

PRODUCT-AT-A-GLANCE 2005 Q1

RAID Controller and Subsystem Specialist since 1992















	Fibre RAID Controller He	ad and JBODs			Product Details
Madal	2510FS-4S / -6S	2510FS-4RH / -6RH	2510FS-4RH / -6RH 2510FS-4D / -6D		F16F-R2J2 (Dual SES) F16F-S2J2 (Single SES)
Model					
	Single-UPG Fibre-Fibre RAID Controller Head *1	Redundant Fibre-Fibre RAID Controller Head *1	<u>Dual-Single</u> Fibre-Fibre RAID Controller Head *1	Fibre-SATA JBOD Subsystem 3U 16-Bay *2	Fibre JBOD Subsystem 3U 16-Bay *2
Form Factor *3	1U Rackmount	1U Rackmount	1U Rackmount	3U Rackmount	3U Rackmount
Drive Channels *6 Hot Swap Trays	Each channel he Each channel mod	els Fibre 2G as two SFP ports ule has built-in PBC and two SFP ports in one loop	4 / 6 Channels Fibre 2G in each Controller, total 8 /12 Channels Each controller has one SFP port for each channel	16 Channels 16-bay (SATA Drives) IDE drives optional	2 Channels Fibre 2G Four SFP ports
Expansion Channels	Every channel of	can be assigned	Every channel can be assigned as Host or Drive	2 Channels	Dual-Loop 16-bay
Host Channels *6		e Channel mode I-loop	Channel mode Dual-loop	Fibre 2G Two SFP Ports per channel, total four SFP ports	(2G FC-SCA Drives)
Redundant Controller *1	Single Controller Upgradeable to Redundant	Dual-Controller Redundant Dedicated sync-channels user configurable	Dual-Single controller Two independent RAID controllers	-	JBOD (No RAID Controller) With dual SES Module (R2J2) Or single SES Module (S2J2)
RAID Function			IDs, Multiple Host LUNs, Instant RAID Ready, LD co	onfiguration on disks, Dynamic host LUN mappin	gs
Advanced Functions	Dual-mode RAID expansions: "Add-in Drive" and		nputers), fibre switch support, fabric log-in (supportent controller	ed on fibre-host models), background firmware do	ownload
Management	LCD front panel: Easy-to-use menu for accessing all RS-232 Terminal: User friendly menu-driven for accessing all RAIDWatch™ java-based cross-platform central and pager).	essing all functions and features.	anagement, remote / local management (in-band or out-of	-band), event notifications (via e-mail, SNMP trap, fax,	network broadcast – with full plain-text event message
Management via Built-in LAN	RAIDWatch™-onboard: <i>Open browser to link to the</i> Telnet-terminal: <i>Access terminal menu by telnet via the</i> Notification-onboard: <i>RAID unit itself issue e-mail and</i>		event messages)		
Hot Swap Fan Modules	2	2	2	2	2
Hot Swap Power Supplies	2 x 350 W	2 x 350 W	2 x 350 W	2 x 460 W	2 x 460 W
Cache Memory	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB (PC-133 SDRAM)	-
Battery Backup *4	Included x1	Included x2	Included x2	-	-

- *1 Single-UPG: Single RAID Controller Upgradeable to Redundant.

 Redundant: Dual-Redundant Controller configuration

 Redundant with dedicated sync-channels: Use two dedicated Fibre channels as redundant controller communication and cache synchronization for enhanced write-back performance.

 Dual-Single: Two RAID controllers both operate individually. No redundant controller functions but performance simply double.
- *2 JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions.

<u>Single-SES</u>: One SES module is installed.

<u>Dual-SES</u>: Two SES modules are installed to provide redundancy on SES module.

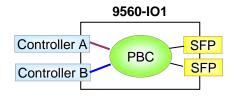
- *3 For rack mount kits, please see page of "Rack Mount Guide".
- *4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

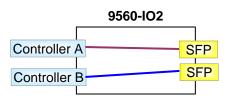
In redundant controller configuration, the two controllers should have identical cache memory and battery backup configuration.

- *5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD. The CD also includes RAIDWatch ™ software for RAID management.
- *6 Host-side dual-loop is supported by using host-side software from the OS or 3rd party to provide redundant loop and load balancing functions.
 - Drive-side dual-loop is supported by RAID controller on all models with Fibre drive side. RAID controller provides redundant path and dynamic load balancing on the drive-side channels. (User configurable on ER2510FS series)
- *7 SFP modules are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.

Channel IO Module for ER2510FS:



With PBC (portbypass-circuit) builtin which links both controllers and both SFP ports together.



Straight-through connections with no PBC.





	Fibre RAID Controller Hea	ad and JBODs	Variant	ts & Spare Parts	
Model	2510FS-4S/6S	2510FS-4RH/6RH	2510FS-4D/6D	A16F-J1210-G	F16F-R2J2 (Dual SES) F16F-S2J2 (Single SES)
	Single-UPG Fibre-Fibre RAID Controller Head *1	Redundant Fibre-Fibre RAID Controller Head *1	<u>Dual-Single</u> Fibre-Fibre RAID Controller Head *1	Fibre-SATA JBOD Subsystem 3U 16-Bay *2	Fibre JBOD Subsystem 3U 16-Bay *2
Controller Module	9560-CTMod-4 (INC x1 for -4S) 9560-CTMod-6 (INC x1 for -6S)	9560-CTMod-4 (INC x2 for -4RH) 9560-CTMod-6 (INC x2 for -6RH)	9560-CTMod-4 (INC x2 for -4D) 9560-CTMod-6 (INC x2 for -6D)	80AF12JC16 (INC x1)	9270FSESM (INC x2 for -R2J2) (INC x1 for -S2J2)
Fan Module	9560-FanMod (INC x2)	9560-FanMod (INC x2)	9560-FanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)
Power Supply Module	9560-PSU (INC x2)	9560-PSU (INC x2)	9560-PSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)
Drive Tray	-	-	-	9272CDTray (INC x16)	9270FDTray (INC x16)
Channel IO Module	9560-IO1 (INC x4 for -4S) (INC x6 for -6S)	9560-IO1 (INC x4 for -4RH) (INC x6 for -6RH)	9560-IO2 (INC x4 for -4D) (INC x6 for -6D)	-	-
RS-232 Cable	9560-Scab (INC x1)	9560-Ycab (INC x2)	9560-Scab (INC x1)	-	-
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	-	-
Fibre SFP *7	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 (OPT)
Rack Mount Kits (See Rack Mount Guide) *3	9253L20 <i>(OPT)</i>	9253L20 <i>(OPT)</i>	9253L20 <i>(OPT)</i>	9270CEncBrk 9270CSlider36 (<i>OPT</i>)	9270CEncBrk 9270CSlider36 (OPT)
Cache Memory *4	128 MB, 256 MB, 512MB and 1GB <i>(OPT)</i> PC-133 SDRAM Memory Module Not Included	128 MB, 256 MB, 512MB and 1GB <i>(OPT)</i> PC-133 SDRAM Memory Module Not Included	128 MB, 256 MB, 512MB and 1GB <i>(OPT)</i> PC-133 SDRAM Memory Module Not Included	128 MB PC-133 SDRAM (INC x1)	-
Battery Backup *5	9560-IOBT (INC x1)	9560-IOBT (INC x2)	9560-IOBT (INC x2)	-	-
CD, Manual and QIG *6 (Quick Installation Guide)	CD (INC)	CD (INC)	CD (INC)	QIG (INC)	QIG (INC)
Redundant Ctrl. Upgrade Kit	9560UP4S4RH (-4S OPT) 9560UP6S6RH (-6S OPT)	Redundant enabled, no upgrade kit required	-	-	-

- *1 <u>SC-UPG</u>: Single RAID Controller Upgradeable to Redundant.

 <u>Redundant</u>: Dual-Redundant Controller configuration

 <u>Redundant with dedicated sync-channels</u>: Use two dedicated

 Fibre channels as redundant controller communication and
 cache synchronization for enhanced write-back performance.

 <u>Dual-Single</u>: Two RAID controllers both operate individually. No
 redundant controller functions but performance simply double.
- *2 JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions.
 - <u>Single-SES</u>: One SES module is installed.

 <u>Dual-SES</u>: Two SES modules are installed to provide redundancy on SES module.
- *3 For rack mount kits, please see page of "Rack Mount Guide".

- *4 The 2510FS series use PC-133 registered ECC SDRAM (168pin DIMM) only. Please contact Infortrend for optional memory modules.
- *5 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

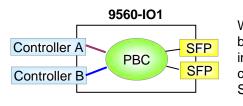
In redundant controller configuration, the two controllers should have identical cache memory and battery backup configuration.

- *6 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD. The CD also includes RAIDWatch ™ software for RAID management.
- *7 SFP modules are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.

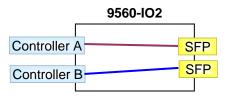
For the minimum / maximum cable length, recommended cable type, wave length and other additional information, please refer to specifications or data sheets from the SFP module manufacturers.

SFP module manufacturer and model: **9270CSFP2GA01** Agilent QFBR-5751ALP

Channel IO Module for ER2510FS:



With PBC (portbypass-circuit) builtin which links both controllers and both SFP ports together.



Straight-through connections with no PBC.





	Fibre-Fibre RAID Subsyst	ems			Product Details
Model	F12F-G2A2-M2	F16F-S2A2-M5	F16F-R2A2-M5	F16F-R2A2-AM5	F16F-R2J2 (Dual SES) F16F-S2J2 (Single SES)
Model	Fibre-Fibre RAID Subsystems 2U 12-Bay	Single-UPG Fibre-Fibre RAID Subsystem *1 3U 16-Bay	Redundant Fibre-Fibre RAID Subsystem *1 3U 16-Bay	Redundant Fibre-Fibre RAID Subsystem with dedicated Sync-Channels *1 3U 16-Bay	Fibre JBOD Subsystem 3U 16-Bay
Form Factor *3	2U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount
Drive Channels *6 Hot Swap Trays	2 Channels Fibre 2G <i>Two SFP ports</i> Dual-Loop	2 Channels Fibre 2G Two SFP ports on each channel, total four SFP ports Dual-Loop	2 Channels Fibre 2G Two SFP ports on each channel, total four SFP ports Dual-Loop	2 Channels Fibre 2G Two SFP ports on each channel, total four SFP ports Dual-Loop	2 Channels
Expansion Channels	12-bay (2G FC-SCA Drives)	16-bay (2G FC-SCA Drives)	16-bay (2G FC-SCA Drives)	16-bay (2G FC-SCA Drives)	Fibre 2G Four SFP ports Dual-Loop
Host Channels *6	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports on each controller, total Four SFP ports	2 Channels Fibre 2G Two SFP ports on each controller, total four SFP ports	16-bay (2G FC-SCA Drives)
Redundant Controller *1		Single Controller Upgradeable to Redundant	Dual-Controller Redundant	Dual-Controller Redundant with two dedicated sync-channels	JBOD (No RAID Controller) With dual SES Module (R2J2) Or single SES Module (S2J2)
RAID Function		e and Global Spare Drives al Volumes (LV), Multiple Partitions, Multiple Host I ackground Rebuild, Automatic Bad Block Reassigr		configuration on disks, Dynamic host LUN mapping	is .
Advanced Functions	Dual-mode RAID expansions: "Add-in Drive" and	ported (3rd party software required in the host com "Copy & Replace with larger drive" to-sync firmware and configuration on replacemen		ed on fibre-host models), background firmware do	wnload
Management	LCD front panel: Easy-to-use menu for accessing all RS-232 Terminal: User friendly menu-driven for acce RAIDWatch™ java-based cross-platform central rand pager).		nagement, remote / local management (in-band or out-o	f-band), event notifications (via e-mail, SNMP trap, fax, r	network broadcast – with full plain-text event message
Management via Built-in LAN	RAIDWatch™-onboard: <i>Open browser to link to the</i> Telnet-terminal: <i>Access terminal menu by telnet via b</i> Notification-onboard: <i>RAID unit itself issue e-mail an</i>		vent messages)		
Hot Swap Fan Modules	3	2	2	2	2
Hot Swap Power Supplies	2 x 350 W	2 x 460 W	2 x 460 W	2 x 460 W	2 x 460 W
Cache Memory	256 MB – 1 GB (PC-133 SDRAM)	512 MB – 1 GB (PC-133 SDRAM)	512 MB – 1 GB (PC-133 SDR	RAM) in Each RAID Controller	-
Battery Backup *4	Optional	Optional	Included x2	Included x2	-

- *1 Single-UPG: Single RAID Controller Upgradeable to Redundant.

 Redundant: Dual-Redundant Controller configuration

 Redundant with dedicated sync-channels: Use two dedicated Fibre channels as redundant controller communication and cache synchronization for enhanced write-back performance.
- *2 JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions.

Single-SES: One SES module is installed.

<u>Dual-SES</u>: Two SES modules are installed to provide redundancy on SES module.

- *3 For rack mount kits, please see page of "Rack Mount Guide".
- *4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

In redundant controller configuration, the two controllers should have identical cache memory and battery backup configuration.

- *5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD. The CD also includes RAIDWatch ™ software for RAID management.
- *6 Host-side dual-loop is supported by using host-side software from the OS or 3rd party to provide redundant loop and load balancing functions.
 - Drive-side dual-loop is supported by RAID controller on all models with Fibre drive side. RAID controller provides redundant path and dynamic load balancing on the drive-side channels. (User configurable on ER2510FS series)
- *7 SFP modules are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.

08/03/2005





	Fibre-Fibre RAID Subsystems Variants & Spa						
Model	F12F-G2A2-M2	F16F-S2A2-M5	F16F-R2A2-M5	F16F-R2A2-AM5	F16F-R2J2 (Dual SES) F16F-S2J2 (Single SES)		
Model			(京县铁石镇):	(元祖等担任):			
	Fibre-Fibre RAID Subsystems 2U 12-Bay	<u>Single-UPG</u> Fibre-Fibre RAID Subsystem *1 3U 16-Bay	<u>Redundant</u> Fibre-Fibre RAID Subsystem *1 3U 16-Bay	Redundant Fibre-Fibre RAID Subsystem with dedicated Sync-Channels *1 3U 16-Bay	Fibre JBOD Subsystem with Dual-SES *2 3U 16-Bay		
Controller Module	9272FCM4 (INC x1)	9270FCM4 (INC x1)	9270FCM4 (INC x2)	9270FCM6 (INC x2)	9270FSESM (INC x2 for -R2J2) (INC x1 for -S2J2)		
Fan Module	9272CFanMod (INC x3)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)		
Power Supply Module	9272CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)		
Drive Tray	9272CDTray (INC x12)	9270FDTray (INC x16)	9270FDTray (INC x16)	9270FDTray (INC x16)	9270FDTray (INC x16)		
Channel IO Module	-	-	-	-	-		
RS-232 Cable	9270ASCab (INC x1)	Standard DB-9	Not included. male RS-232 connector, please use standard DB-	9 RS-232 cable.	-		
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	-		
Fibre SFP *7	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 (OPT)		
Rack Mount Kits (See Rack Mount Guide) *3	9272CESlide36 (OPT)	9270CEncBrk 9270CSlider36 <i>(OPT)</i>	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 <i>(OPT)</i>		
Cache Memory	256 MB PC-133 SDRAM (INC x1) 512 MB and 1GB (OPT)	512 MB PC-133 SDRAM (INC x1) 1GB (OPT)	512 MB PC-133 SDRAM <i>(INC x2)</i> 1GB <i>(OPT)</i>	512 MB PC-133 SDRAM (INC x2) 1GB (OPT)	-		
Battery Backup *4	9270FBT (<i>OPT</i>)	9270FBT (OPT)	9270FBT (INC x2)	9270FBT (INC x2)	-		
CD, Manual and QIG *5 (Quick Installation Guide)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC)		
Redundant Ctrl. Upgrade Kit	-	9270FCM4 (<i>OPT</i>)	Redundant enabled, no upgrade kit required	Redundant enabled, no upgrade kit required	-		

- *1 Single-UPG: Single RAID Controller Upgradeable to Redundant.

 Redundant: Dual-Redundant Controller configuration

 Redundant with dedicated sync-channels: Use two dedicated Fibre channels as redundant controller communication and cache synchronization for enhanced write-back performance.
- *2 JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions.

Single-SES: One SES module is installed.

Dual-SES: Two SES modules are installed to provide redundancy on SES module.

*3 For rack mount kits, please see page of "Rack Mount Guide".

*4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

In redundant controller configuration, the two controllers should have identical cache memory and battery backup configuration.

- *5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD. The CD also includes RAIDWatch ™ software for RAID management.
- *6 Host-side dual-loop is supported by using host-side software from the OS or 3rd party to provide redundant loop and load balancing functions.
- *7 SFP modules are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.

SFP module manufacturer and model: 9270CSFP2GA01 Agilent QFBR-5751ALP





	Fibre-SATA RAID Subsystems						
	A08F-G1A2-M1	A12F-G1A2-M1	A16F-G1A2-M1	A16F-R1A2-M2 (Redundant) A16F-S1A2-M2 (Single-UPG)	A16F-R1211-M2 (Redundant) A16F-S1211-M2 (Single-UPG)	A16F-J1210-G	
Model							
	Fibre-SATA RAID Subsystem 2U 8-Bay	Fibre-SATA RAID Subsystem 2U 12-Bay	Fibre-SATA RAID Subsystem 3U 16-Bay	Fibre-SATA RAID Subsystem with drive-side expansion *8 3U 16-Bay	Fibre-SATA RAID Subsystem with drive-side expansion and host-side hub function *8 3U 16-Bay	Fibre-SATA JBOD Subsystem 3U 16-Bay	
Form Factor *1	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	
Drive Channels Hot Swap Trays	8 Channels 8-bay (SATA Drives) IDE drives optional	12 Channels 12-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	
Expansions Channels *3	-	-	-	1 Channel Fibre 2G One SFP port on each controller Total two SFP ports (R1A2) or One SFP port (S1A2)	1 Channel Fibre 2G One SFP port on each controller Total two SFP ports (R1211) or One SFP port (S1211)	2 Channels	
Host Channels *3 *4	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G One SFP ports per channel on each controller Total: four SFP ports (R1A2) or two SFP ports (S1A2)	2 Channels Fibre 2G Built-in Fibre hub function Two SFP ports per channel on each controller Total: Eight SFP ports (R1211) or Four SFP ports (S1211)	Fibre 2G Two SFP Ports per channel, total four SFP ports	
Redundant Controller *5	-	-	-	R1A2: Dual-controller redundant S1A2: Single-controller upgradeable to redundant	R1211: Dual-controller redundant S1211: Single-controller upgradeable to redundant	-	
RAID Function				ant RAID Ready, LD configuration on disks, [Dynamic host LUN mappings		
Advanced Functions	Dual-mode RAID expansions: "Add-in Driv			, fabric log-in (supported on fibre-host models	s), background firmware download		
Management	LCD front panel: <i>Easy-to-use menu for acces</i> RS-232 Terminal: <i>User friendly menu-driven i</i> RAIDWatch™ java-based cross-platform c	for accessing all functions and features.	ling: Central management, remote / local manaç	gement (in-band or out-of-band), event notification.	s (via e-mail, SNMP trap, fax, network broadcast –	with full plain-text event message and pager).	
Management via Built-in LAN		k to the RAID unit via built-in LAN port. Telnet-t mail and SNMP traps for event notifications (with		uilt-in LAN port.			
Hot Swap Fan Modules	2	3	2	2	2	2	
Hot Swap Power Supplies	2 x 350 W	2 x 350 W	2 x 460 W	2 x 460 W	2 x 460 W	2 x 460 W	
Cache Memory *6	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	128MB (PC-133 SDRAM)	
Battery Backup *7	-	Optional	Optional	Included (R1A2) Optional (S1A2)	Included (R1211) Included (S1211)	-	

- *1 For rack mount kits, please see page of "Rack Mount Guide".
- *2 IDE drives can be used with optional dongle-boards installed in each drive tray.
- *3 SFP modules and Fibre optical cables are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.
- *4 Host-side dual-loop is supported by using host-side software from the OS or 3rd party to provide redundant loop and load balancing functions.

- *5 **Single-UPG**: Single Controller Upgradeable to Dual-Redundant Controller configuration.
 - **Redundant**: Dual-redundant controller configuration. "Active-active" redundant RAID controller (can be used as "active-passive")
- *6 Supports Infortrend qualified PC-133 ECC SDRAM modules only. Please contact Infortrend for optional memory upgrades.
- *7 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

*8 The drive-side expansion port(s) on A16F-R1A2/S1A2/R1211/ S1211 can be used to connect Fibre-SATA JBOD subsystems. **Up to 7 units of A16F-J1210-G can be connected.**

The built-in hub function in A16F-S1211 allows two computers connecting to each host channel without using a Fibre switch. (four SFP connections in total)

The built-in hub function in A16F-R1211 provides four SFP connection per host channel without using a Fibre switch. (Eight SFP connections in total)





	Fibre-SATA RAID Sub	systems		Variants & Spare Parts		
	A08F-G1A2-M1	A12F-G1A2-M1	A16F-G1A2-M1	A16F-R1A2-M2 (Redundant) A16F-S1A2-M2 (Single-UPG)	A16F-R1211-M2 (Redundant) A16F-S1211-M2 (Single-UPG)	A16F-J1210-G
Model				阿里里斯		
	Fibre-SATA RAID Subsystem 2U 8-Bay	Fibre-SATA RAID Subsystem 2U 12-Bay	Fibre-SATA RAID Subsystem 3U 16-Bay	Fibre-SATA RAID Subsystem with drive-side expansion *8 3U 16-Bay	Fibre-SATA RAID Subsystem with drive-side expansion and host-side hub function *8 3U 16-Bay	Fibre-SATA JBOD Subsystem 3U 16-Bay
Controller Module	9272AFGCM08 (INC x1)	9272AFGCM12 (INC x1)	9270AFGCM (INC x1)	9270AFRCM (R1A2: INC x2; S1A2: INC X1)	80AF12RC16 (R1211: INC x2; S1211: INC X1)	80AF12JC16 (INC x1)
Fan Module	9272CFanMod (INC x2)	9272CFanMod (INC x3)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)
Power Supply Module	9272CPSU (INC x2)	9272CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)
Drive Tray	9272CDTray (INC x8)	9272CDTray (INC x12)	9270CDTray (INC x16)	9270ADT2S1S (R1A2: INC x16) 9270ADT1S1S (S1A2: INC x16)	9270ADT2S1S (R1211: INC x16) 9270ADT1S1S (S1211: INC x16)	9272CDTray (INC x16)
Dongle Board for IDE Drive *1	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P (OPT)	-	-	9270AN1S1P (OPT)
RS-232 Cable	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	-
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	-
Fibre Optical Cable (External) *2	- (OPT)	- (OPT)	- (OPT)	- (OPT)	- (OPT)	- (OPT)
SFP Module *2	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 (OPT)
Rack Mount Kits *3 (See Rack Mount Guide)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 <i>(OPT)</i>
Cache Memory *4	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	256 MB PC-133 SDRAM (R1A2: INC x2; S1A2: INC X1) 512 MB and 1GB (OPT)	256 MB PC-133 SDRAM (R1211: INC x2; S1211: INC X1) 512 MB and 1GB (OPT)	128 MB SDRAM (INC x1)
Battery Backup *5	-	9270ABT <i>(OPT)</i>	9270ABT (OPT)	9270ABT (R1A2: INC x2; S1A2: OPT)	9270ABT (R1211: INC x2; S1211: INC x1)	-
CD, Manual & QIG *6 (Quick Installation Guide)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC)
Redundant Controller Upgrade Kit *7	-	-	-	9270AFSUPKIT (Optional for S1A2 only)	80AF12RC16-M2 (x1) + 9270AN2S1S (x16) (Optional for S1211 only)	-

- *1 IDE drives can be used with optional dongle-boards installed in each drive tray.
- *2 SFP modules and Fibre optical cables are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.
- *3 For rack mount kits, please see page of "Rack Mount Guide".
- *4 Supports Infortrend qualified PC-133 ECC SDRAM modules only. Please contact Infortrend for optional memory upgrades.
- *5 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

*6 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD.

The CD also includes RAIDWatch $^{\mathsf{TM}}$ software for RAID management.

- *7 **Single-UPG**: Single Controller Upgradeable to Dual-Redundant Controller configuration.
 - <u>Redundant</u>: Dual-redundant controller configuration. "Active-active" redundant RAID controller (can be used as "active-passive")
- *8 The drive-side expansion port(s) on A16F-R1A2/S1A2/R1211/ S1211 can be used to connect Fibre-SATA JBOD subsystems. Up to 7 units of A16F-J1210-G can be connected.

The built-in hub function in A16F-S1211 allows two computers connecting to each host channel without using a Fibre switch. (four SFP connections in total)

The built-in hub function in A16F-R1211 provides four SFP connection per host channel without using a Fibre switch. (Eight SFP connections in total)

08/03/2005







New! Constor iSCSI & Fibre - SATA II

	iSCSI RAID Storage	Fibre - SATA II RAID Subsy	/stems		Product Details
	New A12E-G2121-25	New A08F-G2221-M2	New A12F-G2221-M2	New A16F-G2221-M2	New A16F-R2221-M2
Model	建聚煮煮煮	三十二十二十二			
	iSCSI – SATA II RAID Subsystem 12-Bay	Fibre – SATA II RAID Subsystem 2U 8-Bay	Fibre – SATA II RAID Subsystem 2U 12-Bay	Fibre – SATA II RAID Subsystem 3U 16-Bay	Fibre – SATA II Redundant Controllers RAID Subsystem 3U 16-Bay
Form Factor *1	2U Rackmount	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount
Drive Channels Hot Swap Trays	12 Channels 12-bay (SATA I - II Drives) IDE drives optional	8 Channels 8-bay (SATA I - II Drives) IDE drives optional	12 Channels 12-bay (SATA I – II Drives) IDE drives optional	16 Channels 16-bay (SATA I - II Drives) IDE drives optional	16 Channels 16-bay (SATA I - II Drives) IDE drives optional
Expansions Channels	-	-	-	-	-
Host Channels *3	2 Channels Gigabit Ethernet Two RJ-45 ports	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports	2 Channels Fibre 2G Two SFP ports on chassis (Fibre cable connections remain intact when exchanging the RAID controller module)	2 Channels Fibre 2G Four SFP Ports on chassis (Fibre cable connections remain intact when exchanging the RAID controller module)
Redundant Controller	-	-	-	-	Redundant Controller Enabled
RAID Function		and Global Spare Drives Volumes (LV), Multiple Partitions, Multiple Host IDs, M kground Rebuild, Automatic Bad Block Reassignmen		ation on disks, Dynamic host LUN mappings	
Advanced Functions	The same as RAID subsystems, plus CHAP and other iSCSI related functions. (Refer to brochure)	Host-side redundant path and load balancing support Dual-mode RAID expansions: "Add-in Drive" and "Co		rs), background firmware download	
Management	The same as RAID subsystems, no LCD front panel.	LCD front panel: Easy-to-use menu for accessing all fun RS-232 Terminal: User friendly menu-driven for accessing RAIDWatch™ java-based cross-platform central mathroadcast – with full plain-text event message and pager).	ng all functions and features. nagement software included, providing: Central managel	ment, remote / local management (in-band or out-of-band),	event notifications (via e-mail, SNMP trap, fax, network
Management via Built-in LAN	RAIDWatch TM -onboard: Open browser to link to the RATelnet-terminal: Access terminal menu by telnet via buil Notification-onboard: RAID unit itself issue e-mail and S		nessages)		
Hot Swap Fan Modules	3	2	3	2	2
Hot Swap Power Supplies	2 x 350 W	2 x 350 W	2 x 350 W	2 x 460 W	2 x 460 W
Cache Memory *4	512 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)
Battery Backup *5	Optional	Optional	Optional	Optional	Optional

- *1 For rack mount kits, please see page of "Rack Mount Guide".
- *2 IDE drives can be used with optional dongle-boards installed in each drive tray.

Both SATA I (with or without NCQ) and SATA II drives can be used in SCSI - SATA II and Fibre - SATA II RAID subsystem models.

- *3 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)
- *4 Please note the different memory module types used in different RAID subsystem models:

PC-3200 ECC DDR400: A08F-G2221, A12F-G2221, A16F-G2221, A16F-R2221 (And all other Infortrend ASIC-266 based RAID controllers and RAID subsystems) Please contact Infortrend for optional memory upgrades.

*5 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

9273CBT-C is a field replaceable module which is independent from the RAID controller module. It can be exchanged with the RAID controller remaining in the chassis.







New! Constor iSCSI & Fibre - SATA II

	iSCSI RAID Storage	Fibre - SATA II RAID Subs	ystems	Varia	ints & Spare Parts
	New A12E-G2121-25	New A08F-G2221-M2	New A12F-G2221-M2	New A16F-G2221-M2	New A16F-R2221-M2
Model	国际 系统		国际		
	iSCSI – SATA II RAID Subsystem 12-Bay	Fibre – SATA II RAID Subsystem 2U 8-Bay	Fibre – SATA II RAID Subsystem 2U 12-Bay	Fibre – SATA II RAID Subsystem 3U 16-Bay	Fibre – SATA II Redundant Controllers RAID Subsystem 3U 16-Bay
Controller Module	82AE21GD12-25 (INC x1)	82AF22GD08-M2 (INC x1)	82AF22GD12-M2 (INC x1)	83AF22GD16-M2 (INC x1)	83AF22RD16C-M2 (INC x1)
Fan Module	9272CFanModE (INC x3)	9272CFanModE (INC x2)	9272CFanModE (INC x3)	9273CFanMod (INC x2)	9273CFanMod (INC x2)
Power Supply Module	9272CPSU-0011 (INC x2)	9272CPSU-0011 (INC x2)	9272CPSU-0011 (INC x2)	9273CPSU (INC x2)	9273CPSU (INC x2)
Drive Tray	9273CDTray (INC x12)	9273CDTray (INC x8)	9273CDTray (INC x12)	9273CDTray (INC x16)	9273ADT2S1S (INC x16)
Dongle Board for IDE Drive *1	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 <i>(OPT)</i>	9270AN1S1P-0011 (OPT)
RS-232 Cable	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)
Fibre SFP *2	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 <i>(OPT)</i>	9270CSFP2GA01 (OPT)	9270CSFP2GA01 (OPT)
Fibre Optical Cable *3	(OPT)	(OPT)	(OPT)	(OPT)	(OPT)
Rack Mount Kits *4 (See Rack Mount Guide)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9273CSlider36 (OPT)	9273CSlider36 (OPT)
Cache Memory *5	512MB PC-3200 DDR400 (INC x1) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)
Battery Backup *6	9273CBT-C (OPT)	9273CBT-C (OPT)	9273CBT-C (OPT)	9273CBT-C <i>(OPT)</i>	9273CBT-C (OPT)
CD, Manual & QIG *7 (Quick Installation Guide)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)
Redundant Controller Upgrade Kit	-	-	-	-	Redundant enabled, no upgrade kit required

*1 IDE drives can be used with optional dongle-boards installed in each drive tray.

Both SATA I (with or without NCQ) and SATA II drives can be used in SCSI - SATA II and Fibre - SATA II RAID subsystem models.

- *2 SFP module manufacturer and model: 9270CSFP2GA01 Agilent QFBR-5751ALP
- *3 SFP modules and Fibre optical cables are not included. To ensure the signal quality for 2G Fibre, we recommend to use SFP module with LC optical connection.
- *4 For rack mount kits, please see page of "Rack Mount Guide".

*5 Please note the different memory module types used in different RAID subsystem models:

PC-3200 ECC DDR400: A08F-G2221, A12F-G2221, A16F-G2221, A16F-R2221 (And all other Infortrend ASIC-266 based RAID controllers and RAID subsystems) Please contact Infortrend for optional memory upgrades.

*6 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

9273CBT-C is a hot-swappable battery module, which can be exchanged without removing the RAID controller from the chassis.

- *7 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD.
 - The CD also includes RAIDWatch ™ software for RAID management.





	SCSI-SATA RAID Subsystems Prod						
	A08U-G1A3-M1	A08U-G1410-M1	A12U-G1A3-M1	A12U-G1410-M1	A16U-G1A3-M1	A16U-G1410-M1	
Model		CONTRACTOR OF THE PARTY OF THE				福温温	
	U160 SCSI-SATA RAID Subsystem 2U 8-Bay	U320 SCSI-SATA RAID Subsystem 2U 8-Bay	U160 SCSI-SATA RAID Subsystem 2U 12-Bay	U320 SCSI-SATA RAID Subsystem 2U 12-Bay	U160 SCSI-SATA RAID Subsystem 3U 16-Bay	U320 SCSI-SATA RAID Subsystem 3U 16-Bay	
Form Factor *1	2U Rackmount	2U Rackmount	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount	
Drive Channels Hot Swap Trays	8 Channels 8-bay (SATA Drives) IDE drives optional	8 Channels 8-bay (SATA Drives) IDE drives optional	12 Channels 12-bay (SATA Drives) IDE drives optional	12 Channels 12-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	16 Channels 16-bay (SATA Drives) IDE drives optional	
Expansions Channels	-	-	-	-	-	-	
Host Channels *3	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI ports	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI Ports	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI Ports	
Redundant Controller *4	-	-	-	-	-	-	
RAID Function		l Spare and Global Spare Drives Logical Volumes (LV), Multiple Partitions, Mu cally Background Rebuild, Automatic Bad Blo		RAID Ready, LD configuration on disks, Dyn	namic host LUN mappings		
Advanced Functions	Host-side redundant path and load balancin Dual-mode RAID expansions: "Add-in Drive	ng supported (3rd party software required in t e" and "Copy & Replace with larger drive"	the host computers), background firmware c	lownload			
Management	LCD front panel: <i>Easy-to-use menu for access</i> RS-232 Terminal: <i>User friendly menu-driven for</i> RAIDWatch™ java-based cross-platform co		g: Central management, remote / local managen	nent (in-band or out-of-band), event notifications (\	ria e-mail, SNMP trap, fax, network broadcast – v	with full plain-text event message and pager).	
Management via Built-in LAN	RAIDWatch TM -onboard: Open browser to link to the RAID unit via built-in LAN port. Telnet-terminal: Access terminal menu by telnet via built-in LAN port. Notification-onboard: RAID unit itself issue e-mail and SNMP traps for event notifications (with full plain-text event messages)						
Hot Swap Fan Modules	2	2	3	3	2	2	
Hot Swap Power Supplies	2 x 350 W	2 x 350 W	2 x 350 W	2 x 350 W	2 x 460 W	2 x 460 W	
Cache Memory *5	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	
Battery Backup *6	-	-	Optional	Optional	Optional	Optional	

- *1 For rack mount kits, please see page of "Rack Mount Guide".
- *2 IDE drives can be used with optional dongle-boards installed in each drive tray.
- *3 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)
- *4 All SCSI-SATA RAID subsystems are equipped with single RAID controller. If redundant RAID controller function is required, please choose EonStor™ Fibre-SATA RAID Subsystems.

- *5 Supports Infortrend qualified PC-133 ECC SDRAM modules only. Please contact Infortrend for optional memory upgrades.
- *6 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.





	SCSI-SATA RAID Sub	SCSI-SATA RAID Subsystems Vari					
	A08U-G1A3-M1	A08U-G1410-M1	A12U-G1A3-M1	A12U-G1410-M1	A16U-G1A3-M1	A16U-G1410-M1	
Model							
	U160 SCSI-SATA RAID Subsystem 2U 8-Bay	U320 SCSI-SATA RAID Subsystem 2U 8-Bay	U160 SCSI-SATA RAID Subsystem 2U 12-Bay	U320 SCSI-SATA RAID Subsystem 2U 12-Bay	U160 SCSI-SATA RAID Subsystem 3U 16-Bay	U320 SCSI-SATA RAID Subsystem 3U 16-Bay	
Controller Module	9272AUGCM08 (INC x1)	82AU14GC08 (INC x1)	9272AUGCM12 (INC x1)	82AU14GC12 (INC x1)	9270AUGCM (INC x1)	80AU14GC16 (INC x1)	
Fan Module	9272CFanMod (INC x2)	9272CFanMod (INC x2)	9272CFanMod (INC x3)	9272CFanMod (INC x3)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	
Power Supply Module	9272CPSU (INC x2)	9272CPSU (INC x2)	9272CPSU (INC x2)	9272CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	
Drive Tray	9272CDTray (INC x8)	9272CDTray (INC x8)	9272CDTray (INC x12)	9272CDTray (INC x12)	9270CDTray (INC x16)	9270CDTray (INC x16)	
Dongle Board for IDE Drive *7	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 (OPT)	9270AN1S1P (OPT)	9270AN1S1P (OPT)	
RS-232 Cable	9270ASCab (INC x1)						
RS-232 Null Modem	9011 (INC x1)						
SCSI Cable (External) *1	9270UHstCab (INC x1) 9270UJBODCab (OPT)						
SCSI Terminator (External) *1	-	-	-	-	-	-	
Rack Mount Kits *2 (See Rack Mount Guide)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	
Cache Memory *3	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	
Battery Backup *4	-	-	9270ABT (OPT)	9270ABT <i>(OPT)</i>	9270ABT <i>(OPT)</i>	9270ABT <i>(OPT)</i>	
CD, Manual & QIG *5 (Quick Installation Guide)	QIG (INC) CD (INC)						
Redundant Controller Upgrade Kit *6	-	-	-	-	-	-	

*1 For SCSI-SATA EonStor™ RAID subsystems, one external SCSI cable is included. The subsystem has built-in SCSI terminators, no external SCSI terminator is included (not required).

Optional external SCSI cables: (U160/U320 ready)

9270UHstCab VHDCI-HD68, 1 meter9270UJBODCab VHDCI-VHDCI, 1 meter

- *2 For rack mount kits, please see page of "Rack Mount Guide".
- *3 Supports Infortrend qualified PC-133 ECC SDRAM modules only. Please contact Infortrend for optional memory upgrades.
- *4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

*5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD.

The CD also includes RAIDWatch $^{\mathsf{TM}}$ software for RAID management.

- *6 All SCSI-SATA RAID subsystems are equipped with single RAID controller. If redundant RAID controller function is required, please choose EonStor™ Fibre-SATA RAID Subsystems.
- *7 IDE drives can be used with optional dongle-boards installed in each drive tray.
- *8 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)









	SCSI - SATA II RAID Subsystems			Product Details
	A08U-C2410-M1	New A08U-G2421-M2	New A12U-G2421-M2	New A16U-G2421-M2
Model	SCSI 320 – SATA II Tower / Desktop RAID Subsystem 8-Bay	SCSI 320 – SATA II RAID Subsystem 2U 8-Bay	SCSI 320 – SATA II RAID Subsystem 2U 12-Bay	SCSI 320 – SATA II RAID Subsystem 3U 16-Bay
Form Factor *1	Tower / Desktop (Convertible)	2U Rackmount	2U Rackmount	3U Rackmount
Drive Channels Hot Swap Trays	8 Channels 8-bay (SATA I - II Drives) IDE drives optional	8 Channels 8-bay (SATA I - II Drives) IDE drives optional	12 Channels 12-bay (SATA I – II Drives) IDE drives optional	16 Channels 16-bay (SATA I - II Drives) IDE drives optional
Expansions Channels	-	-	-	-
Host Channels *3	2 Channels SCSI-320 Four VHDCI ports (in/out ports for each channel)	SCSI-320 SCSI-320 SCSI-320		2 Channels SCSI-320 Four VHDCI ports (in/out ports for each channel)
Redundant Controller *4	-		-	-
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Sp Multiple RAID Logical Drives (LD), Multiple Logical Volumes (LV) Each LD/LV > 2TB (Up to 64TB), Automatically Background Reb	, Multiple Partitions, Multiple Host IDs, Multiple Host LUNs, Instant	RAID Ready, LD configuration on disks, Dynamic host LUN ma	appings
Advanced Functions	Host-side redundant path and load balancing supported (3rd part Dual-mode RAID expansions: "Add-in Drive" and "Copy & Replace	y software required in the host computers), background firmware one with larger drive	download	
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and fea</i> RS-232 Terminal: <i>User friendly menu-driven for accessing all functions</i> RAIDWatch™ java-based cross-platform central management so	and features.	nent (in-band or out-of-band), event notifications (via e-mail, SNMP trap	, fax, network broadcast – with full plain-text event message and pager).
Management via Built-in LAN	RAIDWatch™-onboard: Open browser to link to the RAID unit via built Telnet-terminal: Access terminal menu by telnet via built-in LAN port. Notification-onboard: RAID unit itself issue e-mail and SNMP traps for			
Hot Swap Fan Modules	2	2	3	2
Hot Swap Power Supplies	2 x 250 W 2 x 350 W		2 x 350 W	2 x 460 W
Cache Memory *5	128 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)	256 MB – 1 GB (PC-3200 DDR400)
Battery Backup *6	Optional	Optional	Optional	Optional

*1 For rack mount kits, please see page of "Rack Mount Guide".

The A08U-C2410 is a RAID subsystem designed to standup vertically as a tower subsystem, or placed horizontally as a desktop subsystem. User can decide to use it as a tower or desktop RAID. The front panel LCD can also easily be changed between vertical and horizontal position accordingly.

*2 IDE drives can be used with optional dongle-boards installed in each drive tray.

Both SATA I (with or without NCQ) and SATA II drives can be used in SCSI - SATA II and Fibre - SATA II RAID subsystem models.

*3 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)

The SCSI 320 - SATA II models all equipped with two SCSI-320 (Ultra320 SCSI) host channels, each host channel has two VHDCI SCSI connector ports (in/out ports). This design provides an easier way of chaining multiple RAID units to the same SCSI bus, with VHDCI-VHDCI external SCSI cable (9270UJBODCab).

*4 All SCSI 320 - SATA II RAID subsystems are equipped with single RAID controller. If redundant RAID controller function is required, please choose EonStor™ Fibre - SATA RAID Subsystems with Redundant Controllers equipped.

*5 Please note the different memory module types used in different RAID subsystem models:

PC-133 ECC SDRAM: A08U-C2410 (And all other Infortrend ASIC-133 based RAID controllers and RAID

PC-3200 ECC DDR400: A08U-G2421, A12U-G2421, A16U-G2421 (And all other Infortrend ASIC-266 based RAID controllers and RAID subsystems)

Please contact Infortrend for optional memory upgrades.

*6 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

9273CBT-C is a field replaceable module which is independent from the RAID controller module. It can be exchanged with the RAID controller remaining in the chassis.







New! Constor SCSI - SATA II

	SCSI - SATA II RAID Subsystems Variants & Spare Parts							
	A08U-C2410-M1	New A08U-G2421-M2	New A12U-G2421-M2	New A16U-G2421-M2				
Model	SCSI 320 – SATA II Tower / Desktop RAID Subsystem 8-Bay	SCSI 320 – SATA II RAID Subsystem 2U 8-Bay	SCSI 320 – SATA II RAID Subsystem 2U 12-Bay	SCSI 320 – SATA II RAID Subsystem 3U 16-Bay				
Controller Module	81AU24GC08-M1 (INC x1)	82AU24GD08-M2 (INC x1)	82AU24GD12-M2 (INC x1)	83AU24GD16-M2 (INC x1)				
Fan Module	9271CFanMod (INC x2)	9272CFanModE (INC x2)	9272CFanModE (INC x3)	9273CFanMod (INC x2)				
Power Supply Module	9271CPSU (INC x2)	9272CPSU-0011 (INC x2)	9272CPSU-0011 (INC x2)	9273CPSU (INC x2)				
Drive Tray	9273CDTray (INC x8)	9273CDTray (INC x8)	9273CDTray (INC x12)	9273CDTray (INC x16)				
Dongle Board for IDE Drive *7	9270AN1S1P-0011 <i>(OPT)</i>	9270AN1S1P-0011 <i>(OPT)</i>	9270AN1S1P-0011 (OPT)	9270AN1S1P-0011 <i>(OPT)</i>				
RS-232 Cable	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)	9270ASCab (INC x1)				
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)				
SCSI Cable (External) *1	9270UJBODCab (INC x1) 9270UHstCab (OPT)	9270UJBODCab (INC x1) 9270UHstCab (OPT)	9270UJBODCab (INC x1) 9270UHstCab (OPT)	9270UJBODCab (INC x1) 9270UHstCab (OPT)				
SCSI Terminator (External) *1	-	-	-	-				
Rack Mount Kits *2 (See Rack Mount Guide)	-	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9270CEnBrk 9273CSlider36 (OPT)				
Cache Memory *3	128 MB PC-133 SDRAM <i>(INC x1)</i> 256 MB, 512 MB and 1GB SDRAM <i>(OPT)</i>	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)	256 MB PC-3200 DDR400 (INC x1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT)				
Battery Backup *4	9070E + 9271CBT (OPT)	9273CBT-C (OPT)	9273CBT-C (OPT)	9273CBT-C (<i>OPT</i>)				
CD, Manual & QIG *5 (Quick Installation Guide)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)				
Redundant Controller Upgrade Kit *6	-	-	-	-				

*1 For SCSI-SATA EonStor™ RAID subsystems, one external SCSI cable is included. The subsystem has built-in SCSI terminators, no external SCSI terminator is included (not required).

Optional external SCSI cables: (SCSI-160 / SCSI-320 ready)

9270UHstCab

VHDCI-HD68, 1 meter

9270UJBODCab VHDCI-VHDCI. 1 meter

*2 For rack mount kits, please see page of "Rack Mount Guide". The A08U-C2410 comes with four "feet" which can be used for both Tower or Desktop installations.

The A08U-C2410 is a RAID subsystem designed to stand-up vertically as a tower subsystem, or placed horizontally as a desktop subsystem. User can decide to use it as a tower or desktop RAID. The front panel LCD can also easily be changed between vertical and horizontal position accordingly.

*3 Please note the different memory module types used in different RAID subsystem models:

PC-133 ECC SDRAM: A08U-C2410 (And all other Infortrend ASIC-133 based RAID controllers and RAID subsystems)

PC-3200 ECC DDR400: A08U-G2421, A12U-G2421, A16U-G2421 (And all other Infortrend ASIC-266 based RAID controllers and RAID subsystems)

Please contact Infortrend for optional memory upgrades.

*4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or hard drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

9273CBT-C is a field replaceable module which is independent from the RAID controller module. It can be exchanged with the RAID controller remains in the chassis.

*5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD.

The CD also includes RAIDWatch ™ software for RAID management.

*6 All SCSI-SATA RAID subsystems are equipped with single RAID controller. If redundant RAID controller function is required, please choose EonStor™ Fibre-SATA RAID Subsystems.

- *7 IDE drives can be used with optional dongle-boards installed in each drive tray.
 - Both SATA I (with or without NCQ) and SATA II drives can be used in SCSI - SATA II and Fibre - SATA II RAID subsystem models.
- *8 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)







	SCSI RAID Subsystems Product Detail										
	U12U-G3A3-M1	U12U-G4010-M1	U16U-G3A3-4M2	U16U-G4010-42	U16U-G3A3-6M2	U16U-G4010-62	U16U-G3J3				
Model	SCSI-SCSI RAID Subsystem 2U 12-Bay	U320 SCSI-SCSI RAID Subsystem 2U 12-Bay	SCSI-SCSI RAID Subsystem 3U 16-Bay	U320 SCSI-SCSI RAID Subsystem 3U 16-Bay	SCSI-SCSI RAID Subsystem with drive-side expansion *2 3U 16-Bay	U320 SCSI-SCSI RAID Subsystem with drive-side expansion *2 3U 16-Bay	U160/ U320 SCSI JBOD Subsystem *2 3U 16-Bay				
Form Factor *1	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount				
Drive Channels Hot Swap Trays	2 Channels SCSI U160 12-bay (SCSI SCA Drives)	2 Channels SCSI U320 12-bay (SCSI SCA Drives)	2 Channels SCSI U160 16-bay (SCSI SCA Drives)	2 Channels SCSI U320 16-bay (SCSI SCA Drives)	2 Channels SCSI U160 16-bay (SCSI SCA Drives)	2 Channels SCSI U320 16-bay (SCSI SCA Drives)					
Expansion Channels	-	-	-	-	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI ports	2 Channels SCSI U160/U320 16-bay (SCSI SCA Drives) Two VHDCI ports				
Host Channels *3	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI ports	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI ports	2 Channels SCSI U160 Two VHDCI ports	2 Channels SCSI U320 Two VHDCI ports					
Redundant Controller	-	-	-	-	-	-	JBOD *2 (No RAID Controller)				
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Spare Drives Multiple RAID Logical Drives (LD), Multiple Logical Volumes (LV), Multiple Partitions, Multiple Host IDs, Multiple Host LUNs, Instant RAID Ready, LD configuration on disks, Dynamic host LUN mappings Each LD/LV > 2TB (Up to 64TB), Automatically Background Rebuild, Automatic Bad Block Reassignment										
Advanced Functions	Host-side redundant path and load balancing supported (3rd party software required in the host computers), fibre switch support, fabric log-in (supported on fibre-host models), background firmware download Dual-mode RAID expansions: "Add-in Drive" and "Copy & Replace with larger drive" Redundant models: Rolling-firmware-upgrade, auto-sync firmware and configuration on replacement controller										
Management		driven for accessing all functions and feat		remote / local management (in-band or ou	nt-of-band), event notifications (via e-mail,	SNMP trap, fax, network broadcast – with	full plain-text event message and				
Mgmt. via Built-in LAN	Telnet-terminal: Access terminal menu	er to link to the RAID unit via built-in LAN p by telnet via built-in LAN port. ssue e-mail and SNMP traps for event not		ges)							
Hot Swap Fan Modules	3	3	2	2	2	2	2				
Hot Swap Power Supplies	2 x 350 W	2 x 350 W	2 x 460 W	2 x 460 W	2 x 460 W	2 x 460 W	2 x 460 W				
Cache Memory	128 MB – 1 GB (PC-133 SDRAM)	128 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	256 MB – 1 GB (PC-133 SDRAM)	-				
Date of David Control	0 .: 1	0 .: 1	0.5	0 // 1	0	0 .: 1					

*1 For rack mount kits, please see page of "Rack Mount Guide".

Optional

Battery Backup *4

*2 JBOD (Just-a-Bunch-Of-Disks) subsystem requires connecting to a RAID subsystem (or RAID controller) in order to benefit the RAID and management functions.

The U16U-G3J3 SCSI JBOD is compliant with U160 / U320 SCSI, either U160 or U320 SCSI disks can be used. The U16U-G3J3 is designed to be used with U16U-G3A3-6M2 and U16U-G4010-62.

*3 Host-side load balancing and redundant path functions are supported by using host-side software from the OS or 3rd party. (not included)

*4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

Optional

Optional

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

For U16U and U12U series: A battery charger board (9070E) is required for U16U and U12U series, when battery backup option is taken. The battery module (9270UBT) requires the charger board (9070E) in order to recharge the battery.

Optional

Optional

Optional







	SCSI RAID Subsys	stems	Variants & Spare Parts					
	U12U-G3A3-M1	U12U-G4010-M1 U16U-G3A3-4M2		U16U-G4010-42	U16U-G3A3-6M2	U16U-G4010-62	U16U-G3J3	
Model				一种新疆	流馬馬鹿):			
	SCSI-SCSI RAID Subsystem 2U 12-Bay	U320 SCSI-SCSI RAID Subsystem 2U 12-Bay	SCSI-SCSI RAID Subsystem 3U 16-Bay	U320 SCSI-SCSI RAID Subsystem 3U 16-Bay	SCSI-SCSI RAID Subsystem with drive-side expansion *2 3U 16-Bay	U320 SCSI-SCSI RAID Subsystem with drive-side expansion *2 3U 16-Bay	SCSI JBOD Subsystem *2 3U 16-Bay	
Controller Module	9272UCM4 (INC x1)	82U40GC4 (INC x 1)	9270UCM4 (INC x1)	80U40GC4 (INC x1)	9270UCM6 (INC x1)	80U40GC6 (INC x1)	-	
Fan Module	9272CFanMod (INC x3)	9272CFanMod (INC x3)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	9270CFanMod (INC x2)	
Power Supply Module	9272CPSU (INC x2)	9272CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	9270CPSU (INC x2)	
Drive Tray	9272CDTray (INC x12)	9272CDTray (INC x12)	9270CDTray (INC x16)	9270CDTray (INC x16)	9270CDTray (INC x16)	9270CDTray (INC x16)	9270CDTray (INC x16)	
RS-232 Cable	9270ASCab (INC x1)	9270ASCab (INC x1)	Not included. Standard DB-9 male RS-232 connector, please use standard DB-9 RS-232 cable.					
RS-232 Null Modem	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	9011 (INC x1)	-	
SCSI Cable (External) *1	9270UHstCab (INC x1)	9270UHstCab (INC x1)	9270UHstCab (INC x1)	9270UHstCab (INC x1)	9270UHstCab (INC x1)	9270UHstCab (INC x1)	9270UJBODCab (INC x1)	
SCSI Terminator (External) *1	-	-	-	-	-	-	-	
Rack Mount Kits *3 (See Rack Mount Guide)	9272CESlide36 (OPT)	9272CESlide36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 <i>(OPT)</i>	9270CEncBrk 9270CSlider36 (OPT)	9270CEncBrk 9270CSlider36 <i>(OPT)</i>	
Cache Memory	128 MB PC-133 SDRAM (INC x1) 256 MB, 512 MB and 1GB (OPT)	128 MB PC-133 SDRAM <i>(INC x1)</i> 256 MB, 512 MB and 1GB <i>(OPT)</i>	256 MB PC-133 SDRAM (INC x1) 512 MB and 1GB (OPT)	256 MB PC-133 SDRAM (INC x1) 512 MB and 1GB (OPT)	256 MB PC-133 SDRAM (INC x1) 512 MB and 1GB (OPT)	256 MB PC-133 SDRAM (INC x1) 512 MB and 1GB (OPT)	-	
Battery Backup *4	9070E + 9270UBT (OPT)	9070E + 9270UBT (OPT)	9070E + 9270UBT (OPT)	9070E + 9270UBT (OPT)	9070E + 9270UBT (OPT)	9070E + 9270UBT (OPT)	-	
CD, Manual and QIG *5 (Quick Installation Guide)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC)	

*1 For SCSI-SCSI EonStor™ RAID subsystems, an external SCSI cable – 9270UHstCab is included (VHDCI-HD68, 1 meter length)

For SCSI JBOD subsystem (U16U-G3J3), an external SCSI cable – 9270UJBODCab is included (VHDCI-VHDCI, 1 meter length).

In order to connect U16U-G3J3 to U16U-G3A3-6M2, two 9270JBODCab are required. (one is included)

The EonStor systems has built-in SCSI terminators, no external SCSI terminator is included (not required).

Optional external SCSI cables: (U160/U320 ready)

9270UHstCab VHDCI-HD68, 1 meter 9270UJBODCab VHDCI-VHDCI, 1 meter

*2 JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions.

- *3 For rack mount kits, please see page of "Rack Mount Guide".
- *4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack used, cached data will be kept for around 72 hours. (Estimated time based on using 512MB SDRAM memory module)

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

In redundant controller configuration, the two controllers should have identical cache memory and battery backup configuration.

For U16U and U12U series: A battery charger board (9070E) is required for U16U and U12U series, when battery backup option is taken. The battery module (9270UBT) requires the charger board (9070E) in order to recharge the battery.

- *5 The manuals are provided in PDF format, in the CD included. The Quick Installation Guide provides basic information to get the system to work. All detailed functions and settings please refer to the manual files in the CD.
 - The CD also includes RAIDWatch $^{\mathsf{TM}}$ software for RAID management.



SentinelRAID™ Controllers

	SCSI-SCSI, Fibre-SCSI RAID Cor	ntrollers – SentinelRAID™	Produc	Product Details and Options					
	SR150F	SR170	SR2700	SR2500FR1					
Model									
	SCSI-SCSI RAID Controller	SCSI-320 – SCSI-320 RAID Controller	SCSI-320 – SCSI-320 / Fibre – SCSI-320 RAID Controller	SCSI-SCSI Redundant RAID Controller					
Form Factor	5.25" Half Height	5.25" Half Height	5.25" Half Height	5.25" Full Height					
Base Channels *2	4 Channels SCSI-160 Four standard 68-pin high-density connectors	4 Channels SCSI-320 Four standard 68-pin high-density connectors	4 Channels SCSI-320 Four standard 68-pin high-density connectors	3 Channels SCSI-160 Three standard 68-pin high-density connectors					
Add-on Channels (Optional Daughter Board)	4 Channels SCSI-160 Four standard 68-pin high-density connectors (9284FU3A)	4 Channels SCSI-320 Four standard 68-pin high-density connectors (9284U4A)	4 Channels SCSI-320 Four standard 68-pin high-density connectors (9284U4 + 9288FB4 + 9515) OR 2 Channels Fibre 2G Two optical LC connectors (9282FF2 + 9288FB2F2) *5	-					
Redundant Controller	Supported Requires connections with another SR150F (9535)	-	-	Supported Two integrated controller modules built-in (top-bottom) No additional controller required					
Hot-Swap Controller Docking Connectors *3	-	-	Yes	Yes					
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Multiple RAID Logical Drives (LD), Multiple Logical Volumes (L Automatically Background Rebuild, Automatic Bad Block Reas	.V), Multiple Partitions, Multiple Host IDs, Multiple Host LUNs, I	D configuration on disks, Dynamic host LUN mappings						
Advanced Functions	Host-side redundant path and load balancing supported (3rd p Dual-mode RAID expansions: "Add-in Drive" and "Copy & Rep Redundant models: Rolling-firmware-upgrade, auto-sync firmw	lace with larger drive"	ort, fabric log-in (supported on fibre-host models), background fi	rmware download					
Management	LCD front panel: Easy-to-use menu for accessing all functions and features. RS-232 Terminal: User friendly menu-driven for accessing all functions and features. RAIDWatch TM java-based cross-platform central management software included, providing: Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, network broadcast – with full plain-text event message and pager).								
Management via Built-in LAN Port	RAIDWatch™-onboard: Open browser to link to the RAID unit via built-in LAN port. - Telnet-terminal: Access terminal menu by telnet via built-in LAN port. Notification-onboard: RAID unit itself issue e-mail and SNMP traps for event notifications (with full plain-text event messages)								
Cache Memory	128 MB, 256 MB, 512 MB and 1GB PC-133 SDRAM (Not Included)								
Battery Backup *4	Optional (Battery charger board and first battery pack: 9070D + 9010D; second battery pack: 9010D; battery extension cable 9519D)								

- *1 SR2500FR5 and SR2500FR6 can be fit into a 1U rackmount enclosure. SR2500FR5 and SR2500FR6 do not include power supply or rackmount enclosure/chassis.
- *2 All channels (base channels and additional channels) can be configured as Host channel or Drive channel by user.
- *3 Hot-Swap Controller Docking Connectors provide the ease of controller maintenance - removing the controller board without the need of opening the enclosure or disconnecting any SCSI/Fibre/power/RS-232 cables.
 - The hot-swap drive is supported on all SentinelRAID controllers. (which is not related to the controller docking connectors)
- *4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory with power providing from the battery. With one fully charged battery pack (9010D) used, cached data will be

A second battery (9010D) can be connected (connecting to the first battery pack) for longer. The battery extension cable (9519D) can be used in between the battery pack and RAID controller, when the location of the battery cannot be close to the RAID controller in the enclosure.

The battery is not able to provide the power for RAID controller or drives to operate when the power fails. Please use UPS (uninterruptible power supply) if it is required for the entire RAID system to work during the power failure.

*5 9282FF2: 2 Channel 2G FC Daughter Board 9288FB2F2: The backplane for 9282FF2

9288FB2F2 The 9288FB2F2 is now available as a kit, which includes: 9282FF2 9282FB2F2 daughter board backplane for 9282FF2 2G FC optical-LC cables, 2 pairs 9538 9539 LC duplex adapters, 2 pcs 9515 5V auxiliary cable Enclosure **External Ports** 9538 Controller Main Board 9539

Main Board Backplane

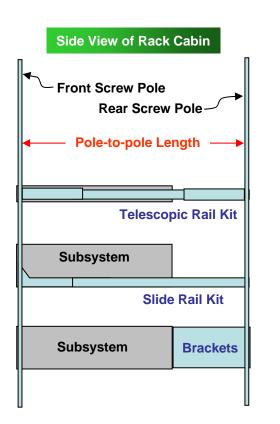


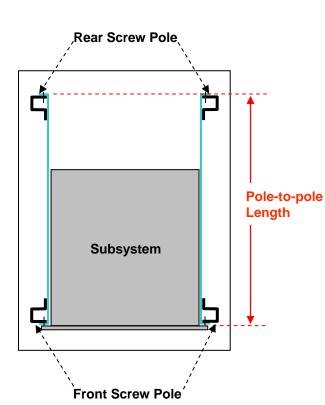


Models		Rack Mount Kits fo	or Rack Mount Subsy	Rack Mount Guide			
		9253L20 - 0011 9272CESlide36 9273CSlide		9273CSlider36	9270CEncBrk	9270CSlider36	
		Telescopic Rail Kit	Slide Rail Kit	Slide Rail Kit	Brackets	Slide Rail Kit	
p Constant	EonRAID™ 2510FS Fibre Controller Head *1	\square	-	-	-	-	
0 35	EonStor™ 2U 8 / 12 -Bay A08U / A12U / A08F / A12F / A12E / U12U / F12F	-		-	-	-	
	EonStor™ 3U 16-Bay A16U-G1A3, A16U-G1410, A16F-G1A2, A16F-R1A2, A16F-R1211 A16F-J1210, U16U-G3J3, U16U-G3A3, U16U-G4010, F16F-S2A2 F16F-R2A2, F16F-R2A2-A, F16F-S2J2, F16F-R2J2	-	-	-	\square		
SALE BOX	EonStor™ 3U 16-Bay (New Chassis) A16U-G2421, A16F-G2221, A16F-R2221	-	-	\square	-	-	
	Minimum Length (Pole-to-pole) *2	511 mm (20.11 inches)	647 mm (25.47 inches)	647 mm (25.47 inches)	609 mm (24 inches)	600 mm (23.62 inches)	
	Maximum Length (Pole-to-pole) *2	717 mm (28.22 inches)	914 mm (35.98 inches)	914 mm (35.98 inches)	812 mm (32 inches)	910 mm (35.82 inches)	

^{*1} The 9253L20-0011 is a revised version from 9253L20. It supports ER2510FS series and 6300 / 6330 series RAID Subsystems.

^{*2} The "pole-to-pole" length is referring to the distance between the front screw hole pole (post) to the rear screw hole pole (post) in a rack cabin. A typical 900mm rack cabin often has pole-to-pole length of around 670 mm, and 800mm rack has around 615 mm.





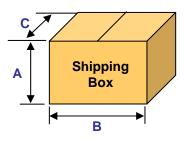
Top View of Rack Cabin

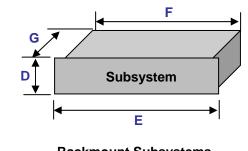
	Shipping Dimensions & Weights				Subsystem Dimensions & Weights						
	Α	В	С	W1 *3	W2 *3	D	E	F	G *4	W3 *	W4 *
ER2510FS 1U Head	360 mm <i>14.17</i> "	625 mm 24.60 "	720 mm 28.34 "	19.5 kg <i>42.95 lbs</i>		44 mm 1.73 "	482 mm 19.00 "	426 mm 16.77 "	470 mm <i>18.50 "</i>	17.5 kg <i>38.54 lb</i> s	
EonStor™ 2U 8-Bay	344 mm <i>13.54</i> "	600 mm 23.62"	670 mm 26.37 "	23.5 kg 51.76 lbs	29.5 kg 64.97 lbs	88 mm <i>3.46</i> "	482 mm 19.00 "	446 mm <i>17.55 "</i>	490 mm 19.29 "	16.0 kg <i>35.24 lb</i> s	22.0 kg 48.45 lbs
EonStor™ 2U 12-Bay	344 mm 13.54 "	600 mm 23.62 "	670 mm 26.37 "	25.5 kg 56.16 lbs	34.5 kg 75.99 lbs	88 mm 3.46 "	482 mm 19.00 "	446 mm <i>17.55 "</i>	490 mm 19.29 "	18.0 kg <i>39.64 lb</i> s	27.0 kg 59.47 lbs
EonStor™ 3U 16-Bay	480 mm 18.89 "	600 mm 23.62 "	700 mm 27.55 "	34.5 kg 75.99 lbs	46.5 kg 102.42 lbs	132 mm 5.19 "	482 mm 19.00 "	450 mm 17.71 "	500 mm 19.68 "	18.0 kg <i>39.64 lb</i> s	30.0 kg 66.07 lbs
3U 16-Bay (New Chassis)	435 mm 17.13 "	575 mm 22.63 "	780 mm <i>30.70</i> "	34.0 kg 74.88 lbs	46.0 kg 101.32 lbs	132 mm <i>5.19</i> "	482 mm 19.00 "	445 mm <i>17.51 "</i>	550 mm <i>21.65</i> "	18.0 kg <i>39.64 lb</i> s	30.0 kg 66.07 lbs
EonStor™ A08U-C2410	450 mm	510 mm	610 mm	21.0 kg	34.5 kg	155 mm <i>6.10</i> "	167 mm <i>6.57</i> "	375 mm <i>14.76 "</i>	370 mm <i>14.56</i> "	11.50 kg	17.0 kg
	17.71 "	20.07 "	24.01 "	42.65 lbs	60.57 lbs	382 mm <i>15.03</i> "	235 mm 9.25 "	155 mm <i>6.10</i> "	370 mm <i>14.56</i> "	25.33 lbs	37.44 lbs

*3 All weight information are estimated numbers as an example.

The actual weight can vary with different drive models and configurations.

*4 Please allow additional 5 cm at the back of the subsystem for the cabling.





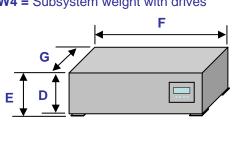
Rackmount Subsystems

W1 = Shipping weight without drives

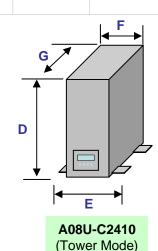
W2 = Shipping weight with drives

W3 = Subsystem weight without drives

W4 = Subsystem weight with drives

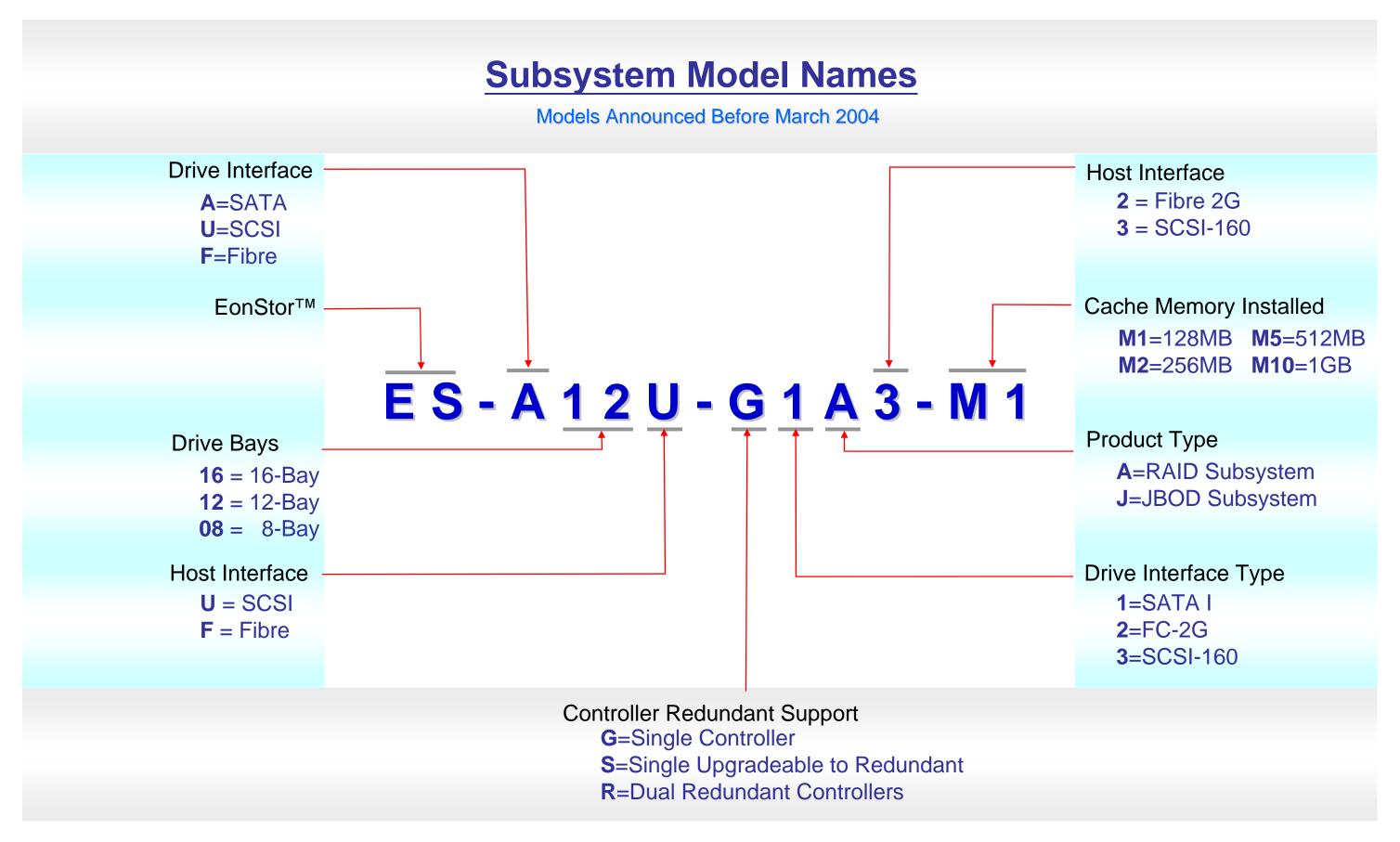


A08U-C2410 (Desktop Mode)



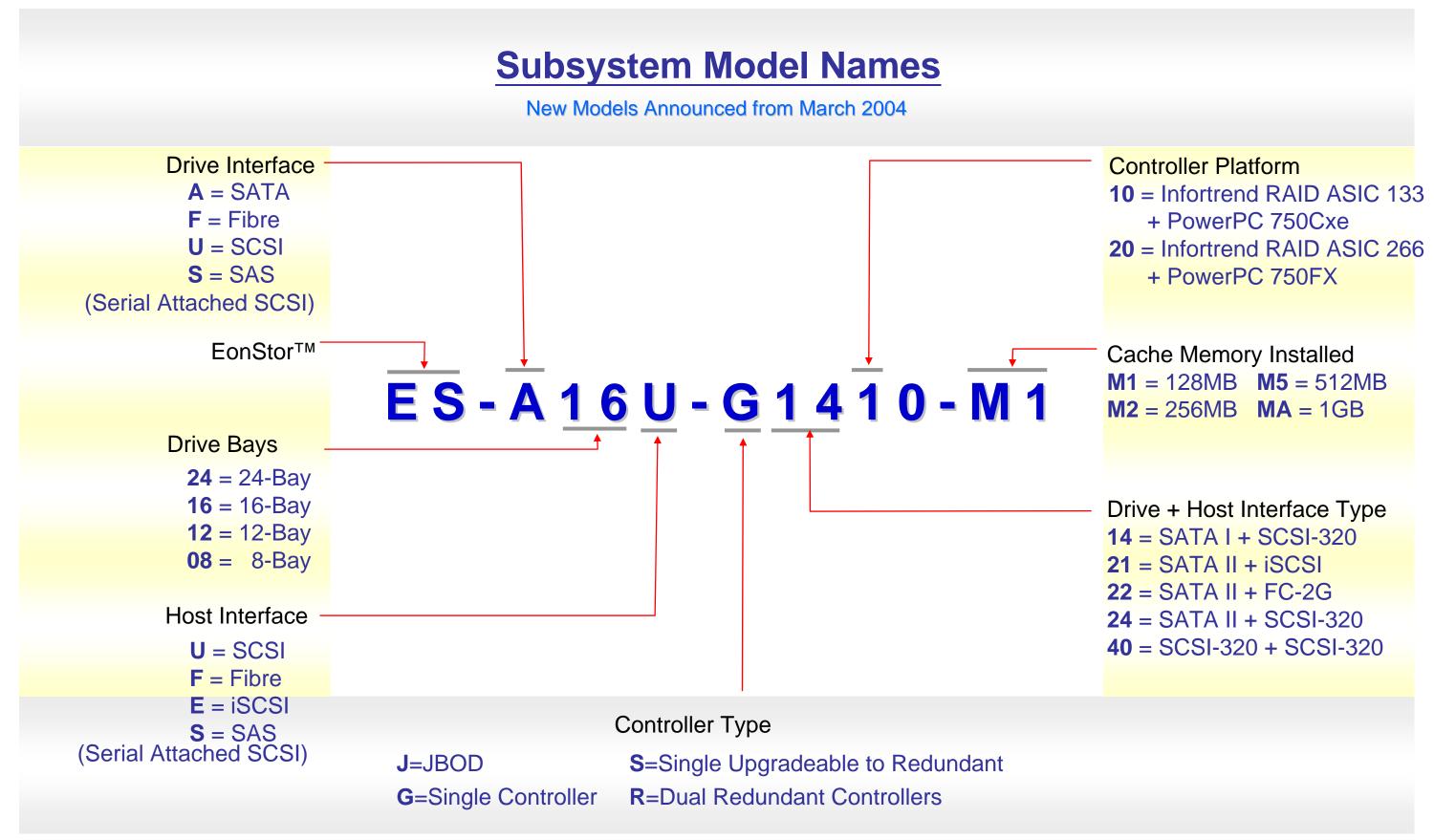












Note: Existing models remain intact, only new models announced after March 2004 use new model naming.





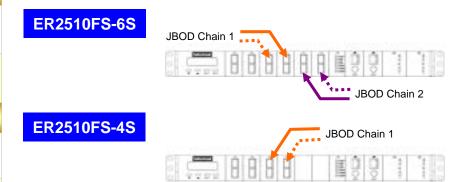
ConStor High Capacity Guide - SATA

SATA Disk Based Combination 1: A16F-R1A2 + A16F-J1210-G A16F-R1A2 A16F-J1210-G Up to 24U Height Up to 128 Disks (3U, 16 Disks) (Up to 7 units) (3U, 16 Disks each) A16F-S1A2 A16F-J1210-G Up to 128 Disks Up to 24U Height (3U, 16 Disks) (Up to **7** units) (3U, 16 Disks each) Combination 2: A16F-R1211 + A16F-J1210-G A16F-J1210-G A16F-R1211 Up to 128 Disks Up to 24U Height (3U, 16 Disks) (Up to 7 units) (3U, 16 Disks each) A16F-S1211 A16F-J1210-G Up to 128 Disks Up to 24U Height (Up to 7 units) (3U, 16 Disks each) (3U, 16 Disks) Combination 3: ER2510FS + A16F-J1210-G A16F-J1210-G ER2510FS-4S Up to 112 Disks Up to 22U Height (Up to 7 units) (3U, 16 Disks each) (1U, no disk) ER2510FS-6S A16F-J1210-G Up to 224 Disks Up to 43U Height (Up to 14 units) (3U, 16 Disks each) (1U, no disk) ER2510FS-4RH A16F-J1210-G Up to 22U Height Up to 112 Disks (Up to **7** units) (3U, 16 Disks each) (1U, no disk) ER2510FS-6RH A16F-J1210-G Up to 224 Disks Up to 43U Height (1U, no disk) (Up to 14 units) (3U, 16 Disks each) ER2510FS-4D A16F-J1210-G Up to 224 Disks Up to 43U Height (1U, no disk) (Up to 14 units) (3U, 16 Disks each) ER2510FS-6D A16F-J1210-G Up to 448 Disks Up to 85U Height (1U, no disk) (Up to 28 units) (3U, 16 Disks each)

Cables and SFPs:

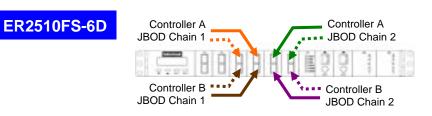
- 1. Fibre cables and SFPs are not included in the above models, should be purchased additionally.
- 2. At least 512MB cache memory is required in each RAID controller, when there are more than 96 disks in the configuration.
- 3. Host channels: Basically needs two LC-LC optical cables and four SFP modules. May vary depending on the connector type on the host computer or Fibre switch.
- 4. Drive channels: Each A16F-J1210-G unit requires two LC-LC optical cables and four SFP modules.
- 5. ER2510FS-6RH: It is recommended to use two of the drive channels as dedicated sync-cache channels, to gain an enhanced WRITE performance. When large capacity or more drives are required, user can configure and use four drive channels to connect drive JBODs.

RAID Controller Connections



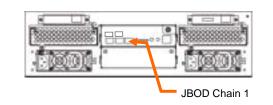








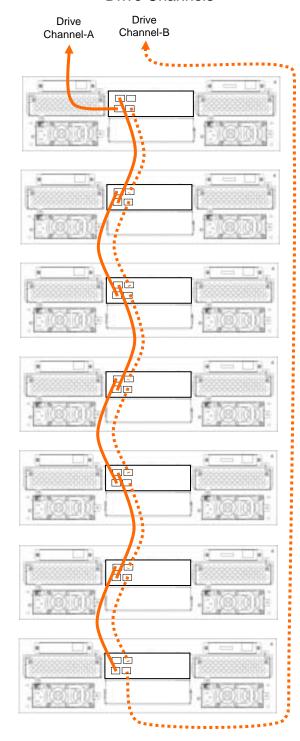
A16F-S1211



JBODs Connections

A16F-J1210-G

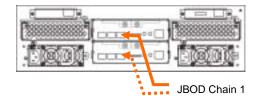
Connecting to the RAID Controller's **Drive Channels**



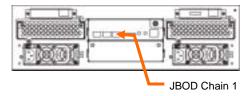
Up to 7 JBOD Subsystems can be chained in one pair of drive channels. (Diagram shown above as one JBOD chain)

08/03/2005

A16F-R1A2



A16F-S1A2



JBOD Chain 1

- Page 19 -

A16F-R1211





Constor High Capacity Guide - Fibre

Fibre Disk Based Combination 1: F12F-G2A2 + F16F-R2J2 (or F16F-S2J2) F12F-G2A2 **F16F-R2J2** (or F16F-S2J2) Up to 20U Height Up to 108 Disks (2U, 12 Disks) (Up to 6 units) (3U, 16 Disks each) **Combination 2: F16F-R2A2 + F16F-R2J2 (or F16F-S2J2)** F16F-R2A2-A F16F-R2J2 (or F16F-S2J2) Up to 112 Disks Up to 21U Height (3U, 16 Disks) (Up to 6 units) (3U, 16 Disks each) F16F-R2A2 **F16F-R2J2** (or F16F-S2J2) Up to 112 Disks Up to 21U Height (Up to 6 units) (3U, 16 Disks each) (3U, 16 Disks) F16F-S2A2 **F16F-S2J2** (or F16F-S2J2) Up to 21U Height Up to 112 Disks (3U, 16 Disks) (Up to 6 units) (3U, 16 Disks each) **Combination 3: ER2510FS + F16F-R2J2 (or F16F-S2J2)** ER2510FS-4S F16F-R2J2 (or F16F-S2J2) Up to 112 Disks Up to 22U Height (1U, no disk) (Up to 7 units) (3U, 16 Disks each) ER2510FS-6S F16F-R2J2 (or F16F-S2J2) Up to 224 Disks Up to 43U Height (Up to 14 units) (3U, 16 Disks each) (1U, no disk) ER2510FS-4RH **F16F-R2J2** (or F16F-S2J2) Up to 112 Disks Up to 22U Height (Up to 7 units) (3U, 16 Disks each) (1U, no disk) **ER2510FS-6RH F16F-R2J2** (or F16F-S2J2) Up to 224 Disks Up to 43U Height (1U, no disk) (Up to 14 units) (3U, 16 Disks each) ER2510FS-4D **F16F-R2J2** (or F16F-S2J2) Up to 43U Height Up to 224 Disks (Up to **14** units) (3U, 16 Disks each) (1U, no disk) ER2510FS-6D **F16F-R2J2** (or F16F-S2J2) Up to 448 Disks Up to 85U Height (Up to 28 units) (3U, 16 Disks each) (1U, no disk)

Cables and SFPs:

F12F-G2A2

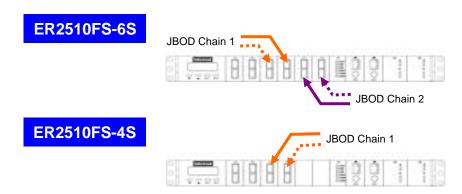
JBOD Chain 1

- 1. Fibre cables and SFPs are not included in the above models, should be purchased additionally.
- 2. At least 512MB cache memory is required in each RAID controller, when there are more than 96 disks in the configuration.
- 3. Host channels: Basically needs two LC-LC optical cables and four SFP modules. May vary depending on the connector type on the host computer or Fibre switch.
- 4. Drive channels: Each F16F-R2J2 (or F16F-S2J2) unit requires two LC-LC optical cables and four SFP modules.
- 5. ER2510FS-6RH: It is recommended to use two of the drive channels as dedicated sync-cache channels, to gain an enhanced WRITE performance. When large capacity or more drives are required, user can configure and use four drive channels to connect drive JBODs.

F16F-S2A2

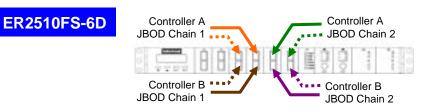
JBOD Chain 1

RAID Controller Connections





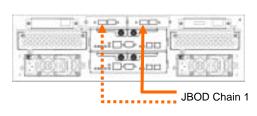




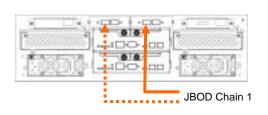


JBOD Chain 1

F16F-R2A2



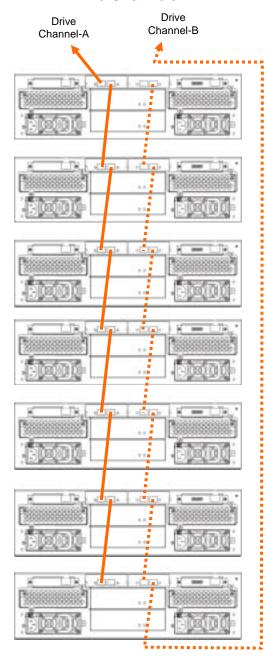
F16F-R2A2-A



JBODs Connections

F16F-R2J2 / F16F-S2J2

Connecting to the RAID Controller's **Drive Channels**



Up to 7 JBOD Subsystems (ER2510FS) or up to 6 JBOD Subsystems (F12F, F16F) can be chained in one pair of drive channels. (Diagram shown above as one JBOD chain)





Enster High Capacity Guide - SCSI

SCSI Disk Based

Combination 1: U16U-G4010-62 (or U16U-G3A3-6M2) + U16U-G3J3

U16U-G3A3-6M2 (3U, 16 Disks)	+	U16U-G3J3 (Up to 1 unit) (3U, 16 Disks)	=	Up to 32 Disks	Up to 6U Height

U16U-G4010-62

U16U-G3A3-6

U16U-G3J3 (Up to **1** unit) (3U, 16 Disks) (3U, 16 Disks)

Up to 6U Height

Up to 32 Disks

U16U-G4010-6

U16U-G3J3



SCSI Cables:

1. Two types of SCSI cables are available:

9270UHstCab VHDCI - HD68, 1 meter 9270UJBODCab VHDCI – VHDCI, 1 meter

- 2. Host-side: Depending on the SCSI connector on the SCSI HBA in the host computer. Up to two SCSI cables can be connected. The U16U-G3A3-6M2 includes one 9270UHstCab (VHDCI - HD68) cable.
- 2. Drive-side: Two SCSI cables are required. (VHDCI-VHDCI cable) The **U16U-G3J3** includes one **9270UJBODCab** (VHDCI-VHDCI) cable, the other one should be purchased additionally.

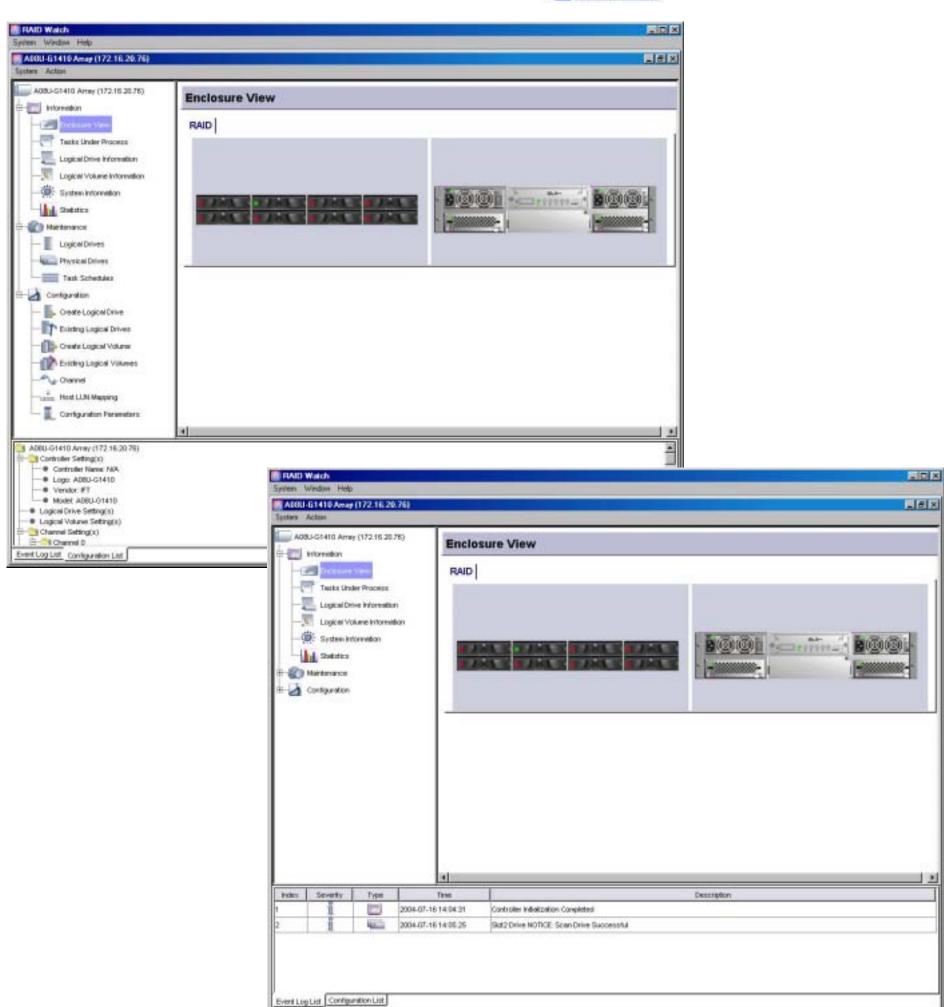


Install as "Central Management" or "Stand-alone (on Subsystem) Model:



Log on as "Configuration" (full access), "Maintenance" or "Monitoring":









Established in 1992, Infortrend designs and manufactures the RAID ASIC, RAID controller, RAID firmware, RAID management software and RAID subsystems. Infortrend is ISO 9001 certified.

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