Enclosure Management Cabling for Rack-Optimized Systems

Cabling Guide for:

- Intel® Server System SR1600UR
- Intel® Server System SR1600URHS
- Intel® Server System SR1625UR
- Intel® Server System SR2600URBRP
- Intel® Server System SR2600URSATA
- Intel® Server System SR2625URBRP
- Intel® Server System SR2612UR
- Intel® Server System SR1690WB
- Intel® Server System SR1695WB
- Intel® Server System SR1695GPRX
- Intel® Server System SR1630BC
- Intel® Server System SR1630GP
- Intel® Server System SR1630HGP
- Intel® Server System SR1500AL
- Intel® Server System SR1550AL
- Intel® Server System SR2500BRP
- Intel® Server Chassis SR1500
- Intel® Server Chassis SR1550
- Intel® Server Chassis SR2500
- Intel® RAID Controller RS2BL080
- Intel® RAID Controller RS2BL080DE
- Intel® RAID Controller RS2BL080SNGL
- Intel® RAID Controller RS2BL040
- Intel® RAID Controller RS2MB044

- Intel® RAID Controller RS2PI008
- Intel® RAID Controller RS2PI008DE
- Intel® RAID Controller RS2WC080
- Intel® RAID Controller RS2WC040
- Intel® RAID Controller RS2SG244
- Intel® RAID Controller RS2SG244SNGL
- Intel® RAID Controller RS2WG160
- Intel® RAID Controller SRCSASJV
- Intel® RAID Controller SRCSASRB
- Intel® RAID Controller SRCSASLS4I
- Intel® RAID Controller SRCSASBB8I
- Intel® RAID Controller SRCSATAWB
- Intel® Integrated RAID Module RMS2MH080
- Intel® Integrated RAID Module RMS2AF080
- Intel® Integrated RAID Module RMS2AF040
- Intel® Integrated RAID Module RMS2LL080
- Intel® IntegratedRAID Module RMS2LL040
- Intel® RAID Expander Card RES2SV240
- Intel® RAID Controller SRCS16
- Intel® RAID Controller SRCS28X
- Intel® RAID Controller SRCSAS18E
- Intel® RAID Controller SRCSAS144E

Revision 1.4

Aug 2010

Revision History

Date	Revision Number	Modifications
January, 2007	1.0	Initial release.
April, 2007	1.2	Updated SRCS16, SRCS28X, and SRCSAS144E information
Mar, 2008	1.3	Added new RAID controllers and SR1560SF
August, 2010	1.4	Updated the list of RAID controllers, RAID modules, and systems.

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Note: Before cabling, please refer to the respective RAID module or RAID controller *Tested Hardware and Operating System lists*, in order to confirm their compatible Intel® Server Boards or Systems.

When using a rack-optimized system with passive backplane / midplane and an add-in RAID card, you must install an additional 3-pin SES cable, or 4-pinSGPIO cable between the RAID card and the backplane or midplane to enable fault LED control. The cable is included with your integrated system or backplane / midplane kit.

The following connectors should be used on the add-in RAID controllers:

Intel® RAID Controller	Connector
RS2SG244, RS2WG160	J1C1, white
RS2BL080, RS2BL080DE, RS2BL080SNGL, RS2BL040	J11, white
RS2MB044	J1A4, white
RS2PI008, RS2PI008DE	None.
RS2WC080, RS2WC040	J7, white
RMS2MH080	J4A1, white
RMS2AF080, RMS2LL080	J1A1, 3-pin, SES, white; J1A2/J1B2, 4-pin, SGPIO, black/blue
RMS2AF040, RMS2LL040	J1A1, 3-pin, SES, white; J1A2, 4-pin, SGPIO, black
SRCSATAWB, SRCSASRB	J6, white Note: RAID FW 420 or higher is required.
SRCSASJV	J2, white Note: RAID FW 312 or higher is required.
SRCSASBB8I, SRCSASLS4I	J7, white
SATA Embedded RAID (ESB2)	No additional cable needed with rack chassis.
SAS Embedded RAID (LSI* 1064e)	No additional cable needed with rack chassis.
SRCS16	Connector: 4-pin J6, see picture Note: RAID firmware ver. 713S or higher and HSC FW 2.05 or higher are required
SRCS28X	J13, 3-pin, white Note: HSC FW 2.05 or higher is required.
SRCSAS18E	J18, 3-pin, white
SRCSAS144E	Enclosure management not supported with passive backplanes/midplanes. Do not connect SES cable.

Note: Below cable is SFF8087 to Four-port Internal Cable with one SGPIO Connector. This cable is shipped with some RAID controllers listed in this document. Refer to RAID controllers'

technical documents for more details. RAID controllers that are shipped with this cable can connect the cable's SGPIO connector to the SGPIO header on the backplanes or midplanes listed in this document, so as to enable fault LED control.
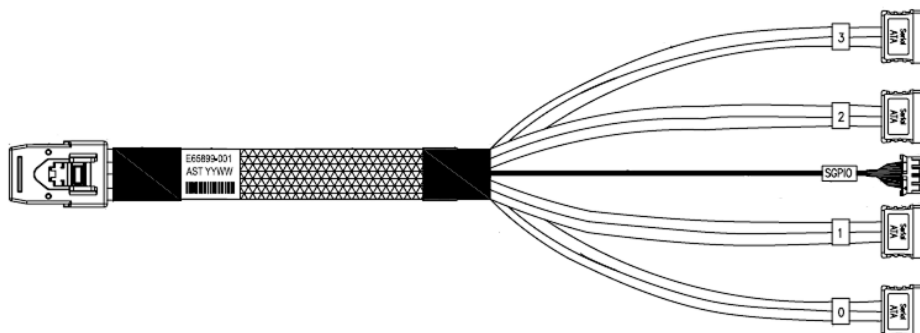
The following connectors should be used on the backplanes/midplanes:

Intel® Server System/Chassis	Connector
SR1600UR with passive backplane	HBA CONN on backplane, 3-pin, white
SR1600URHS* (need to work together with the passive backplane ASR1500PASBP which has to be ordered separately as an accessory.)	HBA CONN on backplane, 3-pin, white
SR1625UR	HBA CONN on backplane, 3-pin, white
SR2600URBRP	HBA CONN on backplane, 3-pin, white
SR2600URSATA	HBA CONN on backplane, 3-pin, white
SR2625URBRP	HBA CONN on backplane, 3-pin, white
SR1690WB	HBA CONN on backplane, 3-pin, white; Or SGPIO header, 4-pin, black
SR1695WB / SR1695GPRX	HBA CONN on backplane, 3-pin, white; Or SGPIO header, 4-pin, black
SR1630HGP	SGPIO header, 4-pin, black
SR1500AL / SR1500 with passive backplane	HBA CONN on backplane, 3-pin, white
SR1550AL / SR1550 with passive midplane	HBA CONN on midplane, 3-pin, white
SR2500ALBRP / SR2500 with passive midplane	HBA CONN on midplane, 3-pin, white
SR1560SF with passive backplane	HBA CONN on backplane, 3-pin, white
SR2520SAX (passive backplane)	Add-in RAID cards not supported. Only the onboard controller can be used.

IMPORTANT: *No cable for fault LED control is needed if using the onboard SAS or SATA RAID controller. No cable for fault LED control is needed if using an active backplane / midplane. In these configurations, connecting 3-pin I2C cable or 4-pin SGPIO cable to backplane / midplane may cause unexpected system behavior.*

Note: Intel® RAID Expander Card RES2SV240 has twenty-four independent ports supporting 6Gb/s, 3 Gb/s, or 1.5Gb/s SAS and SATA data transfers using six SFF-8087 mini-SAS connectors. This controller supports 4 inputs and 20 outputs configuration, or 8 inputs and 16 outputs configuration. The backplane/midplane listed in this document supports 8 physical drives at most, so that it is recommended to use RAID controller/module directly to support up to 8 physical drives, instead of connecting Intel® RAID Expander Card RES2SV240 between the RAID controller/module and backplane/midplane. Refer to *Intel® RAID Expander Card RES2SV240 Hardware User's Guide (E93121-0xx)* for more details.