISE

PrintNet® Enterprise is the only system that lets you manage all your print operations—whether it's a single warehouse or a global infrastructure—from one computer. This advanced Web-based management tool combines a fully integrated Ethernet adapter and Java-based remote management software to deliver unparalleled remote printer management adaptability, remote diagnostics and help desk tools. It supports SNMP, which allows you to use SNMP managers like HP Open View, Tivoli, Computer Associates Unicenter TNG, Sun Net Manager and Castle Rock SNMPc.

With PrintNet Enterprise you get:

- Instant RFID printer status, which indicates which printers are in use or idle and which need consumables or repairs
- Instant alerts, which notify you via e-mail (or routed to your pager or cell phone) if an RFID printer situation requires immediate action
- Instant control, which allows you to remotely change printer settings, update firmware, download fonts and lockout local operators from making changes
- Instant RFID printer organization, which enables you to configure printers from a single action
- Instant diagnostics, which remotely diagnoses printer problems via a Web browser

RFID PRINT AND APPLY

The SLPA™ 7000 is a smart label printer-applicator solution that encodes, prints and applies—all in one unit. Combining RFID smart label printing technology with applicator capability, this RFID smart label solution delivers fast, accurate, cost-effective encoding and printing to users with site-specific requirements.

- Enables supply chain operations using encode, print-and-apply label applicators to automate the application of RFID smart labels
- A fully integrated RFID printer and applicator is designed for heavy industry environments
- Supported orientations include top and side label application and roll-on/front/back applications
- Built-in quality control features identify and reject "bad" or "quiet" labels—ensure 100% high-performance RFID smart labels every time
- Supports multiple label sizes providing flexibility to address different application requirements—reducing the total quantity of print-and-apply label applicators required

COMPLETE RFID SMART SUPPORT

- CONSULTATION
- CERTIFICATION
- IMPLEMENTATION
- MIGRATION AND DEVELOPMENT SUPPORT

RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION IMPROVED PRODUCT AVAILABILITY RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION RADIO FREQUENCY IDENTIFICATION

PRINTRONIX PROFESSIONAL SERVICES

Whether you are about to implement an RFID solution or you have already integrated smart label technology into your supply chain, you undoubtedly will have questions about the best way to optimize your operations.

Printronix Professional Services is a staff of knowledgeable experts who are in the forefront of RFID technology. Our mission is to help you reduce costs, improve operational efficiencies, and reduce downtime by offering the following:

Auto-ID/RFID consulting

- EPC data management and integration
- Assist with rapid implementation and deployment
- Help develop and implement a successful migration strategy from bar code to RFID
- Smart label print-and-apply integration and support services

Label compliance and certification

- Assess root causes for failed EPC labels and bar codes
- Assess and solve label-related charge-back fines
- Implement a complete auditing and quality control system to record EPC and bar code quality history

SAP and ERP bar code integration/implementation

- Offer custom device types and drivers to facilitate SAP/ERP EPC label encoding and printing
- Integrate bar codes and smart labels into ERP applications
- Support ABAP/4 and SAPscript
- Provide expertise with available EPC-compliant middleware packages

Legacy application migration/implementation

- Migrate data streams to new printing platforms without modifying host applications
- Integrate bar code and RFID systems
- Apply software tools to bridge the transition
- Integrate with Microsoft Back Office

PLC and hardware automation interfaces

- Printronix offers tools and services to integrate and control a variety of hardware automation devices such as print-and-apply label applicators, conveyor systems and PLCs (Programmable Logic Controller)

Other services

- Additional services we provide:*
- Onsite assessments
 - Project management
 - Development and testing
 - Installation
 - Training



CERTIFIED RFID INTEGRATOR PARTNERS

Printronix has carefully selected partners who are experts in installation, testing and consulting to help you initiate and/or deploy an intelligently designed RFID solution that meets your supply chain requirements. Our partners include RFID experts who have made significant investments both in the industry's best technical resources as well as in dedicated RFID lab space to test and recommend the best solutions for your particular product needs. For a complete list of our Certified RFID Integrator partners, please go to www.rfid.printronix.com.



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PRINTRONIX

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