



Infortrend[®]

Product

Quick Reference Guide

RAID Subsystem
Fibre/SAS/SATA/SCSI/iSCSI

2007, Q3

Subsystem Naming

New Models Announced after March 2004

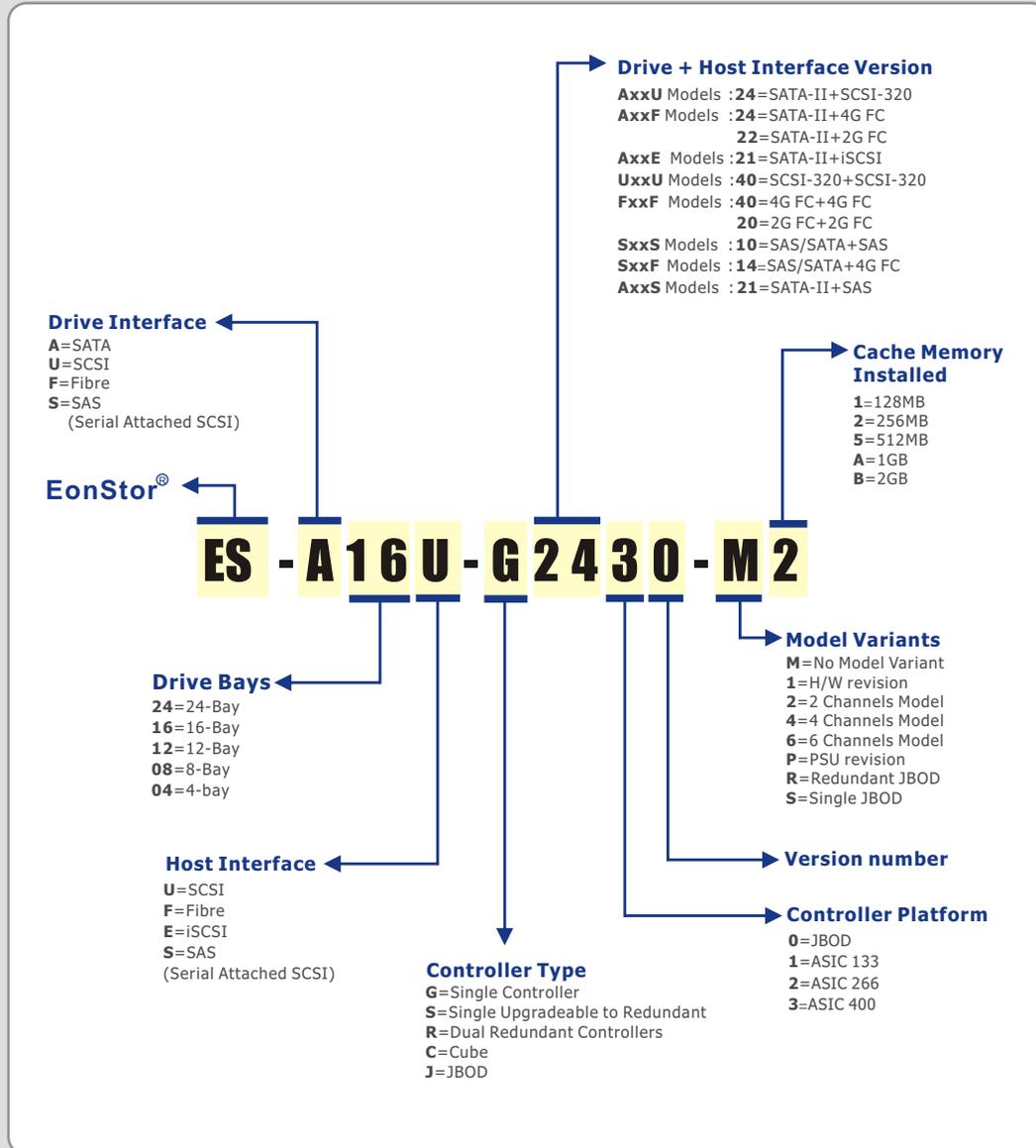


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Product Overview-By Drive Bays



Fibre to Fibre / SBOD RAID Head			Product Details	
Model	F16F-R4031-65/45 F16F-S4031-65/45	FF-R4030-65 FF-S4030-65	FF-R2021-65/45 FF-S2021-65/45	F16F-J4000-R (Dual SES)
Front View	4G FC to 4G FC RAID Redundant/Single-UPG Subsystems 3U 16-bay*1 	4G FC to 4G FC Redundant/Single-UPG RAID Heads *1 	2G FC to 2G FC Redundant/Single-UPG RAID Heads *1 	Fibre SBOD Subsystem 3U 16-Bay *2 
Rear View				
Form Factor	3U Rackmount	1U Rackmount	1U Rackmount	3U Rackmount
Controller	ASIC400	ASIC400	ASIC266	-
Drive Channels Hot Swap Trays *7	4/6 Channels / 4G FC Each channel has two (2) SFP ports (PBC)	6 Channels / 4G FC Each channel has two (2) SFP ports (PBC) Each channel model has built-in HUB which links the two (2) controllers and two(2) SFP ports in one(1) loop, Every channel can be assigned as Host or Drive Channel mode, Dual-Loop	4/6 Channels / 2G FC Each channel has two (2) SFP ports (PBC) Each channel model has built-in HUB which links the two (2) controllers and two(2) SFP ports in one(1) loop, Every channel can be assigned as Host or Drive Channel mode, Dual-Loop	2 Channels / 4G FC Two (2) SFP ports per controller Dual-Loop 16-bay (2G/4G FC-SCA Drives)
Host Channels *7	Each channel model has built-in HUB which links the two (2) controllers and two(2) SFP ports in one(1) loop	One(1) SAS 4x wide port for S(SFF-8470) Two(2) SAS 4x wide ports for R(SFF-8470)		
Expansion Channels *9				
Redundant Controller *1	R Model: Dedicated Synchronize SATA-II Channels for enhanced performance S Model: Single Controller Upgradeable to Redundant	R Model: Dual-Controller Redundant S Model: Single Controller Upgradeable to Redundant	R Model: Dual-Controller Redundant S Model: Single Controller Upgradeable to Redundant	Dual-Controller Redundant
RAID Function	RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives		RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Spare Drives	-
	Multiple RAID Logical Drives (LD), Logical Volumes (LV), Partitions, Host IDs, Host LUNs, Instant RAID Ready, LD configuration on disks, Dynamic host LUN mappings Each LD/LV > 2TB (Up to 64TB), Automatic Background Rebuild, Automatic Bad Block Reassignment			
Advanced Functions	Host-side redundant path and load balancing supported (EonPath software required in the host computers), switched fabric support, fabric log-in (supported on fibre-host model), background firmware download. Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive" Redundant models: Auto-sync firmware and configuration on replacement controller			
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User-friendly menu-driven for accessing all functions and features.</i> RAIDWatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS (Short Message Service), MSN, and network broadcast) - with full plain-text event message.</i>			By RAID Subsystem
Management via Built-in LAN	RAIDWatch-onboard: <i>Open browser to link to the RAID unit via built-in LAN port.</i> Telnet-terminal: <i>Access terminal menu by telnet via built-in LAN port.</i> Notification-onboard: <i>RAID unit issues e-mail and SNMP traps for event notifications (with full plain-text event messages)</i>			
Hot Swap Cooling Modules	2 (Embedded in PSU)	2	2	2 (Embedded in PSU)
Hot Swap Power Supplies	(2) x 530 W	(2) x 250 W	(2) x 250 W	(2) x 530W
Cache Memory *6	512MB-2GB (PC-3200 DDR400)	512MB - 2GB (PC-3200 DDR 400)	512MB - 2GB (PC-3200 DDR 400)	-
Battery Backup *4	Included x 2 for R Included x 1 for S	Included x 2 for R Included x 1 for S	Included x 2 for R Included x 1 for S	-

Fibre to Fibre RAID Head/SBOD				Variants & Spare Parts
Model	F16F-R4031-65/45	FF-R4030-65	FF-R2021-65/45	F16F-J4000-R (Dual SES)
	F16F-S4031-65/45	FF-S4030-65	FF-S2021-65/45	
Controller Module	R Model: 83F40REC6 (INC x 2) 83F40REC4 (INC x 2) S Model: 83F40REC6 (INC x 1) 83F40REC4 (INC x 1)	R Model: 86F40RE6 (INC x 2) S Model: 86F40RE6 (INC x 1)	R Model: 86F20RD6 (INC x 2) S Model: 86F20RD6 (INC x 1) 86F20RD4 (INC x 2) 86F20RD4 (INC x 1)	9273F4JIO2 (INC x 2 for J4000-R)
Fan Module	9273ECFanMod (INC x 2)	9276CFanMod (INC x 2)	9273CFanMod (INC x 2)	9273ECFanMod (INC x 2)
Power Supply Module	9273ECPSU (INC x 2)	9276CPSU (INC x 2)	9276CPSU (INC x 2)	9273ECPSU (INC x 2)
Drive tray	9273CDTray (INC x 16)	-	-	9273CDTray (INC x 16)
Channel IO Module	9273CF4HIO2L (INC x 1) 9273CF4HIO2R (INC x 1) 9273F4DIO4L (INC x 1 for 65) 9273F4DIO4R (INC x 1 for 65) 9273F4DIO2L (INC x 1 for 45) 9273F4DIO2R (INC x 1 for 45)	9276CF4HIO2 (INC x 6) 9273CS1DIO1 (INC X 2) for R 9273CS1DIO1 (INC X 1) for S	9276F2HIO2 (INC x 6)	-
RS-232C Cable	9270AYCab (INC x 1 for R) 9270ASCab (INC x 1 for S)	9270AYCab (INC x 1)	9270AYCab (INC x 1 for R) 9270ASCab (INC x 1 for S)	-
UPS Cable	9270CUPSYCab (OPT)	9270CYUPScab (OPT)	9270CUPSYCab (OPT)	-
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	-
Fibre SFP *3	9270CSFP4GA01 (OPT)	9270CSFP4GA01 (OPT)	9270CSFP2GA01 (OPT)	9270CSFP4GA01 (OPT)
Cable*3	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT) *9 9270CSASCab01 (OPT) 9270CSASCab02 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)
Rack Mount Kits *8	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9276CSlider36 (OPT)	9276CSlider36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)
Cache Memory *6	DDRESCM5 (512MB, INC x 2 for R/ INC x 1 for S) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 2 for R/ INC x 1 for S) DDRESCMA (1GB) DDRESCMB (2GB)	DDRESCM5 (512MB, INC x 2 for R/ INC x 1 for S) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	-
Battery Backup*4	9273CBTE (INC x 2 for R/ INC x 1 for S)	Include (INC x 1 For S, INC x 2 For R) 9276CBTE (OPT)	9273CBTC (INC x 2 for R/ INC x 1 for S)	-
CD, Manual & QIG (Quick Installation Guide)*5	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)
Redundant Controller Upgrade Kit	86F40REC6 + 9273CBTE (OPT for S-65) 86F40REC4 + 9273CBTE (OPT for S-45)	86F40RE6 + 9276CBT+ 9273CS1DIO1	83F20RD65 + 9273CBTC (OPT for S-65) 83F20RD45 + 9273CBTC (OPT for S-45)	-

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

*2. SBOD models connect to Infortrend RAID controllers/subsystems.
Single-SES: One SES module is installed.
Dual-SES: Two SES modules are installed to provide redundancy on SES module. Switching-JBOD used Fibre-switching technology of JBOD.

*3. SFP modules are not included. To ensure the signal quality for 2G/4G Fibre, we recommend to use SFP module with LC optic connection.
SFP and Cable:
9270CSFP4GA01 Agilent Fibre 4G SFP
9270CFCCab01: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 1 Meter
9270CFCCab02: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 5 Meter
9270CFCCab03: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 10 Meter

*4 Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

*5 The manuals are provided in PDF format, in the included CD. The Quick Installation Guide provides basic steps 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 The RAID subsystems use PC-3200 DDR400 registered ECC RAM (184-pin DIMM) only. Please contact Infortrend for optional memory modules.

*7 Host-side dual-loop is supported by using multi-path software from the OS or EonPath to provide path redundancy. Drive-side dual-loop is supported by RAID controllers with Fibre Channel drive side connecting. RAID controller provides redundant path and dynamic load balancing across dual-loops.

*8 For details about rack mount kits, please see the page of "Rackmount Guide."

*9 SAS expansion ports provides to connect SAS JBOD when need to expand subsystem capacity.
SAS JBOD model:
a. **S16S-J1000-R**: SAS to SAS/SATA-II JBOD, Redundant controller
b. **S16S-J1000-S**: SAS to SAS/SATA-II JBOD, Single controller

For SAS-SAS/SATA EonStor RAID subsystems, one external SAS cable is included.
Optical external SAS cable:
9270CSASCab01- SAS external cable, 50cm (SFF-8470)
9270CSASCab02- SAS external cable, 120cm (SFF-8470)
9270CmSASCab3- SAS external cable, 50cm (SFF-8470-SFF-8088)
9270CmSASCab4- SAS external cable, 120cm (SFF-8470-SFF-8088)

FC to SATA RAID Subsystem				Product Details
Model	A08F-G2422-M2 A12F-G2422-M2	A16F-R2431-M5	A16F-G2430-M2	A24F-G2430-M5 A24F-R2430-M5
Front View	4G FC to SATA-II RAID Single Subsystems 2U 8-Bay/ 12-Bay 	4G FC to SATA-II RAID Redundant Subsystem 3U 16-Bay 	4G FC to SATA-II RAID Single Subsystem 3U 16-Bay 	4G FC to SATA-II RAID Single/Redundant Subsystems 4U 24-Bay 
Rear View				
Form Factor	2U Rackmount	3U Rackmount	3U Rackmount	4U Rackmount
Controller	ASIC266	ASIC400	ASIC400	ASIC400
Drive Channels Hot Swap Trays	8 Channels/ 12 Channels 8-bay/12-bay <i>(SATA I-II 3Gb/s Drives)</i>	16 Channels/ 16-bay <i>(SATA -II 3Gb/s Drives)</i>	16 Channels/ 16-bay <i>(SATA I-II 3Gb/s Drives)</i>	24 Channels 24-bay <i>(SATA-II 3Gb/s Drives)</i>
Expansion Channels	-	-	-	One(1)SAS 4x wide port for G(SFF-8470) Two(2)SAS 4x wide ports for R(SFF-8470)
Host Channels	2 Channels / 4G FC <i>Two (2) SFP ports on chassis</i>	2 Channels/ 4G FC <i>Four (4) SFP ports per controller (HUB embedded for each channel)</i>	2 Channels/ 4G FC <i>Two (2) SFP ports on controller</i>	2 Channel / 4G FC <i>Four (4) SFP ports on chassis total eight(8) SFP Ports on chassis (HUB embedded for each channel)</i>
Redundant Controller *1	-	Redundant Controller Enabled	-	Redundant Controller Enabled for R
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Spare Drives	RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives		RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives
	Multiple RAID Logical Drives (LD), Logical Volumes (LV), Partitions, Host IDs, Host LUNs, Instant RAID Ready, LD configuration on disks, Dynamic host LUN mappings Each LD/LV > 2TB (Up to 64TB), Automatic Background Rebuild, Automatic Bad Block Reassignment			
Advanced Functions	Host-side redundant path and load balancing supported (EonPath software required in the host computers) , background firmware download Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive"			
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User-friendly menu-driven for accessing all functions and features.</i> RAIDWatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS, MSN, and network broadcast) - with full plain-text event message and pager.</i>			
Management via Built-in LAN	RAIDWatch-onboard: <i>Open browser to link to the RAID unit via built-in LAN port.</i> Telnet-terminal: <i>Access terminal menu by telnet via built-in LAN port.</i> Notification-onboard: <i>RAID unit issues e-mail and SNMP traps for event notifications (with full plain-text event messages)</i>			
Hot Swap Cooling Modules	2(A08F)/ 3(A12F)	2(Embedded in PSU)	2(Embedded in PSU)	2
Hot Swap Power Supplies	(2) x 350 W	(2) x 530 W	(2) x 530 W	(3) x 405 W
Cache Memory *4	256MB-2GB (PC-3200 DDR400)	512MB-2GB (PC-3200 DDR400)	256MB-2GB (PC-3200 DDR400)	512MB-2GB (PC-3200 DDR400)
Battery Backup *5	Optional	Included x 2	Optional	Included x 2/Optional(for G)

All specifications are subject to change without prior notice.

FC to SATA RAID Subsystem				Variants & Spare Parts
Model	A08F-G2422-M2 A12F-G2422-M2	A16F-R2431-M5	A16F-G2430-M2	A24F-G2430-M5 A24F-R2430-M5
Controller Module	82AF24GD08 (A08F INC x 1) 82AF24GD12 (A12F INC x 1)	83AF24RE16 (INC x 2)	83AF24GE16 (INC x 1)	84AF24GE24 (INC x 1) For G 84AF24RE24 (INC x 2) For R
Cooling Module	9272CFanModE(INC x 2 for A08) 9272CFanModE(INC x 3 for A12F)	9273ECFanMod (INC x 2)	9273ECFanMod (INC x 2)	9274CFanMod (INC x 3)
Power Supply Module	9272CPSU (INC x 2)	9273ECPSU (INC x 2)	9273ECPSU (INC x 2)	9274CPSU(INC x 3)
Drive Tray	9273CDTray (INC x 8) 9273CDTray (INC x 12)	9273S1DT2S1S (INC x 16)	9273CDTray (INC x 16)	9273CDTray (INC x 24) for G 9273S1DT2S1S (INC x 24) for R
Host IO Module	-	-	-	-
RS-232C Cable	9270ASCab (INC x 1)	9270AYCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1) For G 9270AYCab (INC x 1) For R
UPS Cable	-	9270CUPSYCab (OPT)	9270CUPSCab (OPT)	9270CUPSCab (OPT) for G 9270CUPSCab (OPT) for R
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)
Fibre SFP *2	9270CSFP4GA01 (OPT)	9270CSFP4GA01 (OPT)	9270CSFP4GA01 (OPT)	9270CSFP4GA01 (OPT)
Cable*2	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CSASCab01 (OPT) *7 9270CFCCab02 (OPT) 9270CSASCab02 (OPT) 9270CFCCab03 (OPT)
Rack Mount Kits *3	9272CESlide36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9274CSlider32 (OPT) 9274CSlider36 (OPT)
Cache Memory*4	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 2) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 1 for G) (512MB, INC x 2 for R) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)
Battery Backup*5	9273CBTC (OPT)	9273CBTE (INC x 2)	9273CBTE (OPT)	9274CBT (INCx2) For R 9274CBT (OPT) For G
CD, Manual & QIG (Quick Installation Guide) *6	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)
Redundant Controller Upgrade Kit	-	Redundant enabled	-	-

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

*2. SFP modules and Fibre optical cables are not included. To ensure the signal quality for 2G or 4G Fibre, we recommend to use SFP module with LC optical connection.
9270CSFP4GA01 Agilent Fibre 4G SFP
9270CFCCab01: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 1 Meter
9270CFCCab02: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 5 Meter
9270CFCCab03: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 10 Meter

*3. For details about rack mount kits, please see the page of "Rackmount Guide."

*4. Please note the different memory module types used in different RAID subsystem models:
PC-3200 ECC DDR400: For all other Infotrend ASIC-266/ASIC400 based RAID controllers and RAID subsystems.
 Please contact Infotrend 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 and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

 9273CBTC/9273CBTE/9274CBTE are hot-swappable battery modules, which can be exchanged without removing the RAID controller from the chassis.

*6. The manuals are provided in PDF format, in the included CD. The Quick Installation Guide provides basic steps 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. SAS expansion ports provides to connect SAS JBOD when need to expand subsystem capacity.
 SAS JBOD model:
 a. **S16S-J1000-R**: SAS to SAS/SATA-II JBOD, Redundant controller
 b. **S16S-J1000-S**: SAS to SAS/SATA-II JBOD, Single controller

 For SAS-SAS/SATA EonStor RAID subsystems, one external SAS cable is included.
 Optical external SAS cable:
9270CSASCab01- SAS external cable, 50cm (SFF-8470)
9270CSASCab02- SAS external cable, 120cm (SFF-8470)
9270CmSASCab3- SAS external cable, 50cm (SFF-8470~SFF-8088)
9270CmSASCab4- SAS external cable, 120cm (SFF-8470~SFF-8088)

SCSI to SATA RAID Subsystem					Product Details
Model	A08U-C2411/C2412-M1	A04U-G2421-M2	A08U-G2421-M2 A12U-G2421-M2	A16U-G2430-M2	A24U-G2421-15
Front View	SCSI-320 to SATA-II Tower/Desktop RAID Subsystems/ 8-Bay 	SCSI-320 to SATA-II RAID Single Subsystem/1U 4-Bay 	SCSI-320 to SATA-II RAID Single Subsystems 2U 8-Bay/12-Bay 	SCSI-320 to SATA-II RAID Single Subsystem/ 3U 16-Bay 	SCSI-320 to SATA-II RAID Single Subsystem/ 4U 24-Bay 
Rear View					
Form Factor *2	Tower/Desktop (Convertible)	1U Rackmount	2U Rackmount	3U Rackmount	4U Rackmount
Controller	ASIC133	ASIC266	ASIC266	ASIC400	ASIC266
Drive Channels Hot Swap Trays	8 Channels/8-bay <i>(SATA I-II 3Gb/s Drives)</i>	4 Channels/4-bay <i>(SATA I-II 3Gb/s Drives)</i>	8 Channels/8-bay or 12Channels/12-bay <i>(SATA I-II 3Gb/s Drives)</i>	16 Channels/16-bay <i>(SATA I-II 3Gb/s Drives)</i>	24 Channels/24-bay <i>(SATA I-II 3Gb/s Drives)</i>
Expansion Channels	-	-	-	-	-
Host Channels *6	1/2 Channels / SCSI-320 <i>Two (2)/Four (4) VHDCI ports (in/out ports for each channel)</i>	2 Channels / SCSI-320 <i>Two (2) VHDCI ports (in/out ports for each channel)</i>	2 Channels / SCSI-320 <i>Four (4) VHDCI ports (in/out ports for each channel)</i>	2 Channels / SCSI-320 <i>Four (4) VHDCI ports (in/out ports for each channel)</i>	2 Channels / SCSI-320 <i>Four (4) VHDCI ports (in/out ports for each channel)</i>
Redundant Controller *4	-	-	-	-	-
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Spare Drives Multiple RAID Logical Drives (LD), Logical Volumes (LV), Partitions, Host IDs, Host LUNs, Instant RAID Ready, LD configuration on disks, Dynamic host LUN mappings Each LD/LV > 2TB (Up to 64TB), Automatic Background Rebuild, Automatic Bad Block Reassignment			RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare Drives, and Enclosure spare drives	
Advanced Functions	Host-side redundant path and load balancing supported (EonPath software required in the host computers), background firmware download Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive"				
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User-friendly menu-driven for accessing all functions and features.</i> RAIDWatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS, MSN, and network broadcast with full plain-text event message and pager).</i>				
Management via Built-in LAN	RAIDWatch-onboard: <i>Open browser to link to the RAID unit via built-in LAN port.</i> Telnet-terminal: <i>Access terminal menu by telnet via built-in LAN port.</i> Notification-onboard: <i>RAID unit issues e-mail and SNMP traps for event notifications (with full plain-text event messages)</i>				
Hot Swap Cooling Modules	2	2 (Non hot-swappable)	2(A08U)/3(A12U)	2(Embedded in PSU)	2
Hot Swap Power Supplies	(1)x250W (2)x250W (only for C2412)	(1) x 250W(Non hot-swappable)	(2) x 350 W	(2) x 530 W	(3) x 405 W
Cache Memory *3	128MB-1GB (PC-133 SDRAM)	256MB-2GB (PC-3200 DDR400)	256MB-2GB (PC-3200 DDR400)	256MB-2GB (PC-3200 DDR400)	512MB-2GB (PC-3200 DDR400)
Battery Backup *5	Optional (Only for C2412)	-	Optional	Optional	Optional

All specifications are subject to change without prior notice.

SCSI to SATA RAID Subsystem			Variants & Spare Parts		
Model	A08U-C2411/C2412-M1 (MassCube-I/II)	A04U-G2421-M2	A08U-G2421-M2 A12U-G2421-M2	A16U-G2430-M2	A24U-G2421-15
	Controller Module	81AU24GC08C (C2411 INC x 1) 81AU24GC08D (C2412 INC x 1)	87AU14GDC041 (INC x 1)	82AU24GD08 (A08U INC x 1) 82AU24GD12 (A12U INC x 1)	83AU24GE16 (INC x 1)
Cooling Module	9271CFanMod (INC x 2)	9277CFanMod (INC x 2)	9272CFanModE (INC x 2 for A08U) (INC x 3 for A12U)	9273ECFanMod (INC x 2)	9274CFanMod (INC x 2)
Power Supply Module	9271CPSU (INC x 1 for 2411) (INC x 2 for 2412)	9277CPSU (INC x 1)	9272CPSU (INC x 2)	9273ECPSU (INC x 2)	9274CPSU (INC x 3)
Drive Tray	9273CDTray (INC x 8)	9273CDTray (INC x 4)	9273CDTray (INC x 8/12)	9273CDTray (INC x 16)	9273CDTray (INC x 24)
RS-232C Cable	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1)
UPS Cable	-	-	-	9270CUPSCab (OPT)	9270CUPSCab (OPT)
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)
SCSI Cable (External) *1	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9270UJBODCab (INC x 1) 9270UHstCab (OPT)
Rack Mount Kits *2	-	9277CSlide36 (OPT)	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9273CSlide28 (OPT) 9273CSlide36 (OPT)	9274CSlider32 (OPT) 9274CSlider36 (OPT)
Cache Memory *3	SDRAMESCM1 (128MB, INC x 1) SDRAMESCM2 (256MB, OPT) SDRAMESCM5 (512MB, OPT) SDRAMESCMA (1GB, OPT)	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT)	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 1) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)
Battery Backup *5	9070E + 9271CBT (Only for C2412)	-	9273CBTC (OPT)	9273CBTE (OPT)	9274CBTC (OPT)
CD, Manual & QIG (Quick Installation Guide) *7	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)

*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 VHDCl-HD68, 1 meter
9270UJBODCab VHDCl-VHDCl, 1 meter

*2. For rack mount kits, please see the page of "Rack mount Guide."

The A08U-C241x series come with four "feet" which can be used for both Tower or Desktop installations.

The A08U-C241x series 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-C241x

PC-3200 ECC DDR400: A04U-G2421, A08U-G2421, A12U-G2421,

A16U-G2430, A24U-G2421 (And all other Infortrend ASIC-266/ ASIC400 based RAID controllers and RAID subsystems) Please contact Infortrend for optional memory upgrades.

*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. Battery backup provides power to cache memory when power fails. The unwritten write-back cached data will be kept in the cache memory and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

*6 Host-side dual-loop is supported by using multi-path software from the OS or EonPath to provide path redundancy.

*7. The manuals are provided in PDF format, in the included CD. 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.

SAS to SAS/SATA RAID Subsystem						Product Details
Model	S12S-G1030-M5	S12S-R1032-M5	S12S-J1000-G	S12S-J1002-R	S16S-J1000-R S16S-J1000-S	S16S-R1030-M5 S16S-G1030-M5
Front View	SAS to SAS/SATA RAID Single Subsystem 2U 12-Bay 	SAS to SAS/SATA RAID Redundant Subsystem 2U 12-Bay 	SAS to SAS/SATA JBOD Subsystem 2U 12-Bay 	SAS to SAS/SATA JBOD Subsystem 2U 12-Bay 	SAS to SAS/SATA JBOD Subsystems 3U 16-Bay 	SAS to SAS RAID Redundant/Single Subsystems 3U 16-Bay 
Rear View						
Form Factor	2U Rackmount	2U Rackmount	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount
Controller	ASIC400	ASIC400	-	-	-	ASIC400
Drive Channels Hot Swap Trays	12 Channels / 12-Bay (SAS/SATA-II 3Gb/s Drives)	12 Channels / 12-Bay (SAS/SATA-II 3Gb/s Drives)	12 Channels/12-bay (SAS/SATA-II 3Gb/s Drives)	12 Channels/12-bay (SAS/SATA-II 3Gb/s Drives)	16 Channels/16-bay (SAS/SATA-II 3Gb/s Drives)	16 Channels/16-bay (SAS/SATA-II 3Gb/s Drives)
Expansion Channels*7	One (1) SAS 4x wide port (SFF 8470)	Two(2)SAS 4x wide ports (SFF8088)	-	-	-	One(1)SAS 4x wide port for G (SFF8470) Two(2)SAS 4x wide ports for R (SFF8470)
Host Channels*5	2 Channels Two(2) SAS 4x wide ports per controller (SFF8470)	2 Channels Two(2) SAS 4x wide ports per controller (SFF8088)	2 Channels Two (2) SAS 4x wide ports per controller (SFF8470)	2 Channels Two (2) SAS 4x wide ports per controller (SFF8088)	2 Channels Two (2) SAS 4x wide ports per controller (SFF8470)	2 Channels Two (2) SAS 4x wide ports per controller (SFF8470)
Redundant Controller	-	Redundant Controller Enabled	-	-	-	Redundant Controller Enabled for R
RAID Function	RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives Multiple RAID Logical Drives (LD), Logical Volumes (LV), Partitions, Host Ids, Host LUNs, Instant RAID Ready, LD configuration on disks Each LD/LV > 2TB (Up to 64TB), Automatic Background Rebuild, Automatic Bad Block Reassignment					
Advanced Functions	Host-side redundant path and load balancing supported (EonPath software required in the host computers), background firmware download Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive"					
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User-friendly menu-driven for accessing all functions and features.</i> RAIDWatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS (Short Message Service), MSN, and network broadcast) - with full plain-text event message and pager).</i>					
Management via Built-in LAN	RAIDWatch-onboard: <i>Open browser to link to the RAID unit via built-in LAN port.</i> Telnet-terminal: <i>Access terminal menu by telnet via built-in LAN port.</i> Notification-onboard: <i>RAID unit issues e-mail and SNMP traps for event notifications (with full plain-text event messages)</i>					
Hot Swap Cooling Modules	2	2 (Embedded in PSU)	2	2(Embedded in PSU)	2(Embedded in PSU)	2(Embedded in PSU)
Hot Swap Power Supplies	(2) x 460 W	(2) x 530W	(2) x 460W	(2) x 530W	(2) x 530W	(2) x 530W
Cache Memory*3	512MB - 2GB (PC-3200 DDR400)	512MB - 2GB (PC-3200 DDR400)	-	-	-	512MB - 2GB (PC-3200 DDR400)
Battery Backup*4	Optional	Includedx 2	-	-	-	Included x 2 /Optional (for G)

All specifications are subject to change without prior notice.

SAS to SAS/SATA RAID Subsystems					Variants & Spare Parts	
Model	S12S-G1030-M5	S12S-R1032-M5	S12S-J1000-G	S12S-J1002-R	S16S-J1000-R	S16S-R1030-M5
					S16S-J1000-S	S16S-G1030-M5
Controller Module	85S10GE12 (INC x 1)	89S10RE12 (INC x 2)	85S10J12C2 (INC x 1)	89S10J122 (INC x 2)	83S10J162 (INC x 2 for -R) (INC x 1 for -S)	83S10RE16 (INC x 2 for R) 83S10GE16 (INC x 1 for G)
Cooling Module	9275CFanMod (INC x 2)	9279CFanMod (INC x 2)	9275CFanMod (INC x 2)	9279CFanMod (INC x 2)	9273ECFanMod (INC x 2)	9273ECFanMod (INC x 2)
Power Supply Module	9275ECPSU (INC x 2)	9279CPSU (INC x 2)	9275ECPSU (INC x 2)	9279CPSU (INC x 2)	9273ECPSU (INC x 2)	9273ECPSU (INC x 2)
Drive Tray	9273CDTray (INC x 12)	9279CDTray (INC x 12) 9279S1DT2S1S (OPT)	9273CDTray (INC x 12)	9273CDTray (INC x 12)	9273S1DT2S1S (INC x 16 for R) 9273CDTray (INC x 16 for S)	9273S1DT2S1S (INC x 16 for R) 9273CDTray (INC x 16 for G)
RS-232C Cable	9270ASCab (INC x 1)	9270ASCab (INC x 2)	-	-	-	9270AYCab (Inc x1) for R 9270ASCab (Inc x1) for G
UPS Cable	9270CUPSCab (OPT)	9270CUPSYCab (OPT)	-	-	-	9270CUPSYCab (OPT) for R 9270CUPSCab (OPT) for G
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	-	-	-	9011 (INC x 1)
Fibre SFP	-	-	-	-	-	-
Cable*1	9270CSASCab02 (INC x 1) 9270CmSASCab4 (OPT)	9270CmSASCab2 (INCx2) 9270CmSASCab4 (OPT)	9270CSASCab01 (INC x 1) 9270CSASCab02 (OPT)	9270CmSASCab1 (INCx2) 9270CmSASCab2 (OPT)	9270CSASCab01 (INC x 2 for R) (INC x 1 for S)	9270CmSASCab4 (INCx2) for R (INCx1) for G
Rack Mount Kits*2	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9279CSlider36 (OPT)	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9279CESlider36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)
Cache Memory*3	DDRESM5 (512MB, INC x 1) DDRESMA (1GB, OPT) DDRESMB (2GB, OPT)	DDRESM5 (512MB, INC x 1) DDRESMA (1GB) DDRESMB (2GB)	-	-	-	DDRESM5 (512MB, INC x 2 for R/ INC x 1 for G) DDRESMA (1GB, OPT) DDRESMB (2GB, OPT)
Battery Backup*4	9275CBTE (OPT)	9275CBT (INCx2) 9275CBTE (OPT)	-	-	-	9273CBT (INC x 2) for R 9273CBTE (OPT) for G or R
CD, Manual & QIG (Quick Installation Guide)*6	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)

*1. For SAS-SAS/SATA EonStor RAID subsystems, one external SAS cable is included.
Optional external SAS cable:
9270CSASCab01-SAS external cable, 50 cm (SFF-8470)
9270CSASCab02-SAS external cable, 120 cm (SFF-8470)
9270CmSASCab1-SAS external cable, 50 cm (SFF-8088)
9270CmSASCab2-SAS external cable, 120 cm (SFF-8088)
9270CmSASCab3-SAS external cable, 50 cm (SFF-8470-SFF-8088)
9270CmSASCab4-SAS external cable, 120 cm (SFF-8470-SFF-8088)

*2. For details about rack mount kits, please see the page of "Rackmount Guide."

*3. Please note the different memory module types used in different RAID subsystem models:
PC-3200 ECC DDR400:S12S-G1031, S12S-G1030, S16F-G1430, S16F-R1430, S12F-G1420, S12F-R1420 (And all other Infortrend ASIC-266/ASIC400 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 and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

*5. Host-side dual-loop is supported by using multi-path software from the OS or EonPath to provide path redundancy.

Drive-side dual-loop is supported by RAID controllers with Fibre Channel drive side connecting. RAID controller provides redundant path and dynamic load balancing across dual-loops.

*6. The manuals are provided in PDF format, in the included CD. The Quick Installation Guide provides basic steps 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. SAS expansion ports provides to connect SAS JBOD when need to expand subsystem capacity.
 SAS JBOD model:
 a. **S16S-J1000-R**: SAS to SAS/SATA-II JBOD, Redundant controller
 b. **S16S-J1000-S**: SAS to SAS/SATA-II JBOD, Single controller
 c. **S12S-J1000-G**: SAS to SAS/SATA-II JBOD, Single controller
 d. **S12S-J1002-R**: SAS to SAS/SATA-II JBOD, Redundant controller

SAS to SATA RAID Subsystem			Product Details			FC to SAS/SATA RAID Subsystem		Product Details	
Model	A08S-G2130-M2	A12S-G2130-M2	A16S-G2130-M2	S16F-R1430-M5	S16F-G1430-M5	S12F-R1420-M5	S12F-G1420-M5		
Front View	SAS to SATA RAID Single Subsystem 2U 8-Bay 	SAS to SATA RAID Single Subsystem 2U 12-Bay 	SAS to SATA RAID Single Subsystem 3U 16-Bay 	4G FC to SAS/SATA RAID Redundant/Single Subsystems 3U 16-Bay 	4G FC to SAS/SATA RAID Redundant/Single Subsystems 2U 12-Bay 				
Rear View									
Form Factor	2U Rackmount	2U Rackmount	3U Rackmount	3U Rackmount	3U Rackmount	2U Rackmount			
Controller	ASIC400	ASIC400	ASIC400	ASIC400	ASIC400	ASIC266			
Drive Channels Hot Swap Trays	8 Channels/8-bay (SATA-II 3Gb/s Drives)	12 Channels/12-bay (SATA-II 3Gb/s Drives)	16 Channels/ 16-bay (SATA-II 3Gb/s Drives)	16 Channels /16-Bay (SAS/SATA-II 3Gb/s Drives)	12 Channels /12-Bay (SAS/SATA-II 3Gb/s Drives)				
Expansion Channels	-	-	-	One(1)SAS 4x wide port for G (SFF8470) Two(2)SAS 4x wide ports for R (SFF8470)	-				
Host Channels *6	2 Channels Two (2) SAS 4x wide ports(SFF-8088)	2 Channels Two (2) SAS 4x wide ports(SFF-8088)	2 Channels Four (4) SAS 4x wide ports (SFF-8088) Cascaded	2 Channels/4G FC Four (4) SFP ports per controller (Hub embedded for each channel)	2 Channels/ 4G FC Two (2) 4G FC SFPs per controller				
Redundant Controller	-	-	-	Redundant Controller Enabled for R	Redundant Controller Enabled for R				
RAID Function	RAID 0, 1, (0+1), 3, 5, 6,10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives Multiple RAID Logical Drives (LD), Logical Volumes (LV), Partitions, Host IDs, Host LUNs, Instant RAID Ready, LD configuration on disks, Dynamic host LUN mappings Each LD/LV > 2TB (Up to 64TB), Automatic Background Rebuild, Automatic Bad Block Reassignment								
Advanced Functions	Host-side redundant path and load balancing supported (EonPath software required in the host computers), background firmware download Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive"								
Management	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User- friendly menu-driven for accessing all functions and features.</i> RAIDwatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS,MSN, and network broadcast with full plain-text event message and pager).</i>								
Management via Built-in LAN	RAIDWatch-onboard: <i>Open browser to link to the RAID unit via built-in LAN port.</i> Telnet-terminal: <i>Access terminal menu by telnet via built-in LAN port.</i> Notification-onboard: <i>RAID unit issues e-mail and SNMP traps for event notifications (with full plain-text event messages)</i>								
Hot Swap Cooling Modules	2	3	2 (Embedded in PSU)	2 (Embedded in PSU)	2 (Embedded in PSU)	2			
Hot Swap Power Supplies	(2) x 350W	(2) x 350W	(2) x 530W	(2) x 530W	(2) x 530W	(2) x 405W			
Cache Memory *3	256MB-2GB (PC-3200 DDR400)	256MB-2GB (PC-3200 DDR400)	256MB-2GB (PC-3200 DDR400)	512MB - 2GB (PC-3200 DDR400)	512MB - 2GB (PC-3200 DDR400)				
Battery Backup *4	Optional	Optional	Optional	Included x 2/Optional (for G)	Included x 2/Optional (for G)				

SAS to SATA RAID Subsystems				FC to SAS/SATA RAID Subsystem	
Model	A08S-G2130-M2	A12S-G2130-M2	A16S-G2130-M2	S16F-R1430-M5	S12F-R1420-M5
				S16F-G1430-M5	S12F-G1420-M5
Controller Module	82AS21GE08 (INC x 1)	82AS21GE12 (INC x 1)	83AS21GE16 (INC x 1)	83SF14RE16 (INC x 2 for R) 83SF14GE16 (INC x 1 for G)	85SF14RD12C (INC x 2 for R) 85SF14GD12C (INC x 1 for G)
Cooling Module	9272CFanModE (INC x 2)	9272CFanModE (INC x 3)	9273ECFanMod (INC x 2)	9273ECFanMod (INC x 2)	9275CFanMod (INC x 2)
Power Supply Module	9272CPSU (INC x 2)	9272CPSU (INC x 2)	9273ECPSU (INC x 2)	9273ECPSU (INC x 2)	9275CPSU (INC x 2)
Drive Tray	9273CDTray (INC x 8)	9273CDTray (INC x 12)	9273CDTray (INC x 16)	9273S1DT2S1S (INC x 16 for R) 9273CDTray (INC x 16 for G)	9273S1DT2S1S (INC x 12 for R) 9273CDTray (INC x 12 for G)
RS-232C Cable	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab	9270AYCab (INC x 1 for R) 9270ASCab (INC x 1 for G)	9270AYCab (INC x 1 for R) 9270ASCab (INC x 1 for G)
UPS Cable	9270CUPSCab (OPT)	9270CUPSCab (OPT)	9270CUPSCab (OPT)	9270CUPSYCab (OPT) 9270CUPSCab (OPT)	9270CUPSYCab (OPT) 9270CUPSCab (OPT)
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)
Fibre SFP	-	-	-	9270CSFP4GA01 (OPT)	9270CSFP4GA01 (OPT)
Cable (External) *1	9270CmSASCab2 (INC x 1)	9270CmSASCab2 (INC x 1)	9270CmSASCab2 (INC x 1)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)	9270CFCCab01 (OPT) 9270CFCCab02 (OPT) 9270CFCCab03 (OPT)
Rack Mount Kits *2	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9273CSlider32 (OPT) 9273CSlider36 (OPT)	9272CESlide28 (OPT) 9272CESlide36 (OPT)
Cache Memory *3	DDRESCM2 (256MB, INCx1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM2 (256MB, INCx1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM2 (256MB, INCx1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESM5 (512MB, INC x 2 for R/ INC x 1 for G) DDRESMA (1GB, OPT) DDRESMB (2GB, OPT)	DDRESM5 (512MB, INC x 2 for R/ INC x 1 for G) DDRESMA (1GB, OPT) DDRESMB (2GB, OPT)
Battery Backup *4	9273CBTE (OPT)	9273CBTE (OPT)	9273CBTE (OPT)	9273CBTE (INC x 2 for R) 9273CBTE (OPT for G)	9275CBTC (INC x 2 for R) (OPT for G)
CD, Manual & QIG (Quick Installation Guide) *5	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)

*1. For SAS-SAS/SATA EonStor RAID subsystems, one external SAS cable is included.
Optional external SAS cable:
9270CmSASCab1-SAS external cable, 50 cm (SFF-8088)
9270CmSASCab2-SAS external cable, 120 cm (SFF-8088)
9270CmSASCab3-SAS external cable, 50 cm (SFF-8470-SFF-8088)
9270CmSASCab4-SAS external cable, 120 cm(SFF-8470-SFF-8088)

*2. For details about rack mount kits, please see the page of "Rackmount Guide."

*3. Please note the different memory module types used in different RAID subsystem models:
PC-3200 ECC DDR400:S12S-G1031, S12S-G1030, S16S-G1030, S16S-R1030, S16F-G1430, S16F-R1430, S12F-G1420, S12F-R1420, A08S-G2130, A12S-G2130, A16S-G2130 (And all other Infortrend ASIC-266/ASIC400 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 and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

*5. The manuals are provided in PDF format, in the included CD. The Quick Installation Guide provides basic steps 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 multi-path software from the OS or EonPath to provide path redundancy.

SCSI to SCSI RAID Subsystem		Product Details		iSCSI to SATA Storage		Product Details	
Model	U12U-G4020-M2	U16U-G4020-M2	A12E-G2121-25	A16E-G2130-45			
	SCSI-320 to SCSI-320 RAID Single Subsystem 2U 12-Bay	SCSI-320 to SCSI-320 RAID Single Subsystem 3U 16-Bay	iSCSI to SATA-II RAID Single Subsystem 2U 12-Bay	iSCSI to SATA-II RAID Single Subsystem 3U 16-Bay			
Front View							
Rear View							
Form Factor	2U Rackmount		3U Rackmount		2U Rackmount		3U Rackmount
Controller	ASIC266		ASIC266		ASIC266		ASIC400
Drive Channels Hot Swap Trays	2 Channels SCSI-320 12-Bay (SCSI SCA Drives)		2 Channels SCSI-320 16-Bay (SCSI SCA Drives)		12 Channels 12-Bay (SATA-II 3Gb/s Drives)		16 Channels 16-Bay (SATA-II 3Gb/s Drives)
Expansion Channels	-		-		-		-
Host Channels *6	2 Channels / SCSI-320 Four (4) VHDCI ports (In/Out ports for daisy-chain)		2 Channels SCSI-320 Four (4) VHDCI ports (In/Out ports for daisy-chain)		2 Channels Gigabit Ethernet Two (2) RJ-45 ports		4 Channels Gigabit Ethernet Four (4) RJ-45 ports
RAID Function	RAID 0, 1, (0+1), 3, 5, 10, 30, 50 with Local Spare and Global Spare Drives						RAID 0, 1, (0+1), 3, 5, 6, 10, 30, 50, 60 with Local Spare, Global Spare, and Enclosure spare Drives
Advanced Functions	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), Automatic Background Rebuild, Automatic Bad Block Reassignment						
Management	Host-side redundant path and load balancing supported (EonPath software required in the host computers), background firmware download Dual-mode RAID expansion "Add-in Drive" and "Copy & Replace with large drive" Redundant models: Auto-sync firmware and configuration on replacement controller						
Management via Built-in LAN	LCD front panel: <i>Easy-to-use menu for accessing all functions and features.</i> RS-232 Terminal: <i>User-friendly menu-driven for accessing all functions and features.</i> RAIDWatch cross-platform central management software included, providing: <i>Central management, remote / local management (in-band or out-of-band), event notifications (via e-mail, SNMP trap, fax, SMS (Short Message Service), MSN, and network broadcast) - with full plain-text event message.</i>						
Hot Swap Cooling Modules	3		2		3		2(Embedded in PSU)
Hot Swap Power Supplies	(2) x 350 W		(2) x 460 W		(2) x 350 W		(2) x 530 W
Cache Memory	256MB - 2GB (PC-3200 DDR400)		256MB - 2GB (PC-3200 DDR400)		512MB - 2GB (PC-3200 DDR400)		512MB - 2GB (PC-3200 DDR400)
Battery Backup *4	Optional		Optional		Optional		Optional

All specifications are subject to change without prior notice.

SCSI to SCSI RAID Subsystem		Variants & Spare Parts		iSCSI to SATA Storage		Variants & Spare Parts	
Model	U12U-G4020-M2	U16U-G4020-M2	A12E-G2121-25	A16E-G2130-45			
Controller Module	82U40GD4 (INC x 1)	83U40GD4 (INC x 1)	82AE21GD122 (INC x 1)	83AE21GE164 (INC x 1)			
Cooling Module	9272CFanModE (INC x 3)	9273CFanMod (INC x 2)	9272CFanModE (INC x 3)	9273ECFanMod (INC x 2)			
Power Supply Module	9272CPSU (INC x 2)	9273CPSU (INC x 2)	9272CPSU (INC x 2)	9273ECPSU (INC x 2)			
Drive Tray	9273CDTray (INC x 12)	9273CDTray (INC x 16)	9273CDTray (INC x 12)	9273CDTray (INC x 16)			
RS-232C Cable	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1)	9270ASCab (INC x 1)			
UPS Cable	9270CUPSCab (OPT)	9270CUPSCab (OPT)	-	9270CUPSCab (OPT)			
RS-232C Null Modem	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)	9011 (INC x 1)			
Cable (External) *1	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9270UJBODCab (INC x 1) 9270UHstCab (OPT)	9273CSTPCab (OPT)	9273CSTPCab (OPT)			
Rack Mount Kits *3	9272CEslide28 (OPT) 9272CEslide36 (OPT)	9273Cslider32 (OPT) 9273Cslider36 (OPT)	9272CESlide28 (OPT) 9272CESlide36 (OPT)	9273Cslider32 (OPT) 9273Cslider36 (OPT)			
Cache Memory	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM2 (256MB, INC x 1) DDRESCM5 (512MB, OPT) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 1) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)	DDRESCM5 (512MB, INC x 1) DDRESCMA (1GB, OPT) DDRESCMB (2GB, OPT)			
Battery Backup*4	9273CBTC (OPT)	9273CBTC (OPT)	9273CBTC (OPT)	9273CBTE (OPT)			
CD, Manual & QIG (Quick Installation Guide) *5	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)	QIG (INC) CD (INC)			

*1. Optional external SCSI/iSCSI cables:
9270UHstCab VHDCI-HD68, 1 meter
9270UJBODCab VHDCI-VHDCI, 1 meter
9273CSTPCab Cat5e Shielded Twist Pair cable

*2. JBOD models require connecting to a RAID controller or RAID subsystem order to benefit the RAID and management functions. Direct attachment to host is not supported.

*3. For details about rack mount kits, please see the page of "Rackmount 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 and supported by the battery. The battery pack can support cache memory for up to 72 hrs (512MB memory) with fully charged battery. The battery does not supply power to the module, RAID controller or disk drives. Please use UPS devices (Uninterruptible Power Supply) if it is required for the entire RAID subsystem during power failure.

*5. The manuals are provided in PDF format, in the included CD. The Quick Installation Guide provides basic steps 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 multi-path software from the OS or EonPath to provide path redundancy.

Fibre Disk Based

Combination 1:

FF-R/S2021 + F16F-J4000-R

FF-R/S2021-6 (1U, no Disks) + F16F-J4000-R (Up to 14 units)(3U, 16 Disks each) = Up to 224 Disks Up to 43U Height

Configuration: CH0, CH1 Host channels; CH2, CH3, CH4, CH5 Drive expansion channels.

Combination 2:

F16F-R/S4031+ F16F-J4000-R

F16F-R/S4031 (3U, 16 Disks) + F16F-J4000-R (Up to 13 units)(3U, 16 Disks each) = Up to 224 Disks Up to 42U Height

Configuration: CH0, CH1 Host channels; CH2, CH3, CH4, CH5 Drive expansion channels.

Combination 3:

FF-R/S4030+ F16F-J4000-R

FF-R/S4030 (1U, no Disks) + F16F-J4000-R (Up to 14 units)(3U, 16 Disks each) = Up to 224 Disks Up to 43U Height

Configuration: CH0, CH1 Host channels; CH2, CH3, CH4, CH5 Drive expansion channels.

Combination 4:

FF-R/S4030+ F16F-J4000-R+ S16S-J1000-R/S(SATA-II 3Gb/s Drives)

FF-R4030 (1U, no Disks) + F16F-J4000-R (Up to 14 units) (3U, 16 Disks each) + S16S-J1000-R (Up to 3 units) (3U, 16 Disks each) = Up to 272 Disks Up to 52U Height

FF-S4030 (1U, no Disks) + F16F-J4000-R (Up to 14 units) (3U, 16 Disks each) + S16S-J1000-S (Up to 3 units) (3U, 16 Disks each) = Up to 272 Disks Up to 52U Height

Configuration: CH0, CH1 Host channels; CH2, CH3, CH4, CH5 Drive expansion channels.

Cables and SFPs:

1. Fibre optical cables and SFPs are not included in the above models; they should be purchased separately.
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 two LC-LC optical cables and four SFP modules. May vary by host connections.
4. Drive channels: Each F16F-J4000-R unit requires at least two LC-LC optical cables and four SFP modules.

Accessories of SFP, and Cables

9270CSFP4GA01: Agilent Fibre Channel 4.25 / 2.125 / 1.0625 GbD Small Form Pluggable Optical Transceiver, LC, wave-length 850nm, multi-mode

9270CFCCab01: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 1 Meter

9270CFCCab02: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 5 Meter

9270CFCCab03: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 10 Meter

9270CmSASCab3: SAS external cable, 50 cm(SFF-8470~SFF-8088)

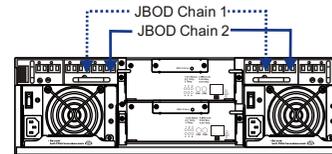
9270CmSASCab4: SAS external cable, 120 cm(SFF-8470~SFF-8088)

9270CSASCab01: SAS external cable, 50 cm(SFF-8470)

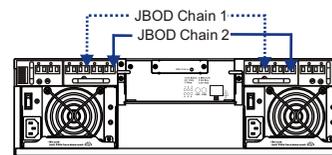
9270CSASCab02: SAS external cable, 120 cm(SFF-8470)

RAID Subsystem Connections

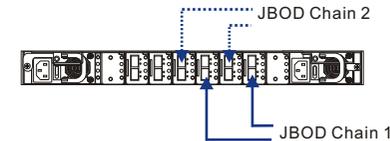
F16F-R4030-6



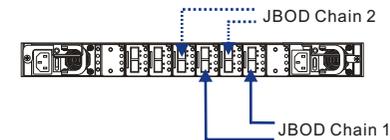
F16F-S4030-6



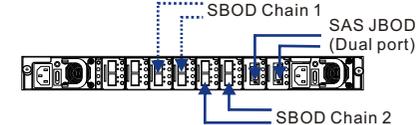
FF-R2021



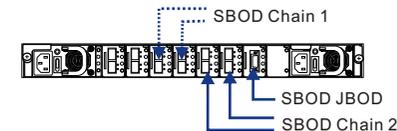
FF-S2021



FF-R4030



FF-S4030

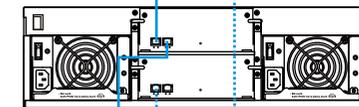


SBODs Connections

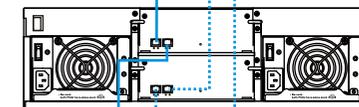
F16F-J4000-R

Connecting to the RAID Controller's Drive Channels

Drive Channel-A
Drive Channel-B



1



2



3



4



5



6



7

Up to 7 SBOD Subsystems (FF-R/S2021, FF-R/S4031) or up to 6 SBOD Subsystems (F16F) in a drive-side dual-loop

SAS/SATA Disk Based

Combination 1 :

S16F-R/G1430 + S16S-J1000-R/S

S16F-R1430 (3U, 16 Disks) + (Up to 3 units)(3U, 16 Disks each)	S16S-J1000-R = Up to 64 Disks	Up to 12U Height
S16F-G1430 (3U, 16 Disks) + (Up to 4 units)(3U, 16 Disks each)	S16S-J1000-S = Up to 80 Disks	Up to 15U Height

Combination 2 :

S12S-G1030 +S12S-J1000-G

S12S-G1030 (2U, 12 Disks) + (Up to 4 units)(2U, 12 Disks each)	S12S-J1000-G =Up to 60 Disks	Up to 10U Height
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Combination 3 :

A24F-R/G2430 + S16S-J1000-R/S(SATA-II Drives)

A24F-R2430 (4U, 24 Disks) + (Up to 2 units)(3U, 16 Disks each)	S16S-J1000-R = Up to 56 Disks	Up to 10U Height
A24F-G2430 (4U, 24 Disks) + (Up to 4 units)(3U, 16 Disks each)	S16S-J1000-S = Up to 88 Disks	Up to 16U Height

Combination 4 :

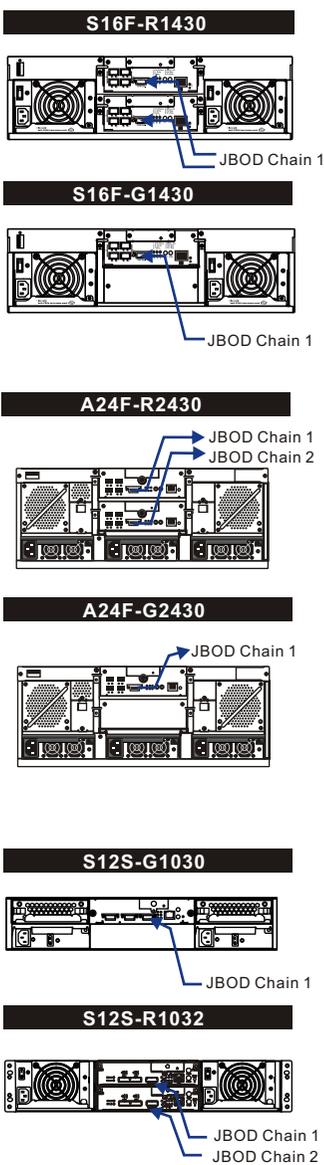
S12S-R1032 + S12S-J1002-R

S12S-R1032 (2U, 12 Disks) + (Up to 3 units)(2U, 12 Disks each)	S12S-J1002-R = Up to 48 Disks	Up to 8U Height
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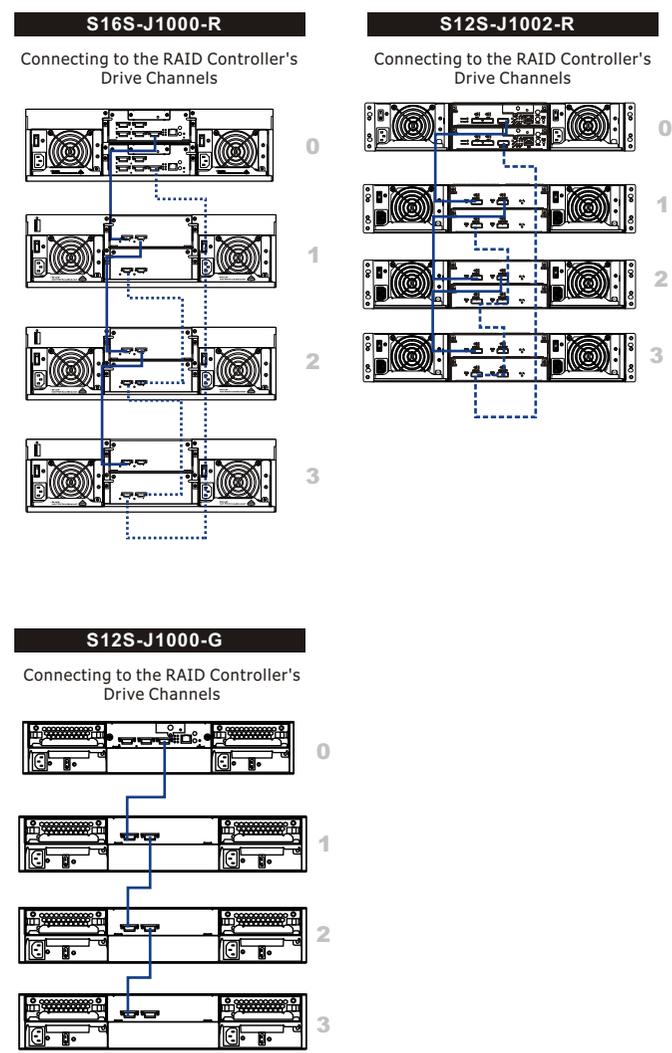
Accessories Cables

- 9270CSFP4GA01: Agilent Fibre Channel 4.25/2.125 / 1.0625 GBd Small Form Pluggable Optical Transceiver, LC, wave-length 850nm, multi-mode
- 9270CFCCab01: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 1 Meter
- 9270CFCCab02: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 5 Meter
- 9270CFCCab03: Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 10 Meter
- 9270CSASCab01: SAS external cable, 50 Centimetres (SFF-8470)
- 9270CSASCab02: SAS external cable, 120 Centimetres (SFF-8470)
- 9270CmSASCab1: SAS external cable, 50 cm (SFF-8088)
- 9270CmSASCab2: SAS external cable, 120 cm (SFF-8088)
- 9270CmSASCab3: SAS external cable, 50 cm (SFF-8470-SFF-8088)
- 9270CmSASCab4: SAS external cable, 120 cm(SFF-8470-SFF-8088)

RAID Subsystem Connections



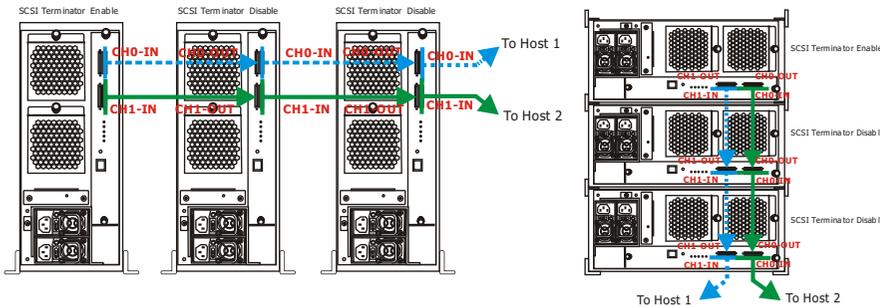
JBODs Connections



Up to 3 JBOD Subsys tems for R model ,
or 4 JBOD Subsys tem for G model ,
R model can be chained using fault-tolerant links

Maximize Storage with Cube

Combination 1: 4 x A08U-C2412 (or A08U-C2411 Single SCSI channel)
3 x A08U-C2412 (or A08U-C2411) (8-bay desktop) = Up to 24 Disks

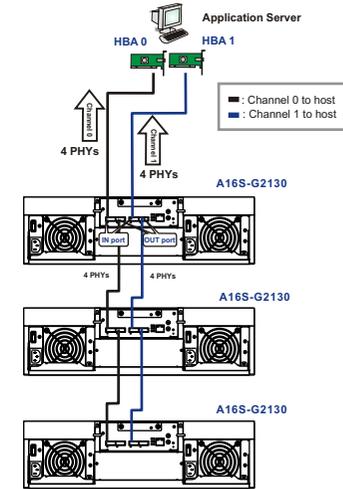


Tower Daisy Chain

SCSI Cables:

- Two types of SCSI cables are available for Host:
 - 9270UHstCabVHDCI – HD68, 1 meter**
 - 9270UJBODCabVHDCI – VHDCI, 1 meter**
- Daisy chain: Four SCSI cables are required. (VHDCI-VHDCI cable) The **A08U-C2412** includes one **9270UJBODCab** (VHDCI-VHDCI) cable
- The internal SCSI terminator is auto-detected by Hardware and it is unnecessary to adjust the SCSI terminator when working on the subsystem connection

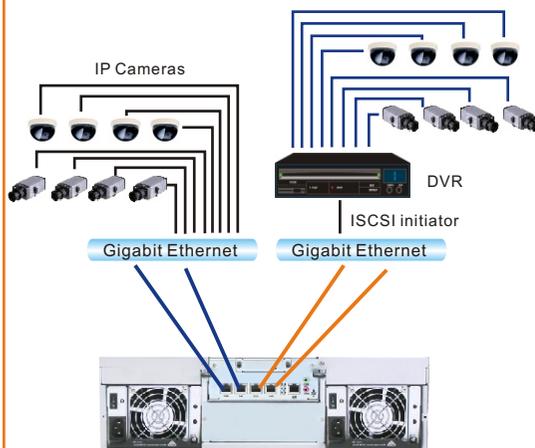
SAS RAID Connections



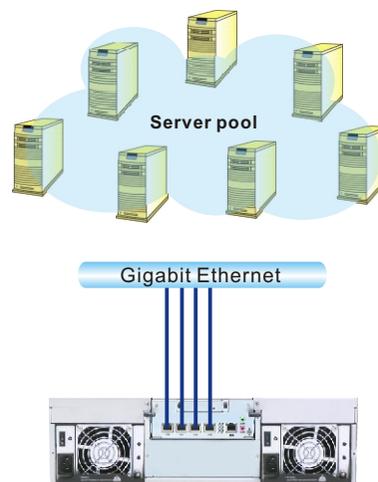
- The diagram above shows one application server directly attached to three A16S RAID enclosures via the expansion links.
- The A16S-G2130 provides two (2) additional Cascade ports that connect another three (3) A16S enclosures.
- The configuration supports up to 48 disk drives. Each Mini SAS port features the connectivity of 4 3Gb/s PHY ports

iSCSI Storage Connectivity

CCTV Environments



IP SAN Environments



iSCSI FAQ

1. What is iSCSI?

Ans. iSCSI (Internet SCSI) is a protocol that encapsulates SCSI (Small Computer System Interface) commands and data in TCP/IP packets for linking storage devices.

2. Is Microsoft iSCSI initiator supported?

Ans. Yes, Windows 2003 supported.

3. How many simultaneous session can be accepted on A12E-G2121?

Ans. Up to 64 sessions are supported, with 1GB cache memory installed.

4. What is Jumbo Frame?

Ans. Jumbo frames can reduce host CPU cycles since fewer frames are bundled for data transactions, and an MTU size of 9000 can dramatically increase performance.

5. What is the Access control for IQN and IP

Ans. A built-in access filter enables you to include both the IP addresses and IQN identifiers of iSCSI offload initiators as the access control parameters. Together with other security features, these access parameters provide enhanced security. The IQN & IP access security can be combined with a maximum of 64 host sessions.

6. What is difference between iSCSI and NAS?

Ans. NAS (network attached storage) is based on file serving and sharing over IP networks. iSCSI, a block based storage protocol, is superior in speed (up to 10 times faster) to NFS, CIFS file-based protocols.

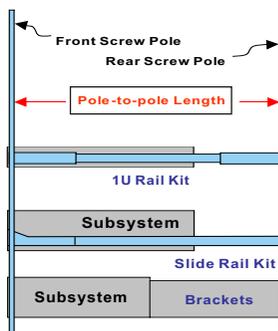
7. Why and what configuration should user choose iSCSI rather than NAS?

Ans. iSCSI protocol presents storage space as block-level devices. It is faster than the file-level devices run in NAS protocol. By using iSCSI protocol, the storage and server can be connected through network connection even if they are located in two different areas.

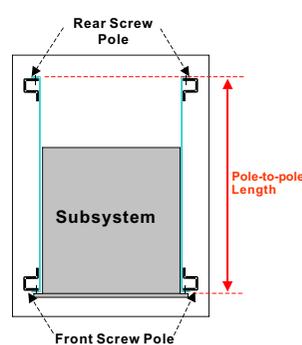
Rackmount Guide

Model	Rackmount Kits for Subsystems					
	9276CSlider36	9277CSlider36	9272CESlider36	9273CSlider32/36	9274CSlider32/36	9279CSlider36
						
	Slide Rail Kit	Slide Rail Kit	Slide Rail Kit	Slide Rail Kit	Slide Rail Kit	Slide Rail Kit
EonRAID® 1U RAID head FF-R2021 FF-S2021 FF-R4030 FF-S4030	<input checked="" type="checkbox"/>	-	-	-	-	-
EonStor® 1U 4-Bay A04U-G2421	-	<input checked="" type="checkbox"/>	-	-	-	-
EonStor® 2U 8/12-Bay A08U-G2421 A12U-G2421 S12S-G1030 A08F-G2422 A12F-G2422 S12F-G1420 A08S-G2130 A12S-G2130 S12F-R1420 A12E-G2121 U12U-G4020 S12S-J1000-G	-	-	<input checked="" type="checkbox"/>	-	-	-
EonStor® 2U 12-Bay S12S-R1032 S12S-J1002-R	-	-	-	-	-	<input checked="" type="checkbox"/>
EonStor® 3U 16-Bay A16U-G2421 A16E-G2130 U16U-G4020 A16U-G2430 A16F-G2430 A16F-R2431 A16S-G2130 F16F-R/S4031 S16F-G1430 S16F-R1430 F16F-J4000-R S16S-J1000-R/S S16S-R1030 S16S-G1030	-	-	-	<input checked="" type="checkbox"/>	-	-
EonStor® 4U 24-Bay A24U-G2421 A24F-G2430 A24F-R2430	-	-	-	-	<input checked="" type="checkbox"/>	-
Minimum Length (Pole-to-pole) *1	610mm (24 inches)	610mm (24 inches)	647 mm (25.47 inches)	521 mm/605mm (20.5/23.8 inches)	521mm/601.5mm (20.5/23.6 inches)	575 mm (22.64 inches)
Maximum Length (Pole-to-pole) *1	925mm (36.40 inches)	925mm (36.40 inches)	914 mm (35.98 inches)	812mm/900 mm (32/35.4 inches)	812mm/914mm (32.33/36 inches)	926 mm (36.46 inches)

Side View of Rack Cabin

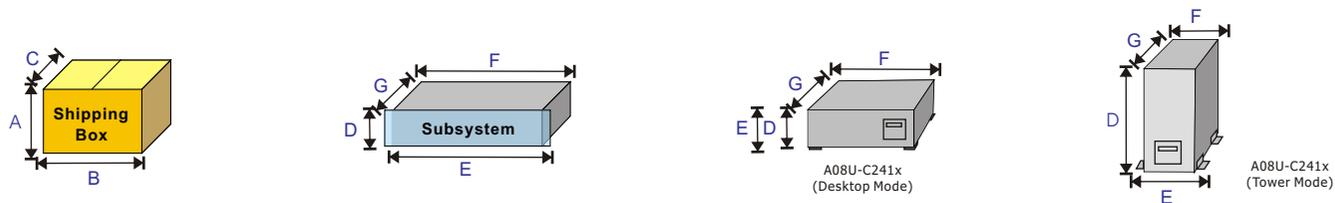


Top View of Rack Cabinet



* 1. The "pole-to-pole" length (or "post-to-post" 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.

Shipping and Rack Planning Reference



	Shipping Dimension & Weights					Subsystem Dimension & Weights						BTU & Amps		Air
	A	B	C	Shipping Weight without Drives (Estimated)	Shipping Weight with Drives (Estimated) *1	D	E	F	G*2	Subsystem Weight without Drives (Estimated)	Subsystem Weight with Drives (Estimated) *1	Maximum Heat Dissipation (Estimated)	Maximum Current at 230V AC (Estimated)	Airflow Direction
EonStor 1U Controller head FF-R2021 FF-S2021 FF-R4030 FF-S4030	209mm 8.20"	585mm 23.00"	776mm 30.30"	16kg 35.27lbs		43.5mm 1.70"	482mm 19.00"	440mm 17.35"	540mm 21.30"	15kg 33.10lbs		850 BTU/Hour	1.08A	Front to Rear
EonStor 1U - 4-Bay A04U-G2421	180mm 7.00"	582mm 22.90"	718mm 28.30"	10kg	12.4kg	43.5mm 1.70"	478mm 18.80"	445mm 17.50"	511mm 20.10"	8kg	10.4kg	680 BTU/Hour	0.86A	Front to Rear
EonStor 2U 8-Bay A08U-G2421 A08F-G2422 A08S-G2130	381mm 15.00"	567mm 22.32"	772mm 30.40"	26.5kg 58.42lbs	32.5kg 71.65lbs	88mm 3.46"	482mm 19.00"	446mm 17.55"	490mm 19.29"	25.0kg 55.10lbs	31.0kg 68.34lbs	1197 BTU/Hour	1.52A	Front to Rear
EonStor 2U 12-Bay A12F-G2421 A12F-G2422 A12E-G2121 A12S-G2130 U12U-G4020 S12S-G1030 S12S-J1000-G S12F-R1420 S12F-G1420 A12U-G2421	381mm 15.00"	567mm 22.32"	772mm 30.40"	28.5kg 62.83lbs	37.5kg 82.67lbs	88mm 3.46"	482mm 19.00"	446mm 17.55"	490mm 19.29"	25.00kg 55.10lbs	35.00kg 77.16lbs	1197(350W) BTU/Hour	1.52A	Front to Rear
												1381(460W) BTU/Hour	1.75A	
EonStor 3U 16-Bay A16U-G2421 A16F-G2430 A16F-R2431 A16E-G2130 S16F-G1430 S16F-R1430 U16U-G4020 F16F-R/S2021 S16S-J1000-R/S F16F-R/S4030 A16U-G2430 F16F-J4000-R/S A16S-G2130	423mm 16.70"	567mm 22.32"	772mm 30.4"	34.5kg 74.90lbs	46.0kg 101.41lbs	132mm 5.19"	482mm 19.00"	450mm 17.51"	505mm 19.90"	30.5kg 67.24lbs	42.5kg 93.69lbs	1573(460W) BTU/Hour	2A	Front to Rear
												1807(530W) BTU/Hour	2.29A	
EonStor 4U 24-Bay A24U-G2421 A24F-R2430 A24F-G2430	480mm 18.9"	590mm 23.2"	700mm 27.55"	39.6kg 87.3lbs	57.6kg 126.98lbs	174.4mm 6.86"	482mm 19.00"	498mm 19.6"	514mm 20.23"	36.5kg 80.46lbs	54.5kg 120.15lbs	2770 BTU/Hour	3.5A	Front to Rear
EonStor DeskTop/Tower 8-Bay A08U-C2411 A08U-C2412	450mm 17.71"	510mm 20.07"	610mm 24.01"	21.0kg 42.29lbs	34.5kg 76lbs	155mm 6.10" 382mm 15.03"	167mm 6.57" 235mm 9.25"	375mm 14.76" 155mm 6.10"	370mm 14.56" 370mm 14.56"	11.5kg 25.33lbs	17.0kg 37.44lbs	850 BTU/Hour	1.08A	Front to Rear
EonStor 2U 12-Bay S12S-R1032	390mm 15.35"	575mm 22.63"	780mm 30.70"	25.9.0kg 57.10lbs	32.5kg 71.65lbs	88mm 3.46"	482mm 18.98"	446mm 17.56"	516mm 20.31"	18.71kg 41.25lbs	25.31kg 55.80lbs	1809(530W) BTU/Hour	2.30A	Front to Rear
EonStor 2U 12-Bay S12S-J1002-R	390mm 15.35"	575mm 22.63"	780mm 30.7"	24.96kg 55.03lbs	31.56kg 69.58lbs	174.4mm 6.86"	482mm 18.98"	446mm 17.56"	522mm 20.55"	17.77kg 39.17lbs	24.37kg 53.72lbs	1809(530W) BTU/Hour	2.30A	Front to Rear

*1. All weight information are estimated numbers. The actual weight can vary with different drive models and configurations.
 *2. Please provide additional 5 cm at the back of the subsystem for cabling and airflow.

Spare Parts & Accessories

					
81AU24GC08C	81AU24GC08D	82AE21GD12	82AF24GD08	82AS21GE12	85S10GE12
SCSI to SATA RAID controller module, for ES A08U-C2411 subsystem, 2 x SCSI-320 VHDCI host connectors.	SCSI to SATA RAID controller module, for ES A08U-C2412 subsystem, 4 x SCSI-320 VHDCI host connectors.	iSCSI to SATA RAID controller module, for ES A12E-G2121 subsystem, 2 x 1Gb Ethernet connectors.	Fibre to SATA RAID controller module, for ES A08F-G2422 subsystem, 2 x 4G FC SFP host connectors	SAS to SATA RAID controller module, for ES A12S-G2130 subsystem, 2 SAS 4x host connectors	SAS to SAS/SATA RAID controller module, for ESS12S-G1030 subsystem, 2 x SAS 4x host connector, SAS Exp.
					
82AF24GD12	82AU24GD08	82AU24GD12	82U40GD4	83AS21GE16	83AE21GE164
Fibre to SATA RAID controller module, for ES A12F-G2422 subsystem, 2 x 4G FC SFP host connectors	SCSI to SATA RAID controller module, for ES A08U-G2421 subsystem, 2 x SCSI-320 VHDCI host connectors.	SCSI to SATA RAID controller module, for ES A12U-G2421 subsystem, 4 x SCSI-320 VHDCI host connectors.	SCSI to SCSI RAID controller module, for ES U12U-G4020 subsystem, 4 x SCSI-320 channels.	SAS to SATA RAID controller module, for ES A16S-G2130 subsystem, 4 x SAS 4x host connectors	iSCSI to SATA RAID controller module, for ES A16E-G2130-4 subsystem, 4 x 1Gb Ethernet
					
83AF24GD16	83U40GD4	84AU24GD24E	84AF22GD24E	84AF22RD24E	86F20RD6
Fibre to SATA RAID controller module, for ESA16F-G2422 subsystem, 2 x 4G FC SFP host connectors, RAID 6	SCSI to SCSI RAID controller module, for ES U16U-G4020 subsystem, 4 x SCSI-320 channels.	SCSI to SATA RAID controller module, for ES A24U-G2421-1 subsystem, 4 x SCSI-320 VHDCI host connectors, RAID 6.	Fibre to SATA RAID controller module, for ES A24F-G2224-1 subsystem, no 2G FC SFP host connectors, RAID 6	Fibre to SATA RAID controller module, for ES A24F-R2224-1 subsystem, no 2G FC SFP host connectors, RAID 6	Fibre-to-Fibre RAID controller module, for ES FF-R2021-65, 6 x 2G FC channels
					
86F20RD4	84AF24GE24	84AF24RE24	83S10GE16	83S10RE16	86F40RE6
Fibre-to-Fibre RAID controller module, for ES FF-R/S2021-45, 4 x 2G FC channels	Fibre to SATA RAID controller module, for ES A24F-G2430 subsystem, 4 x 4G FC SFP host connectors, RAID 6	Fibre to SATA RAID controller module, for ES A24F-R2430 subsystem, 4 x 4G FC SFP host connectors, RAID 6	SAS to SAS RAID controller module, for ES S16S-G1030 subsystem, 4 x SAS 4x	SAS to SAS RAID controller module, for ES S16S-R1030 subsystem, 4 x SAS 4x	4G-FC to 4G-FC RAID controller module, for ES FF-R/S4030, 6 x 2G FC channels

Spare Parts & Accessories

					
9273F4JIO2 Fibre channel (4G FC) IO board, for ES 3U/16-bay FC-SBOD subsystem, 2 x SFP ports w/ on-board loop switch, for DRV exp., SES embedded	83SF14GE16 Fibre to SAS/SATA RAID controller module, for ES S16F-G1430 subsystem, 4 x 4G FC SFP host connectors w/ on-board host hub, SAS Exp.	83SF14RE16 Fibre to SAS/SATA RAID controller module, for ES S16F-R1430 subsystem, 4 x 4G FC SFP host connectors w/ on-board host hub, SAS Exp	83S10GE16 SAS to SAS/SATA RAID controller module, for ESS16S-G1030 subsystem, 4 x (SAS 4x) host connector, SAS Exp.	83S10RE16 SAS to SAS/SATA RAID controller module, for ESS16S-R1030 subsystem, 4 x (SAS 4x) host connector, SAS Exp.	83S10J162 SAS to SAS/SATA JBOD Expander module, for ES S16S-J1000 subsystem, 2 x SAS connectors.
					
83F40REC6 Fibre-to-Fibre RAID controller module, for ES F16F-R/S4031-6 subsystem, 6 x 4G FC channels	83F40REC4 Fibre-to-Fibre RAID controller module, for ES F16F-R/S4031-4 subsystem, 4 x 4G FC channels	83AU24GE16 SCSI to SATA RAID controller module, for ES A16U-G2430 subsystem, 4 x SCSI-320 VHDCI host connectors.	83AF24GE16 Fibre to SATA RAID controller module, for ES A16F-G2430 subsystem, 4 x 4G FC SFP host connectors	83AF24RE16 Fibre to SATA RAID controller module, for ES A16F-R2431 subsystem, 4 x 4G FC SFP host connectors w/ on-board host hub	84AF24RE24 Fibre to SATA RAID controller module, for ES A24F-R2430 subsystem, 4 x 4G FC SFP host connectors, SAS Exp.
					
84AF24GE24 Fibre to SATA RAID controller module, for ES A24F-G2430 subsystem, 4x 4G FC SFP host connectors, SAS Exp.	89S10RE12 SAS to SAS RAID controller module, for ES S12S-R1032 subsystem, 2x SAS host ports +1 SASExp.	89S10J122 SAS to SAS/SATA JBOD expander module, for ES S12S-J1002 subsystem, 2x SAS connectors	9272CPSU Power supply module, for ES 2U series subsystems, 350W capacity	9273CPSU Power supply module, for ES Enhanced 3U/16-bay subsystems, 460W capacity	9273ECPSU Power supply module, for ES Enhanced 3U/16-bay subsystems, 530W capacity, Axial-FAN
					
9274CPSU Power supply module, for ES 4U/24-bay subsystems, 405W (N+1) capacity	9275CPSU Power supply module, for ES 2U-R series subsystem, 405W capacity	9275ECPSU Power supply module, for ES 2U-R series subsystem, 460W capacity	9276CPSU Power supply module, for ES 1U-E subsystems, 250W capacity	9277CPSU Power supply module, for ES 1U/4-bay subsystems, 200W capacity	9279CPSU Power supply module, for ES 2U series subsystems, 530W capacity

Spare Parts & Accessories

					
9274CF2HIO4L	9274CF2HIO4R	9276F2HIO2	9273CF4HIO2L	9273CF4HIO2R	9273F4DIO4L
Fibre channel (2G FC) IO board, Left-hand side, for ES 4U/24-bay subsystem, 4 x SFP ports w/ on-board host hub	Fibre channel (2G FC) IO board, Right-hand side, for ES 4U/24-bay subsystem, 4 x SFP ports w/ on-board host hub	Fibre channel (2G FC) IO board, for ES 1U-E subsystems, 2 x SFP ports w/ on-board host hub	Fibre channel (4G FC) IO board, Left-hand side, for ES 3U/16-bay subsystem, 2 x SFP ports w/ on-board host hub	Fibre channel (4G FC) IO board, Right-hand side, for ES 3U/16-bay subsystem, 2 x SFP ports w/ on-board host hub	Fibre channel (4G FC) IO board, Left-hand side, for ES 3U/16-bay subsystem, 4 x SFP ports w/ on-board loop switch, for DRV exp.
					
9273F4DIO4R	9273CS1DIO1	9276CF4HIO2	85S10J12C2	9279S1DT2S1S	9273CDTray
Fibre channel (4G FC) IO board, Right-hand side, for ES 3U/16-bay subsystem, 4 x SFP ports w/ on-board loop switch, for DRV exp	SAS channel IO board, for ES 1U-E subsystem, 1 x SAS connector	Fibre channel (4G FC) IO board, for ES 1U-E subsystems, 2 x SFP ports w/ on-board host hub	SAS to SAS JBOD Expander module, for ES S12S-J1000-G subsystem, 2 x SAS connectors.	Drive tray with a pre-installed MUX board; for using SATA-II 3Gb/s disk drives in a dual-controller S12S-R1032	Drive tray, Type-III bezel and Type-II LED light pipe
					
9273A2DT2S1S	9274CDTray	9274A2DT2S1S	9273S1DT2S1S	9279CDTray	9273CBTC
Drive tray (Type-III bezel and Type-II LED light pipe), 2-to-1 SATA (SATA-II) MUX conversion, dual-controller subsystems.	Drive tray, Type-III bezel w/ maize color push button and Type-II LED lightpipe	Drive tray (Type-III bezel w/ maize color push button and Type-II LED lightpipe), 2-to-1 SATA (SATA-II) MUX conversion, power MOS switch embedded, dual-controller subsystems	Drive tray (Type-III bezel and Type-II LED lightpipe), 2 SAS-to-1 SATA MUX conversion, dual-controller subsystems	Drive tray, exclusively for S12S-X1032 models (identified by a light-green release button)	Battery cell pack, Li-Ion, for ES Enhanced 3U/16-bay subsystems
					
9273CBTE	9274CBTC	9275CBTE	9276CBTC	9276CBTE	9274CBTE
Battery cell pack, Li-Ion, for ES Enhanced 3U/16-bay subsystems, BBU ID, high capacity	Battery cell pack, Li-Ion, for ES 4U/24-bay subsystems	Battery cell pack, Li-Ion, for ES 2U-R series subsystems, BBU ID, high capacity	Battery cell pack, Li-Ion, for ES 1U-E series subsystems	Battery cell pack, Li-Ion, for ES 1U-E series subsystems, BBU ID, high capacity	Battery cell pack, Li-Ion, for ES Enhanced 4U/24-bay subsystems, BBU ID, high capacity

Spare Parts & Accessories

					
9275CBT	9070E	9011	9273ECFanMod	9271CFanMod	9272CFanModE
Battery cell pack, Li-Ion, for ES Enhanced 2U-R series subsystems, BBU ID, high capacity	Battery charger board	Null Modem	Cooling fan module, for ES Enhanced 3U/16-bay subsystems	Cooling fan module, for ES Cube/8-bay subsystems	Cooling fan module, for ES 2U series subsystems
					
9273CFanMod	9274CFanMod	9276CFANMod	9279CFANMod	DDRESCM2(M5, MA, MB)	SDRAMESCM1(M2, M5, MA)
Cooling fan module, for ES Enhanced 3U/16-bay subsystems	Cooling fan module, for ES 4U/24-bay subsystems	Cooling fan module, for ES 1U-E subsystems	Cooling fan module, for ES 2U series subsystems	256MB (512MB, 1GB, 2GB) DDR DIM module for all EonStor subsystems	128 MB (256MB, 512MB, 1GB)SDRAM module for all EonStor subsystems
					
9271CBT					
Battery charger board with 9271CBT for A08U-C2412 subsystem					

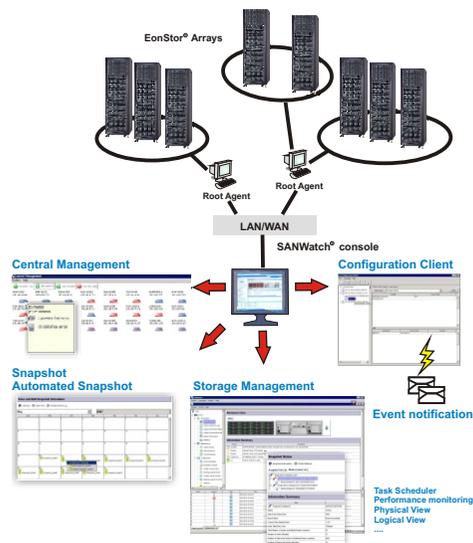
Spare Parts & Accessories

				
9270CUPSYcab	9270CUPSCab	9270ASCab	9270AYCab	9270CSASCab01/02
UPS Y-cable, 2 audio jack-to- 1 DB-9	UPS cable, audio-jack to Db9	Serial cable, audio jack-to-DB9	Serial port Y-cable for dual-controller subsystems, 2 audio jacks -to- 1 DB-9	SAS external Cable, Infiniband 4 x to infiniband 4x, 50 cm/120cm(SFF-8470)
				
9270UHSTCAB	9270UJBODCAB	9270mSASCab01/02/03/04		9270CSFP4GA01(4G)
SCSI external round cable, HD68 to VHDCI	SCSI external round cable, VHDCI to VHDCI	9270CmSASCab1 -SAS external cable, 50 cm (SFF-8088) 9270CmSASCab2 -SAS external cable, 120 cm (SFF-8088) 9270CmSASCab3 -SAS external cable, 50 cm (SFF-8470-SFF-8088) 9270CmSASCab4 -SAS external cable, 120 cm(SFF-8470-SFF-8088)		Agilent Fibre Channel 4.25/2.125 /1.0625 GBd Small Form Pluggable Optical Transceiver, LC, wave-length 850nm, multi-mode
				
9270CFCCab03 (10m)	9270CFCCab01 (1m)	9270CFCCab02 (5m)		
Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 10 Meters	Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 1 Meter	Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mm*2, 5 Meters		

OVERVIEW

SANWatch is Infortrend's latest storage management platform featuring the following function groups:

- **Centralized Management:**
Full-featured monitoring of multiple arrays locally or remotely over LAN/WAN.
- **Storage Management:**
Comprehensive and complete RAID configuration functions.
- **Data Service:**
Snapshot is the first consolidation feature that will be followed by more functionality such as Volume Copy, Remote Replication, etc.



NEW FEATURES

- Point-in-time snapshot images using space-efficient copy-on-write methodology
- Snapshot operation processed by storage hardware, off-loaded from host CPUs
- Non-disruptive backup and recovery
- Flush agents for Windows platforms
- Automated snapshot task scheduler
- Automated snapshot prune for recycling storage space either by the maximum number or the life span of images

Storage Management Supported Platforms

- Microsoft Windows XP/2003 (32/64)/2003 R2 (32/64)/Vista
- Linux (Please refer to Infortrend web site)
- Sun Solaris 8/9/10 Sparc
- Mac OS X 10.4.x

Snapshot Versions

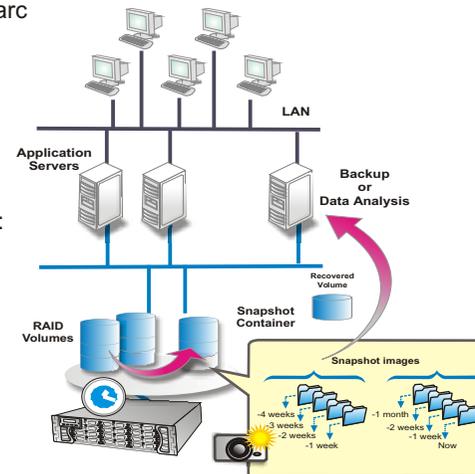
- **Express Version:**
Manual snapshot
- **Professional Version:**
Advanced features including snapshot scheduler, and automated space management

Snapshot Supported Platforms

- Windows Server 2003 R2 SP2 32-bit
- Windows Server 2003 SP2 64-bit
- Linux, Solaris (Snapshot on Linux and Solaris with coming release)

Applicable EonStor Models

- Selected ASIC400 series



TECHNICAL BRIEF

SANWatch provides a feature-rich, yet easy to approach, Java-based GUI for Infortrend's EonStor series products. SANWatch includes the advanced data protection Snapshot in addition to all necessary storage administration functionality such as RAID configuration, maintenance, and monitoring - all seamlessly integrated into a platform run across any distance over the network.

Infortrend implements multi-layer snapshot tables for maximum storage efficiency. Snapshot variables and differential images are managed as independent storage volumes that look and behave like complete backups. Snapshot volumes are mounted as real LUNs when data retrieval takes place allowing concurrent access to the regular or snapshot volumes.

Snapshot imposes minimum impact on host performance and storage space. With native hardware support, schedules can be arranged to perform automated backup and system will maintain a configurable number of snapshots.

Either RAID or Snapshot volumes can be dynamically expanded and there can be numerous snapshot images referring to multiple source volumes.

Quality & Warranty

Quality System

Infotrend is an ISO-9001:2000 and ISO-14001:1996 certified manufacturer known for its high quality standards. Infotrend products adhere to international standards including RoHS Mil-std-105D, Mil-std-810F, IEC 60950, and IEC 17025. Other company and product certifications include UL, CE, CB, BSMI, and FCC. Quality inspections include the following activities:

- 100% inspection of incoming components
- Baking all components prior to testing
- Maintaining components in ovens prior to the manufacturing cycle
- Pre-pilot design verification, full burn-in quality control testing
- Mass production finished goods sampling
- Random sample integration verification testing
- Continuous monitoring at every station

Even stable, problem-free products are fully tested at all stages of manufacture with full verification of quality.

All current Infotrend controllers and subsystems include a 3-year warranty.



3-year Warranty

Quality is our priority and we back it with a 3-year warranty.



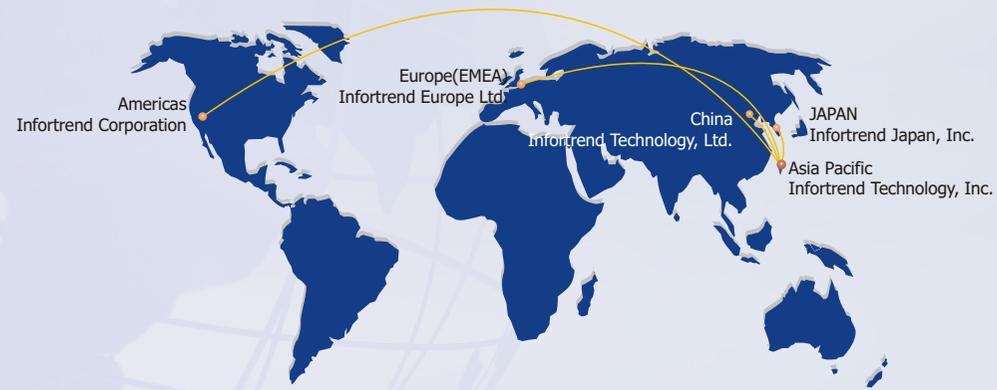
Optional Extended Warranty

In addition to the three-year Regular Warranty, Infotrend offers an Optional Extended Warranty (battery excluded) that extends the warranty period for the product an additional two years. Customers may purchase the Optional Extended Warranty at the time of sale or within the regular warranty period. For more detailed information, please contact your local representatives

http://www.infotrend.com/main/3_support/pdf/Extended%20Warranty%20process%20for%20direct%20customers.pdf

Extended Warranty Card	
This document certifies that the warranty for the 4 th and 5 th years has been purchased for the Infotrend equipment defined below.	
Model number:	_____
Serial number:	_____
Expiry date:	_____
For detailed terms of coverage, please refer to the Infotrend website: http://www.infotrend.com/main/3_support/warranty.asp	

www.infortrend.com



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