

G-SPEED™ Product Guide



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TABLE OF CONTENTS

1. [INTRODUCTION](#)
2. [SAFETY PRECAUTIONS](#)
3. [SYSTEM REQUIREMENTS](#)
4. [WHAT'S IN THE BOX](#)
5. [G-SPEED OVERVIEW](#)
6. [LED Indicators](#)
7. [INSTALLING G-SPEED](#)
 - 7.1 Installing ATTO HBA
 - 7.2 Installing Disk Drive modules
 - 7.3 Installing SFP and Optical Cable (FC version)
 - 7.4 Installing SCSI Terminator and Cables (SCSI version)
 - 7.5 Setting SCSI ID
 - 7.6 Formatting G-SPEED
8. [MANUAL CONFIGURATION](#)
 - 8.1 Connecting to the GUI
 - 8.2 Setting SCSI ID via the GUI (SCSI version)
 - 8.3 Initializing G-SPEED / Creating a RAID Set
 - 8.4 Deleting a RAID Set
9. [HARDWARE MONITORING](#)
 - 9.1 Silencing the Audible Alarm
10. [SYSTEM CONTROL](#)
 - 10.1 Silencing the Audible Alarm
 - 10.1 Alert by Mail Config
 - 10.1 View Events / Mute Beeper
11. [TECHNICAL SUPPORT](#)
12. [LIMITED WARRANTY](#)

APPENDIX

Description of RAID Levels

IMPORTANT SAFEGUARDS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating/maintenance (servicing) instructions literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE APPLIANCE TO RAIN OR MOISTURE.

1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the unit is operated.

2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS

All Warnings on the unit and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

5. ATTACHMENTS

Do not use attachments not recommended by the unit's manufacturer as they may cause hazards.

6. WATER AND MOISTURE

Do not use this unit near water—for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.



7. ACCESSORIES

Do not place this unit on an unstable cart, stand, tripod, bracket or table. The unit may fall, causing serious injury and serious damage to the unit.



8. VENTILATION

Openings in the front and back of the unit are provided for ventilation to ensure reliable operation and to protect it from over heating. These openings must not be blocked or covered. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.



9. POWER SOURCES

This unit should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply in your facility, consult your local dealer or power company.



10. GROUNDING AND POLARIZATION

This equipment is supplied with a power cord with a US style 3-wire grounding type plug at one end and a 3-wire IEC standard connector at the other. The 3-wire grounding type plug will fit into a US style grounding type power outlet and the IEC connector is intended to plug into the Medea unit. The 3-wire grounding type plug is a safety feature. If you are unable to insert the plug into the outlet, do not force it. Contact your electrician to replace the obsolete outlet. **DO NOT DEFEAT THE SAFETY PURPOSE OF THE GROUNDING TYPE PLUG.** For use in Foreign Countries, contact your local Medea dealer or representative to obtain a power cord with a locally compatible 3-wire grounding plug on one end and a 3-wire IEC standard connector on the other.



11. POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit the unit.



12. SERVICING

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltages or other hazards. (See Caution Symbol at rear of power supply chassis.) Refer all servicing to qualified service personnel.



WICHTIGE SICHERHEITSHINWEISE

WARNUNG
Gefahr eines elektrischen
Schlages Nicht öffnen

WARNUNG: Um die Gefahr eines elektrischen Schlages zu verringern sollten Sie niemals eine Verkleidung oder Abdeckung entfernen. Keines der enthaltenen Teile kann selbst gewartet werden. Überlassen Sie dies qualifiziertem Servicepersonal.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, dass er hier unisolierte gefährliche Spannung innerhalb des Gehäuses antrifft, die ausreichend gefährlich ist um einen Stromschlag hervorzurufen.



Dieses Symbol ist gedacht um den Anwender darauf hinzuweisen, dass sich im Handbuch wichtige Hinweise befinden.

WARNUNG: UM DIE GEFAHR EINES ELEKTRISCHEN SCHLAGES ZU VERRINGERN, DARF DAS GERÄT WEDER REGEN NOCH FEUCHTIGKEIT AUSGESETZT WERDEN.

1. LESEN SIE DIE HINWEISE

Lesen Sie bitte alle Sicherheitshinweise und die Bedienungsanleitung bevor Sie das Gerät in Betrieb nehmen.

2. AUFBEWAHREN DER HINWEISE

Bewahren Sie die Bedienungsanleitung und alle Sicherheitshinweise für spätere Verwendung auf.

3. BEACHTEN SIE DIE WARNUNGEN

Alle Warnungen und Hinweise auf dem Gehäuse und in der Anleitung sollten unter allen Umständen beachtet werden.

4. FOLGEN SIE DEN ANWEISUNGEN

Alle Benutzer- und Bedienungsanweisungen sollten befolgt werden.

5. ERWEITERUNGEN

Benutzen Sie keine Erweiterungen, die nicht vom Hersteller empfohlen wurden um Gefahren zu vermeiden.

6. WASSER UND FEUCHTIGKEIT

Benutzen Sie das Gerät nicht in der Nähe von Wasser—z.B. Badewanne, Waschschüssel, Spüle, Waschwanne, feuchter Fußboden oder in der Nähe eines Pools.

7. ZUBEHÖR

Stellen Sie das Gerät nicht auf einen wackeligen Rollcontainer, Ständer, Stativ, Regal oder Tisch. Das Gerät könnte herunterfallen, was einen bleibenden bzw. irreparablen Schaden an dem Gerät hervorrufen könnte.

8. BELÜFTUNG

Öffnungen an der Vor- und Rückseite des Gerätes sind für die Belüftung vorgesehen, um eine zuverlässige Funktion zu garantieren und gegen Überhitzung vorzubeugen. Diese Öffnungen dürfen weder verstellt noch zugedeckt werden. Das Gerät sollte niemals in der Nähe einer Heizung oder einer anderen Wärmequelle aufgestellt werden. Das Gerät sollte außerdem nicht in einem Einbaugeschäbe wie einem Schrank, oder einem Rack installiert werden, solange eine ausreichende Belüftung nicht sichergestellt ist.

9. NETZANSCHLUß (STROMVERSORGUNG)

Das Gerät sollte nur mit der Spannungsversorgung, die auf dem Geräteaufkleber ausgewiesen ist, betrieben werden. Sollten Sie nicht sicher sein, welche Art der Spannungsversorgung in Ihrem Betrieb verwendet wird, fragen Sie bei Ihrem Händler oder der Stromversorgungsgesellschaft nach.

10. ERDUNG UND POLUNG

Zur Ausstattung gehört ein Stromkabel mit einem amerikanischen Schutzkontakt Stecker mit Erdung auf der einen Seite und einem Kaltgeräte Stecker auf der anderen (IEC Standard). Der Schutzkontaktstecker passt in eine amerikanische Schutzkontaktsteckdose und die Kaltgerätestecker in ihr Medea Gerät. Der Schutzkontaktstecker ist eine Sicherheitsvorrichtung. Sollten Sie ihn nicht in Ihre Steckdose stecken können, wenden Sie keine Gewalt an. Setzen Sie sich mit Ihrem Elektriker in Verbindung um die Steckdose auszuwechseln. Zerstören Sie unter keinen Umständen die Sicherheitsvorrichtung an Ihrem Stecker. Zur Anwendung in anderen Ländern setzen Sie sich mit Ihrem Medea Händler in Verbindung, der Ihnen ein Landesübliches Stromkabel mit einem Schutzkontaktstecker auf der einen und einem Kaltgerätestecker auf der anderen Seite zur Verfügung stellt.

11. STROMKABEL ISOLIERUNG

Stromkabel sollten so gelegt werden, dass man nicht auf sie tritt, oder Gegenstände auf ihnen stehen bzw. gegen sie stoßen. Besondere Aufmerksamkeit sollte Leitungen und Steckern, sowie Kupplungen und die Stelle an der sie das Gerät verlassen, gewidmet werden.


12. SERVICE


Versuchen Sie keinesfalls das Gerät selbständig zu warten, oder das Gehäuse zu öffnen. Dies kann Sie gefährlicher Spannung oder andern Gefahren aussetzen. Überlassen sie alle Wartungsarbeiten qualifiziertem Service Personal.

MEDIDAS PREVENTIVAS IMPORTANTES

PRECAUCIÓN
RIESGO DE DESCARGA ELÉCTRICA
NO ABRIR

PRECAUCIÓN: PARA REDUCIR EL RIESGO DE DESCARGA ELÉCTRICA, NO RETIRE LA CUBIERTA (O CUBIERTA POSTERIOR). NO HAY NINGUNAS PARTES REPARABLES POR EL USUARIO. PERMITA QUE EL SERVICIO LO REALICE PERSONAL DE SERVICIO CALIFICADO.

 El símbolo del rayo con fecha dentro de un triángulo equilátero tiene por objeto alertar al usuario de la presencia de voltaje peligroso y sin aislamiento en el interior del producto que pudiera ser de la suficiente magnitud como para constituir el riesgo de recibir una descarga eléctrica.

 El símbolo de la signo de exclamación dentro de un triángulo equilátero tiene por objeto alertar al usuario de la existencia de instrucciones importantes para la operación y mantenimiento (servicios) en los documentos que acompañan el equipo.

ADVERTENCIA: PARA PREVENIR LA POSIBILIDAD DE PROVOCAR UN INCENDIO O DE RECIBIR UNA DESCARGA ELÉCTRICA, NO EXPONGA ESTE SISTEMA A LA LLUVIA O HUMEDAD.

- LEA LAS INSTRUCCIONES**
Deberá leer todas las instrucciones sobre seguridad y operación antes de operar la unidad.
- GUARDAR LAS INSTRUCCIONES**
Deberá guardar las instrucciones sobre seguridad y operación para referir en el futuro.
- PRESTE ATENCIÓN A ADVERTENCIAS**
Deberá cumplir con todas las Advertencias indicadas en la unidad o en las instrucciones de operación.
- SIGA LAS INSTRUCCIONES**
Deberá seguir todas las instrucciones sobre operación y uso.
- ACCESORIOS**
No utilice accesorios que no hayan sido recomendados por el fabricante de la unidad en virtud de que pueden crear un peligro.
- AGUA Y HUMEDAD**
No utilice esta unidad cerca de agua—por ejemplo, cerca de una tina, lavabo, fregadero o tinaco, en un sótano mojado o cerca de una piscina.
- EQUIPO AUXILIAR**
No coloque esta unidad sobre carritos, bases, trípodes, soportes o mesas inestables. La unidad se podrá caer, causando lesiones graves y daños severos a la unidad.
- VENTILACIÓN**
Aberturas al frente y en la parte posterior de la unidad se proporcionan para ventilación y para asegurar una operación estable, así como para proteger a la unidad de sobrecalentamiento. Estas aberturas no deberán ser obstruidas o cubiertas. Esta unidad nunca se deberá de colocar cerca o encima de un radiador o fuente de calor. Esta unidad no se deberá de colocar en muebles construidos a la medida, tales como libreros o estantes, salvo que se proporcione ventilación adecuada.
- FUENTES DE ENERGÍA**
La unidad deberá operar únicamente a partir del tipo de fuente de energía indicada en la etiqueta correspondiente. Si no está seguro del tipo de fuente de energía en su edificio, consulte a su distribuidor local o compañía de suministro de energía eléctrica.




- PUESTA A TIERRA Y POLARIZACIÓN**
El equipo se entrega con un cable alimentador con un enchufe con puesta a tierra de 3 alambres en un extremo y un enchufe estándar IEC (Comité Electrotécnico Internacional) de tres alambres en el otro. El enchufe con puesta a tierra y el conector IEC tiene por objeto enchufarse a una unidad Medea. El enchufe con puesta a tierra de 3 alambres es una medida de seguridad. Si no lo es posible conectar el enchufe a un tomacorriente, no lo fuerce. Póngase en contacto con un electricista para sustituir el tomacorriente obsoleto. **NO FRUSTRE LA MEDIDA DE SEGURIDAD INCORPORADA POR EL ENCHUFE CON PUESTA A TIERRA.** Para uso en países extranjeros, póngase en contacto con su distribuidor local de Medea o su representante para obtener un cable alimentador con un enchufe con puesta a tierra de 3 alambres en un extremo y un enchufe estándar IEC de tres alambres en el otro compatible en su país.
- PROTECCIÓN DEL CABLE ALIMENTADOR**
Los cables alimentadores se deberán de colocar de manera que se evite que sean pisados o pellizcados por algún equipo o mueble puestos encima de ellos o contra ellos, poniendo especial atención al enchufe del cable alimentador, receptáculos de protección o el punto en que se conectan a la unidad.
- SERVICIOS**
No intente dar servicio a esta unidad por sí mismo en virtud de que abrir la unidad o retirar alguna cubierta lo puede exponer a voltajes peligrosos u otros riesgos. Permita que el servicio lo realice personal de servicio calificado.

MISES EN GARDE IMPORTANTES

ATTENTION
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRI

ATTENTION: AFIN DE PRÉVENIR LES RISQUES D'ÉLECTROCUTION, NE PAS ENLEVER LA COUVERTURE NI LE PANNEAU ARRIÈRE DE L'APPAREIL. AUCUNE PIÈCE INTÉRIEURE NE DOIT ÊTRE RÉPARÉE PAR L'UTILISATEUR. POUR TOUTE RÉPARATION, CONSULTER UN TECHNICIEN COMPÉTENT.

 Le symbole d'éclair dans un triangle équilatéral indique la présence d'une tension suffisamment élevée pour engendrer un risque de chocs électriques.

 Le point d'exclamation dans un triangle équilatéral indique que le manuel d'utilisation inclus avec l'appareil contient d'importantes recommandations quant au fonctionnement et à l'entretien de ce dernier.

MISE EN GARDE: AFIN DE PRÉVENIR TOUT RISQUE D'INCENDIE OU D'ÉLECTROCUTION, NE PAS EXPOSER L'APPAREIL À LA PLUIE NI À L'HUMIDITÉ.

- LIRE LES DIRECTIVES**
Lire toutes les directives concernant la sécurité et le fonctionnement de l'appareil avant de l'utiliser.
- CONSERVER LES DIRECTIVES**
Conserver les directives concernant la sécurité et le fonctionnement de l'appareil pour référence ultérieure.
- RESPECTER LES MISES EN GARDE**
Respecter toutes les mises en garde sur l'appareil et dans le manuel d'utilisation.
- SUIVRE LES DIRECTIVES**
Suivre toutes les directives concernant le fonctionnement et l'utilisation de l'appareil.
- ACCESSOIRES**
Ne pas utiliser d'accessoires non recommandés par le fabricant de l'appareil, car ils peuvent représenter un danger.
- EAU ET HUMIDITÉ**
Ne pas utiliser l'appareil dans un endroit où il risque d'être mouillé, notamment dans un sous-sol humide et à proximité d'une baignoire, d'un lavabo, d'un évier, d'une cuve à lessive ou d'une piscine.
- BAIES ET SUPPORTS**
Ne pas placer l'appareil dans une baie ou sur un support, un trépied, une console ou une table instable. L'appareil pourrait tomber et subir des dommages importants ou infliger de graves blessures.
- AÉRATION**
Le boîtier de l'appareil comporte des fentes d'aération à l'avant et à l'arrière pour assurer le bon fonctionnement de l'appareil et le protéger de la surchauffe. Ces fentes ne doivent pas être obstruées ni recouvertes. Éloigner l'appareil de toute source de chaleur telle les radiateurs et autres éléments de chauffage. Ne pas placer l'appareil dans un meuble encastré tel une bibliothèque ou un bû qui ne procure pas une aération adéquate.
- ALIMENTATION**
Ne brancher l'appareil que dans une prise de courant du type décrit sur l'étiquette signalétique. En cas de doute sur le type

d'alimentation disponible, consulter la compagnie d'électricité ou le distributeur local.

10. MISE À LA TERRE ET POLARISATION
Le cordon d'alimentation fourni avec l'appareil est doté d'une fiche polarisée à trois branches de style américain à une extrémité et d'un connecteur femelle CEI standard à l'autre extrémité. La fiche polarisée à trois branches peut être branchée dans une prise de courant polarisée de style américain et le connecteur CEI doit être raccordé à l'appareil Medea. La fiche polarisée à trois branches constitue une mesure de sécurité. Si elle ne s'insère pas aisément dans la prise, ne pas la forcer. Contacter un électricien pour remplacer la prise désuète. **NE PAS TENTER DE CONTOURNER CETTE MESURE DE SÉCURITÉ.** Pour utiliser l'appareil à l'étranger, se procurer un cordon d'alimentation compatible avec la configuration électrique locale auprès du distributeur ou du représentant Medea local.

11. PROTECTION DU CORDON D'ALIMENTATION
Les cordons d'alimentation doivent être placés de manière qu'ils ne soient pas piétinés ou écrasés par des objets et une attention particulière doit être portée à la fiche, à la prise et au point de sortie de l'appareil.

12. RÉPARATION
Ne pas tenter de réparer l'appareil, car l'ouverture ou le retrait du boîtier peut vous exposer à des tensions dangereuses ou à d'autres risques. Confier toute réparation à un technicien qualifié.

1. INTRODUCTION

Thank you for purchasing G-SPEED from G-Technology, Inc. (G-Tech)! Designed from the ground up for creative professionals, G-SPEED supports uncompressed HD video editing workflows with multiple levels of RAID protection. G-SPEED is ideally suited for deployment into high performance creative environments including audio & video editing, motion graphics and digital photography. G-SPEED is available with a Fibre Channel or SCSI interface and with a standard or redundant power supply.

2. SAFETY PRECAUTIONS

The disk drives contained in your G-SPEED are delicate electronic instruments and are susceptible to damage due to excessive physical shock. Place the unit in a vented area away from moisture or liquids. Please handle the unit with care. Do not open the case. Doing so will void the warranty. *If the Product is returned with damage caused by improper handling, the warranty will be void and liability will rest with the user.*

3. SYSTEM REQUIREMENTS

A. Fibre Channel

Fibre Channel Host Adapter Equipped Computer

- Mac OS X 10.2.4 or higher
- Windows 2000 or Windows XP

NOTE: We recommend the ATTO Celerity 4Gb Fibre Channel Host Bus Adapters.

B. SCSI

SCSI Host Bus Adapter Equipped Computer

- Mac OS X 10.2.4 or higher
- Windows 2000 or Windows XP

NOTE: We recommend the ATTO Ultra 320 Express PCI SCSI Host Bus Adapters.

4. WHAT'S IN THE BOX

Take a moment to ensure that the following items are included in the box. If anything is missing, please call G-Tech at (310) 449-4599. Please keep the shipping container and packing materials. *In the unlikely event that you need to return G-SPEED to us for any reason, you must use the G-Tech shipping container. If the Product is returned damaged caused by improper packaging, the warranty will be void and liability will rest with the user.*



- G-SPEED storage system
- 6 removable SATA drive modules
- RS 232 9-pin Cable
- Configuration Utility & Installation CD
- AC Power cable

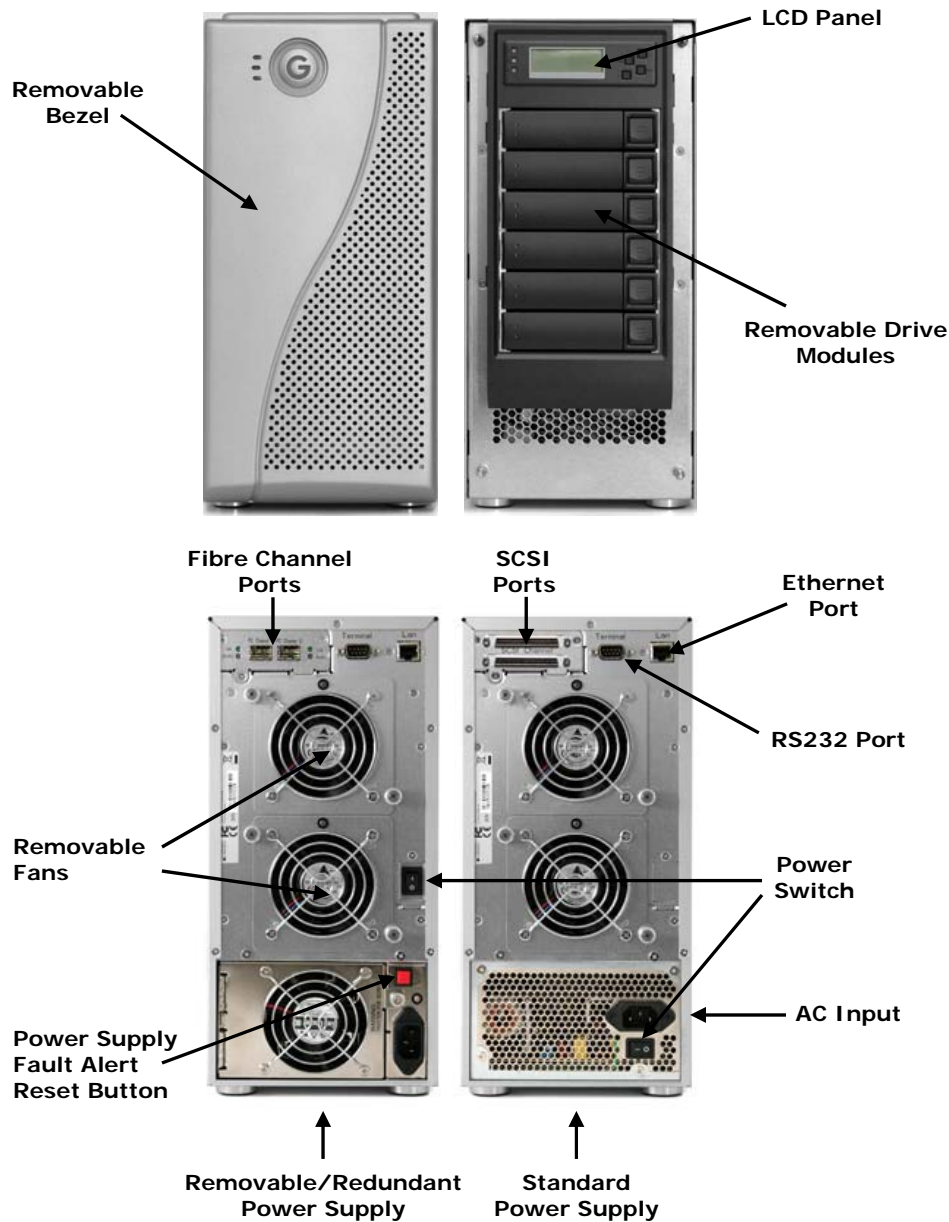
Fibre Channel Version:

- SFP Module
- 3m Fibre Channel Cable

SCSI Version:

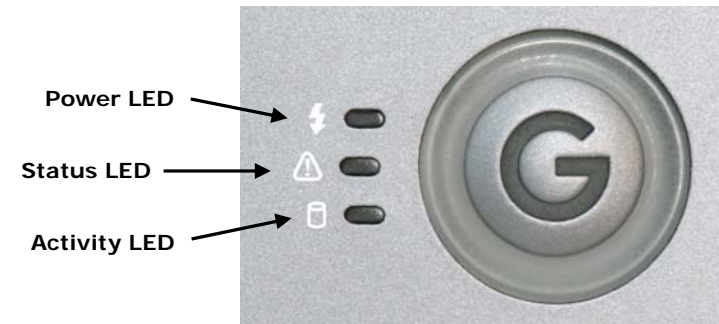
- 1M HD-HD U320 SCSI Cable
- HD SCSI Terminator

5. G-SPEED OVERVIEW



6. LED Indicators

G-SPEED is equipped with three LED's located on the front panel. The top blue LED indicates the system is powered, the bottom blue LED will flash when the data is being read from or written to the array and the middle LED will glow RED when a hardware fault has been detected.



7. INSTALLING G-SPEED

G-SPEED comes pre-configured in RAID 3 mode and formatted for MAC OSX. Connecting G-SPEED to your computer and configuring your system takes just a few steps...

If an ATTO Host Bus Adapter was included in your kit:

7.1 Install the ATTO HBA:

1. Install the adapter into an empty PCI-X or PCI-E slot in your system.
2. Install the appropriate ATTO driver (located on the Product CD) for your operating system

(For detailed installation instructions consult the ATTO Installation Guide located on the Product CD)

7.2 Installing the Disk Drive Modules

1. Remove the G-SPEED Bezel by pulling forward.



2. Install the six disk drive modules into the G-SPEED enclosure and secure them in place by pushing on the lever.



Note: The G-SPEED writes a signature to each drive so the drive modules can be installed in any position in the G-SPEED enclosure.

3. Replace the G-SPEED Bezel.

7.3 (Fibre Channel) Installing the SFP and Optical Cable

1. Install the SFP into **PORT 0** of the G-Speed. It will seat with an audible click (to remove, open the latch and pull)



2. Remove the protective plugs from the SFP and optical cable.



3. Insert the optical cable into the SFP, it will seat with an audible click.



4. Remove the protective plug from **PORT 0** of the SFP installed in the ATTO HBA and insert the free end of the optical cable. It will seat with an audible click.

7.4 (SCSI) Installing the SCSI Cable and Terminator

1. Attach the 68pin HD SCSI terminator to the lower SCSI port on the G-SPEED as shown. Tighten the thumbscrews to hold the terminator in place.



2. Attach the 68pin HD cable to the upper connector on the G-SPEED as shown. Tighten the thumbscrews to hold the cable in place.



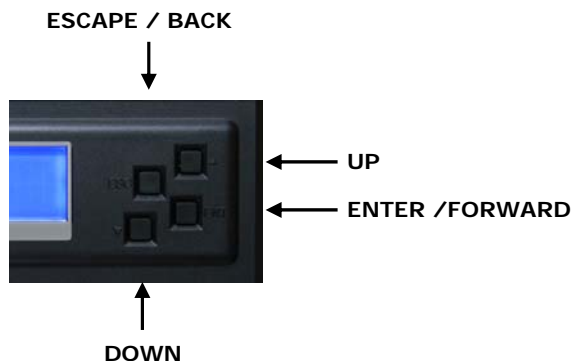
3. Attached the other end of the SCSI cable to your system's SCSI Host adapter.

7.5 (SCSI) Setting the SCSI ID

1. The G-SPEED is set at the factory with a default SCSI ID of 0, which is perfect for most applications where there is only one device connected to your SCSI Adapter. If you have multiple G-SPEEDs (or other devices) connected to your system you will need to change the SCSI ID so all the attached devices have different ID's. This setting is modified through the web GUI or the front panel LCD. See section 8.1 for information on connecting to the G-SPEED GUI and section 8.2 for information on changing the SCSI ID via the GUI.

To set the SCSI ID via the front panel LCD, follow the steps on the next page.

2. Enter the system through the LCD panel by pressing the "ENTER" button once. You will be prompted for your password. Use the UP / DOWN buttons to change the characters and ENTER button to move the cursor to the right.



For example, using the default password, hit the UP button once and "0" will appear on the LCD screen. Press ENTER to move the cursor right and repeat this process until four (0) zeros are visible. Hit ENTER 12 more times to move the cursor completely to the right and you will be logged in.

Hit the DOWN button until "Volume Set Functions" is displayed in the window. Hit ENTER once and "Create Volume Set" should appear. Hit the DOWN button 2 times and "Modify Volume Set Attribute" will appear.

Hit ENTER 3 times and the current RAID level will be displayed (default is RAID3). Hit the DOWN arrow 3 times and SCSI ID will be displayed. Hit ENTER once and then hit the UP or DOWN buttons to adjust the SCSI ID.

Hit ENTER when you are satisfied. Hit the BACK button and you will be prompted to confirm your action. Hit ENTER 2 times to accept your changes or ESCAPE to exit without changing.

7.6 Formatting G-SPEED

Now that G-SPEED is physically connected to your computer, it must be formatted for use with your operating system.



Attention Mac OS X Users!

G-SPEED is set up at the factory for use with Mac OS X systems. If you are running Mac OS X, G-SPEED will mount on the OS X desktop right out of the box. If it becomes necessary to re-format G-SPEED for Mac OS X, refer to your system documentation.



Attention Windows Users!

G-SPEED must be formatted using Windows Disk Manager. Please refer to your system documentation to format G-SPEED for the NTFS file system.

NOTE: Windows XP currently does not support disk volumes over 2TB in capacity (2048 GB). If your G-SPEED is larger than 2TB see section 8.3 for information on configuring G-SPEED to work around this limitation.

8. MANUAL CONFIGURATION

This section will describe how to manually configure G-SPEED using the web GUI. The G-SPEED employs a very sophisticated controller with many advanced options. Some of these options can erase data on the G-SPEED, so be careful and backup your data if the G-SPEED has been in use. These operations are identical on MAC and Windows systems.

8.1 Connecting to the G-SPEED GUI

1. Connect the G-SPEED to your computer or network by connecting an Ethernet cable from the Ethernet port on the G-SPEED to your host computer or network.
2. G-SPEED will auto configure to your network or direct attached computer and display the IP address of the G-SPEED on the LCD panel.



3. Enter this IP address into a web browser to connect to the G-SPEED GUI. When the login prompt appears type the default username "admin" and password "0000".



Note: See section 10.4 to customize the login username / password

4. After entering the correct username and password the G-SPEED GUI will appear. There are many advanced features accessible through the GUI that are not covered in this manual. Consult your Dealer for more information.

Raid Set	IDE Channels	Volume Set(Ch/Lun)	Volume State	Capacity
Raid Set # 00	Ch01	G-SPEED -VOL#00 (0/0)	Normal	2199.0GB
	Ch02			
	Ch03			
	Ch04			
	Ch05			
	Ch06			

Channel	Usage	Capacity	Model
Ch01	Raid Set # 00	500.1GB	HDS725050KLA360
Ch02	Raid Set # 00	500.1GB	HDS725050KLA360
Ch03	Raid Set # 00	500.1GB	HDS725050KLA360
Ch04	Raid Set # 00	500.1GB	HDS725050KLA360
Ch05	Raid Set # 00	500.1GB	HDS725050KLA360
Ch06	Raid Set # 00	500.1GB	HDS725050KLA360

8.2 (SCSI) Configuring G-SPEED SCSI ID

To set the SCSI ID of G-SPEED select “Modify Volume Set” on the left NAV bar under “Volume Set Functions.” On the next page select the volume you wish to set the SCSI ID.

Select	Volume Set Name	On Raid Set	Capacity
<input checked="" type="checkbox"/>	G-SPEED -VOL#00	Raid Set # 00	800.0GB

Click the “submit” button and the following screen will appear:

Enter Volume Attribute On Raid Set #01

Volume Name: G-SPEED -VOL#00

Max Capacity Allowed: 800.0 GB

Volume Capacity: 800.0 GB

Volume Initialization Mode: Foreground Initialization

Volume Raid Level: Raid 3

Volume Stripe Size: N.A. KBytes

Volume Cache Mode: Write Back

Tagged Command Queuing: Enabled

Max SCSI Speed: 320MB/Sec

SCSI Channel: SCSI ID: SCSI Lun: 0 : 0 : 0

Confirm The Operation

Submit Reset

Select the SCSI ID you would like to assign. Check the “Confirm the Operation” box and click “Submit” to save the changes. The G-SPEED will need to be restarted for the changes to take effect.

8.3 Initializing G-SPEED



Note: If the G-SPEED is currently configured with a RAID Set. You must delete the RAID Set before continuing. See Section 8.4 for instructions on deleting a RAID Set.

1. To create a RAID/Volume set on the G-RAID select “Quick Create” under “Function Menu” on the left navigation bar of the G-SPEED GUI. The following screen will appear:

Quick Create Raid/Volume Set

Total Number Of Disks: 6

Select Raid Level: Raid 3

Maximum Capacity Allowed: 2500 GB

Select Capacity: 2500 GB

Greater Two TB Volume Support: 64bit LBA

Volume Initialization Mode: Foreground Initialization

Select Stripe Size: N.A. KBytes

Confirm The Operation

Submit Reset

2. Select the RAID level you'd like to use with G-SPEED.
Note: For video applications in protected mode we recommend using RAID 3. For maximum performance and capacity we recommend RAID 0. See Appendix A for details on other RAID levels supported

Quick Create Raid/Volume Set

Total Number Of Disks: 6

Select Raid Level: Raid 3

Maximum Capacity Allowed: 2500 GB

Select Capacity: 2500 GB

Greater Two TB Volume Support: 64bit LBA

Volume Initialization Mode: Foreground Initialization

Select Stripe Size: N.A. KBytes

Confirm The Operation

Submit Reset



Note: G-SPEED with capacities over 2TB require special initialization covered next in **Item 3**. Skip to **Item 4** if your G-SPEED is less than 2TB.

3. G-SPEED with capacities over 2TB must be configured to work properly with your operating system.



a. Mac OS X Users:

Set the item "Greater Two Terabyte Volume Support" to "64bit LBA", this configures G-SPEED to report full capacity in MAC OSX



b. Windows 64 Users:

Set the item "Greater Two Terabyte Volume Support" to "for Windows", this configures G-SPEED to report full capacity in Windows 64 (or Vista)

Quick Create Raid/Volume Set

Total Number Of Disks	6
Select Raid Level	Raid 3
Maximum Capacity Allowed	2500 GB
Select Capacity	2500 GB
Greater Two TB Volume Support	64bit LBA
Volume Initialization Mode	Foreground Initialization
Select Stripe Size	N.A. KBytes

Confirm The Operation

Submit Reset



c. Windows XP Users:

Windows XP currently does not support disk volumes over 2TB in capacity (2048 GB). You must configure G-SPEED with multiple volumes of 2TB or less as described here:

c1. Choose "Quick Create", select your RAID level and leave the default setting of "No" under "Greater Two Terabyte Volume Support". This will create the maximum Volume size of 2047.97GB (2199GB from disk) allowed in 32bit systems.

c2. Continue to create Volumes on the G-SPEED by selecting "Create Volume Set" under the "VolumeSet Functions" on the left navigation bar. This screen will appear:

Select	Raid Set Name	Member Disks	Capacity
<input type="radio"/>	Raid Set # 00	6	3000.0GB

Submit Reset

c3. Hit "submit" to enter the configuration page. Select your desired RAID level, check "Confirm the Operation" and hit "Submit". Continue this process until all available space has been used.

Enter Volume Attribute On Raid Set # 00

Volume Name	G-SPEED -VOL#01
Member Disks	
Volume Raid Level	Raid 3
Max Capacity Allowed	
Select Volume Capacity	667.5 GB
Volume Initialization Mode	Foreground Initialization
Volume Stripe Size	N.A. KBytes
Volume Cache Mode	Write Back
Tagged Command Queuing	Enabled
Fibre Channel: LUN Base: LUN	0 : 0 : 1

Confirm The Operation

Submit Reset

This process will create multiple Volumes that will appear in Windows Disk Manager as disks ready to be formatted. It is possible to create one large Volume in Windows by "spanning" these logical disks. Refer to your OS documentation for details.

Skip to **Item 5**

4. Accept all other default settings on the Quick Create page. To complete the process and create the RAID/Volume Set, check the “Confirm The Operation” check box and hit the “Submit” button. This will begin the initialization process.

5. The initialization process can take from a few seconds to over 3 hours depending on the RAID level chosen and the size of the array.

Drives	RAID 0	RAID 3
(6) 250GB Drives	<1min	1h 18m
(6) 500GB Drives	<1min	2h 49m
(6) 750GB Drives	<1min	3h 19m

6. Once the initialization is complete, reboot your computer system and the array will appear as a blank disk, ready to be formatted. Refer to your system documentation for instructions on formatting G-SPEED for your operating system.

8.4 Deleting a RAID set

1. Select “Delete Raid Set” under the “RaidSet Functions” on the left navigation bar. The following screen will appear:

Check the “Confirm The Operation” checkbox and hit the “Submit” button.



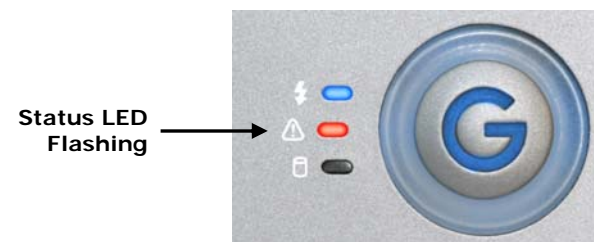
WARNING: THIS OPERATION WILL DELETE THE RAID SET AND ANY DATA ON THE G-SPEED!!

The G-SPEED is now ready to be re-configured. See Section 8.2 for details on configuring a RAID Set on G-SPEED.

9. HARDWARE MONITORING

1. Should hardware fail in your G-SPEED the system alerts the user in the following ways:

A. The Status LED will flash:



B. An audible alarm will sound (audible alarm is enabled by default – to disable see Section 10.1)

G-SPEED Product Guide

C. An email is sent to specified email address if email notification is enabled. (To enable email notification see Section 10.2)

2. The specific failure is reported on the front panel LCD (accessed by removing the G-SPEED front bezel) and the web GUI.



LCD Panel

System Events Information				
Time	Device	Event Type	Elapse Time	Errors
2006-8-4 10:28:1	H/W Monitor	Power Failed		
2006-8-4 10:27:41	H/W Monitor	Power Recovered		
2006-8-4 10:26:50	010.001.100.014	HTTP Log In		
2006-8-4 9:7:16	FC Channel 0	FC Link Up		
2006-8-4 9:6:37	FC Channel 0	FC Link Down		
2006-8-3 23:18:20	010.001.100.014	HTTP Log In		
2006-8-3 23:16:10	FC Channel 0	FC Link Up		
2006-8-3 23:16:9	FC Channel 1	FC Link Down		
2006-8-3 23:16:9	FC Channel 1	FC Link Down		

G-SPEED GUI

3. If a hard drive fails, the drive position will be indicated on the LCD panel, the LED on the failed drive will flash and the GUI will also report the failed drive and its position.

Raid Set Hierarchy

IDE Channels

Raid Set	IDE Channels	Volume Set(Ch/Lun)	Volume State	Capacity
Raid Set # 00	Ch01	G-SPEED -VOL#00 (0/0)	Failed	2199.0GB
	Ch02			
	Failed			
	Ch04			
	Ch05			
	Ch06			

Channel	Usage	Capacity	Model
Ch01	Raid Set # 00	500.1GB	HDS725050KLA360
Ch02	Raid Set # 00	500.1GB	HDS725050KLA360
Ch03	N.A.	N.A.	N.A.
Ch04	Raid Set # 00	500.1GB	HDS725050KLA360
Ch05	Raid Set # 00	500.1GB	HDS725050KLA360
Ch06	Raid Set # 00	500.1GB	HDS725050KLA360

If the G-SPEED was configured in a protected RAID mode the data on the array will be safe, however, the array is now in an unprotected state* and a further drive failure will result in loss of the array and the data it contains. The system can be fully restored to fail-safe mode by replacing the failed disk drive module drive and rebuilding the array. If you purchased a spare drive with your G-SPEED simply replace the failed drive with your spare. The G-SPEED will automatically rebuild the RAID in the background – while you continue to work.

Rebuild times vary depending on the RAID level and size of the unit.

*If G-SPEED was initialized in RAID 6 mode, data would still be protected as RAID 6 can withstand two simultaneous drive failures.

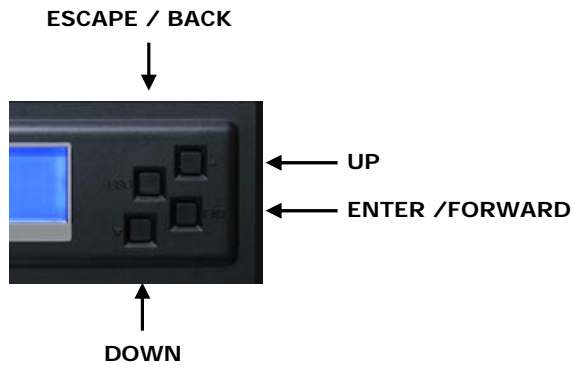
9.1 Silencing the Audible Alarm

During a Failure event, the audible alarm is silenced through the web GUI or by the LCD panel. (to disable the audible alarm see section 10.1)

1. Silencing Through Web GUI

Select "View Events/Mute Beeper" under the "System Control" section on the left navigation bar. This will silence the beeper and open the "View Events" page with information regarding the failure.

2. Silencing Through LCD Panel



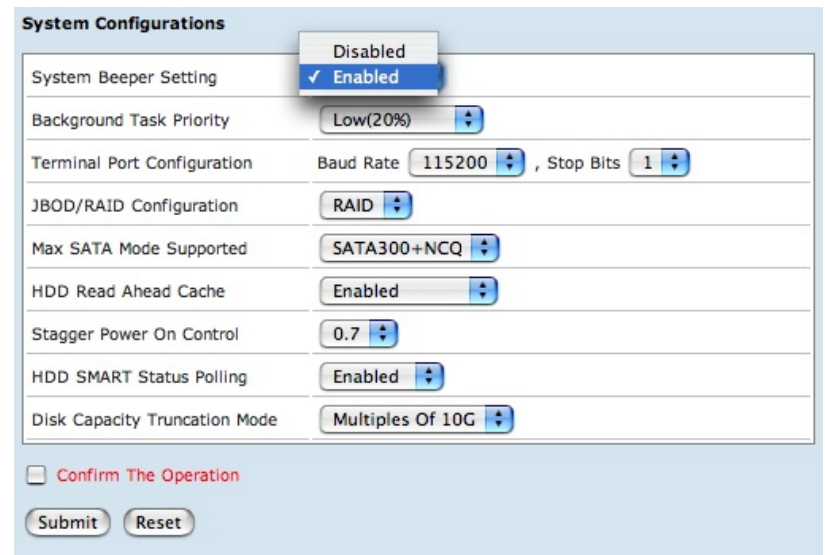
Enter the system through the LCD panel by pressing the "ENTER" button once. You will be prompted for your password. Use the UP / DOWN buttons to change the characters and ENTER button to move the cursor to the right. For example, using the default password, hit the UP button once and "0" will appear on the LCD screen. Press ENTER to move the cursor right and repeat this process until four (0) zeros are visible. Hit ENTER 12 more times to move the cursor completely to the right and you will be logged in. Hit the DOWN button until "Raid System Functions" is displayed in the window. Hit ENTER and "Mute the Alert Beeper" will be displayed. Hit ENTER one more time to mute the beeper. Hit ESCAPE 2 times to exit the system.

10. SYSTEM CONTROL

This section outlines the user configurable options in the "System Control" section of the G-SPEED web GUI. Clicking on the links will bring up windows described below.

10.1 Disable Audible Alarm

G-SPEED has an audible alarm that sounds in the event of a disk drive failure. To disable this alarm select "Disabled" in the System Beeper Setting pull-down menu as shown below. We recommend that you leave all other settings in this menu at the preset values. You must click the "Confirm The Operation" box and then click on the "Submit" button for your changes to take effect.



10.2 Alert By Mail Config

In the event of a system failure G-SPEED can alert up to four individuals of the problem via an email message. Enter the applicable information in to the window shown below, click the "Confirm The Operation" box and then click on the "Submit" button.

SMTP Server Configuration

SMTP Server IP Address

Mail Address Configurations

Sender Name : Mail Address :

Account : Password :

MailTo Name1 : Mail Address :

MailTo Name2 : Mail Address :

MailTo Name3 : Mail Address :

MailTo Name4 : Mail Address :

Event Notification Configurations

Disable Event Notification No Event Notification Will Be Sent

Urgent Error Notification Send Only Urgent Event

Serious Error Notification Send Urgent And Serious Event

Warning Error Notification Send Urgent, Serious And Warning Event

Information Notification Send All Event

Notification For No Event Notify User If No Event Occurs Within 24 Hours

Confirm The Operation

10.3. View Events/Mute Beeper

G-SPEED keeps a log of events that may be viewed by clicking this link. If a hardware failure occurs and the audible alarm is enabled, clicking on this link will mute the alarm.

System Events Information

Time	Device	Event Type	Elapse Time	Errors
2006-8-3 12:35:15	G-SPEED -VOL#00	Create Volume		
2006-8-3 12:35:15	Raid Set # 00	Create RaidSet		
2006-8-3 12:34:40	FC Channel 0	FC Link Up		
2006-8-3 12:34:34	FC Channel 0	FC Link Down		

4. Modify Password

Click on this link to modify the login password for G-SPEED. You must click the "Confirm The Operation" box and then click on the "Submit" button for your change to take effect.

Modify System Password

Enter Original Password

Enter New Password

Re-Enter New Password

Confirm The Operation

11. TECHNICAL SUPPORT

If you encounter any difficulties while installing G-SPEED, please contact G-Tech Technical Support via one of the following ways:

Telephone: (310) 449-4599

Fax: (310) 449-4670

E-mail: support@g-technology.com

Internet: <http://www.g-technology.com/support>

When contacting Technical Support, make sure to be in front of your computer and have the following information readily available:

- Your G-SPEED serial number (on bottom of unit)
- Operating system and version
- Computer brand and model
- Fibre Channel host adapter brand and model
- Amount of memory installed
- Other devices attached to your computer

Thank you for purchasing G-SPEED. If you have any comments or questions about this manual or the Product, please call (310) 449-4599, or send an email to info@g-technology.com.

12. LIMITED WARRANTY

G-Technology Inc. (G-Tech) warrants your Product against any defect in material and workmanship, under normal use, for the designated warranty period. If the Product should become defective within the warranty period, G-Tech, will at its discretion, repair or replace the Product. Repair or replacement parts or Products will be furnished on an exchange basis and will be either new or reconditioned. All replaced parts or Products shall become the Property of G-Tech. This warranty shall not apply if the Product has been damaged by accident, misuse, abuse or as a result of unauthorized service or parts. Warranty service is available to the purchaser by obtaining a Return Material Authorization number (RMA) and by delivering the Product during the warranty period to an authorized G-Tech service facility or to G-Tech. The purchaser shall bear all shipping, packing and insurance costs and all other costs, excluding parts and labor, necessary to effectuate repair, replacement or refund under this warranty. All returned Product must be shipped to G-Tech in the original shipping container.

For more information on how to obtain warranty service, an RMA number or to acquire shipping materials, contact G-Tech at 1653 Stanford Street, Santa Monica, CA 90404, (310) 449-4599 or support@g-technology.com.

IN THE EVENT A PRODUCT BECOMES DEFECTIVE DURING THE WARRANTY PERIOD, THE PURCHASER'S EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED ABOVE. INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF DATA, ARISING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ARE NOT THE RESPONSIBILITY OF G-TECH AND, TO THE EXTENT PERMITTED BY LAW, ARE HEREBY EXCLUDED BOTH FOR PROPERTY DAMAGE, AND TO THE EXTENT NOT UNCONSCIONABLE, FOR PERSONAL INJURY DAMAGE.

APPENDIX A

RAID Level	Description	Advantage	Disadvantage	Ideal For...
0	Disk striping	Offers the highest performance and useable storage capacity	No fault tolerance - failure of one drive in the array results in complete data loss	Content creation applications
1	Mirroring	High level of fault tolerance	Not the most efficient in regards to capacity as useable storage space is cut in half	Applications in which data security is paramount
3	Disk striping with dedicated parity drive	High level of read/write performance, fault-tolerant, disk failure has insignificant impact on performance		Content creation applications requiring high-performance and data security
5	Disk striping with distributed parity	High read performance, medium write performance, fault-tolerant	Disk failure results in drop in performance	File servers, database applications
6	Disk striping with dual-distributed parity	An extension of RAID 5 with a second independent distributed parity scheme. High level of fault tolerance. Two drives in the array can fail without data loss.	Lower performance than RAID 3 or RAID 5	Mission critical data
JBOD	Just-a-bunch-of-disks	Each drive can be accessed as an individual volume.	No fault tolerance	Audio applications