Hardware Addendum to the 007-4365-001, 007-4498-001, and 007-4509-001 Guides

007-4519-001

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Contents

Figures vii

Tables ix

Hardware Addendum to the 007-4365-001, 007-4498-001, and 007-4509-001 Guides 1

SGI Origin 300 Server and SGI Onyx 300 Graphics System 1

L2 Controller 3

NUMAlink Module 4

SGI Total Performance 900 (TP900) Storage Module 4

USB Hub 5

Connectors 6

- DB9 Connector 7
- RJ-45 Connector 8
- External SCSI Port Connector 9
- Stereo Jack Connector Conductor 11
- USB Type A Connector 12
- USB Type B Connector 13

Figures

Figure 1-1 Rear Panel Connectors 2
Figure 1-2 L2 Controller Rear Panel 3
Figure 1-3 NUMAlink Module Rear Panel 4
Figure 1-4 TP900 Rear Panel 4
Figure 1-5 USB Hub Connectors 5
Figure 1-6 DB9 Pin Assignments for Serial Port 1 and Serial Port 2 7
Figure 1-7 DB9 Pin Assignments for L1 Console Port, Console Port, and Modem Port 8
Figure 1-8 RJ-45 Connector Pin Assignments 8
Figure 1-9 External SCSI Port Pin Number Locations 9
Figure 1-10 Stereo Jack Connector Conductors 11
Figure 1-11 USB Type A Connector Pin Number Locations 12
Figure 1-12 USB Type B Connector Pin Number Locations 13

Tables

Table 1-1	SGI Origin 300 Server and SGI Onyx 300 Graphics System Connectors	1
Table 1-2	L2 Controller Connector Pin Assignments	3
Table 1-3	Connector Pin Assignments	6
Table 1-4	SCSI VHDCI Pin Assignments	9
Table 1-5	Stereo Jack Connector Conductor Assignments	11
Table 1-6	USB Type A Connector Pin Assignments	12
Table 1-7	USB Type B Connector Pin Assignments	13

Hardware Addendum to the 007-4365-001, 007-4498-001, and 007-4509-001 Guides

This addendum provides pin assignment information for the non-proprietary connectors on the SGI Origin 300 server, SGI Onyx 300 graphics system, L2 controller, NUMAlink module, SGI Total Performance 900 (TP900) storage module, and USB hub devices that are described in the following documentation:

- SGI Origin 300 User's Guide (007-4365-001)
- SGI Origin 300 System with NUMAlink Module User's Guide (007-4498-001)
- SGI Onyx 300 Graphics System User's Guide (007-4509-001)

SGI Origin 300 Server and SGI Onyx 300 Graphics System

Table 1-1 describes the pin assignments for the connectors located on the rear panel of the SGI Origin 300 server and the SGI Onyx 300 graphics system shown in Figure 1-1.

Table 1-1 SGI Origin 300 Server and SGI Onyx 300 Graphics System Connectors

Connector	Connector Type	Pin Assignments
Serial ports 1 and 2	DB9	See Figure 1-6 on page 7
L1 console port	DB9	See Figure 1-7 on page 8
Ethernet port	RJ-45	See Figure 1-8 on page 8
External SCSI port	SCSI 68-pin VHDCI	See Figure 1-9 on page 9 and Table 1-4 on page 9
RT interrupt input and output	Stereo jack	See Figure 1-10 on page 11 and Table 1-5 on page 11

Table 1-1 (continued) SGI Origin 300 Server and SGI Onyx 300 Graphics System Connectors

Connector	Connector Type	Pin Assignments
USB ports 1 and 2	USB type A	See Figure 1-11 on page 12 and Table 1-6 on page 12
USB L1 port	USB type B	See Figure 1-12 on page 13 and Table 1-7 on page 13

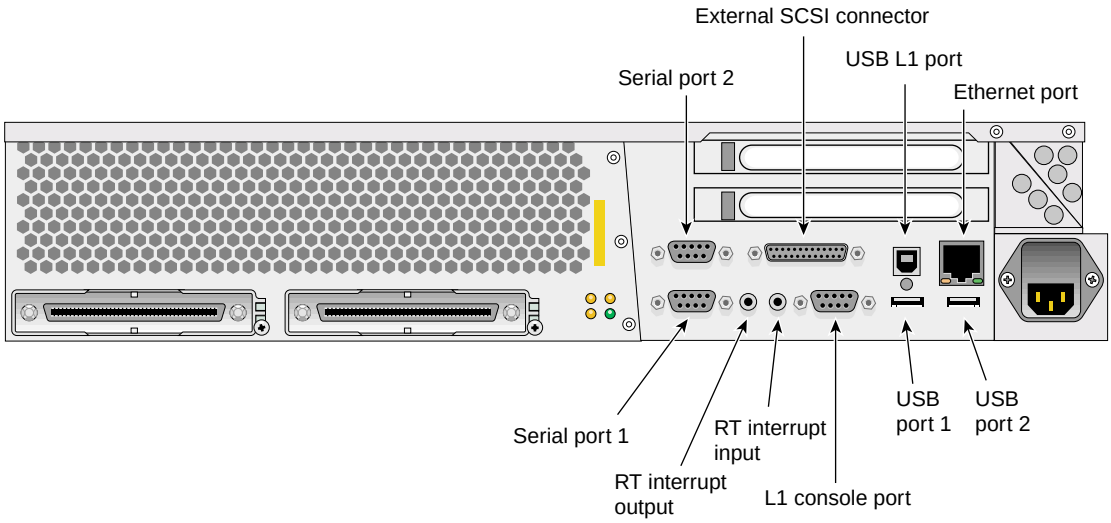

Figure 1-1 Rear Panel Connectors

L2 Controller

Table 1-2 describes the pin assignments for the port connectors located on the rear panel of the L2 controller shown in Figure 1-2.

Table 1-2 L2 Controller Connector Pin Assignments

Connector	Connector Type	Pin Assignments
Console (serial port)	DB9	See Figure 1-7 on page 8
Modem (serial port)	DB9	See Figure 1-7 on page 8
Ethernet port	RJ-45	See Figure 1-8 on page 8
L1 ports (four ports)	USB type A	See Figure 1-11 on page 12 and Table 1-6 on page 12

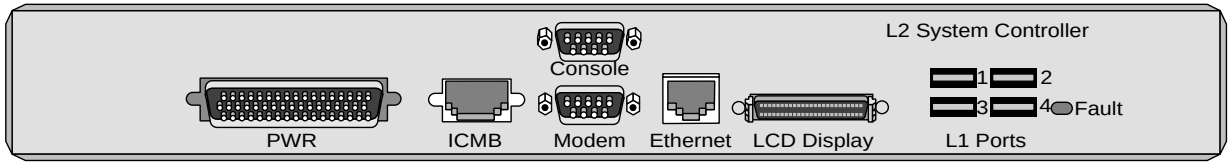

Figure 1-2 L2 Controller Rear Panel

NUMAlink Module

Figure 1-3 shows the L1 port (USB type B) connector located on the rear panel of the NUMAlink module. Figure 1-12 on page 13 shows the pin number locations for the USB type B connector, and Table 1-7 on page 13 shows the pin assignments.

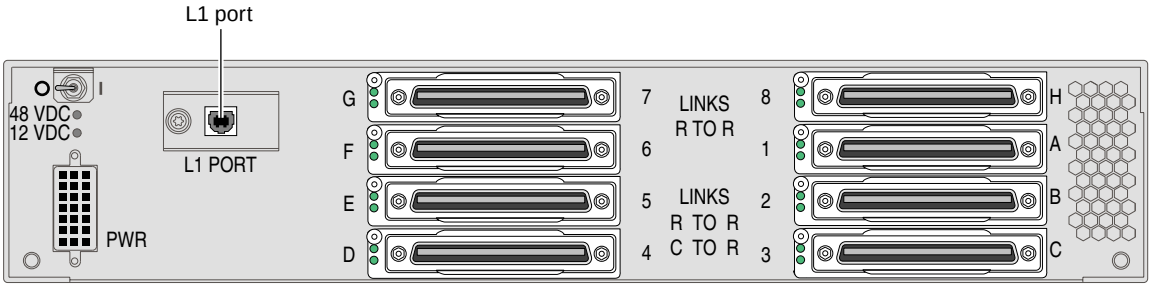

Figure 1-3 NUMAlink Module Rear Panel

SGI Total Performance 900 (TP900) Storage Module

Figure 1-4 shows the two SCSI port connectors located on the rear panel of the TP900 storage module. Figure 1-9 on page 9 shows how the pin numbers are distributed on the SCSI connector, and Table 1-4 on page 9 shows the pin assignments.

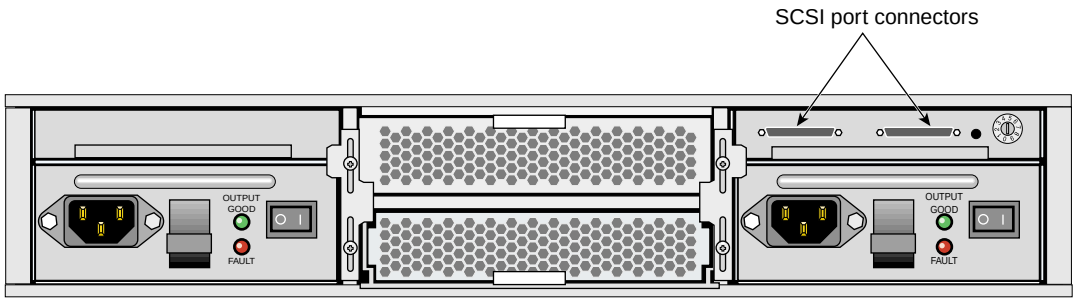

Figure 1-4 TP900 Rear Panel

USB Hub

This section discusses the pin assignments for the five USB port connectors on the USB hub. These USB ports connect the L2 controller to SGI Origin 300 servers.

One USB type B port connects to the L2 controller, and the other four USB type A ports are used to connect to the Origin 300 servers as shown in Figure 1-5. Figure 1-11 on page 12 shows the pin number locations for the USB type A port connectors, and Table 1-6 on page 12 shows the pin assignments. Figure 1-12 on page 13 shows the pin number locations for the USB type B port connectors, and Table 1-7 on page 13 shows the pin assignments.

Note: The USB hub might look different from the one shown in Figure 1-5.

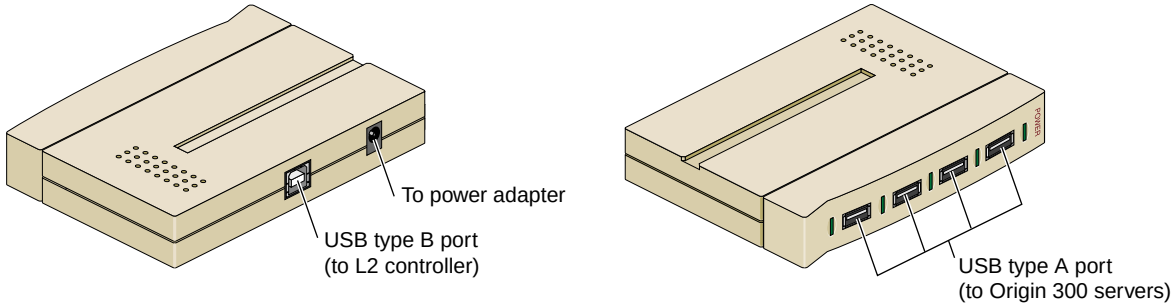

Figure 1-5 USB Hub Connectors

Connectors

This section provides the pin assignments for the connectors listed in Table 1-3.

Table 1-3 Connector Pin Assignments

Connector Type	Connectors	Pin Assignments
DB9 connector	Serial port 1 and serial port 2 on the SGI Origin 300 server and SGI Onyx 300 graphics system.	See Figure 1-6 on page 7
DB9 connector (pin 9 not connected)	L1 console port on the SGI Origin 300 server and SGI Onyx 300 graphics system; console port and modem port on the L2 controller.	See Figure 1-7 on page 8
RJ-45 connector	Ethernet port on the SGI Origin 300 server, SGI Onyx 300 graphics system, and L2 controller.	See Figure 1-8 on page 8
SCSI connector	The External SCSI on the SGI Origin 300 server, SGI Onyx 300 graphics system, and TP900.	See Figure 1-9 on page 9 and Table 1-4 on page 9
Stereo jack connector	RT interrupt input and output ports on the SGI Origin 300 server and SGI Onyx 300 graphics system.	See Figure 1-10 on page 11 and Table 1-5 on page 11
USB type A connector	USB port 1 and USB port 2 on the SGI Origin 300 server and SGI Onyx 300 graphics system; four L1 ports on the L2 controller; four USB ports on the USB hub.	See Figure 1-11 on page 12 and Table 1-6 on page 12
USB type B connector	USB L1 port on the SGI Origin 300 server and SGI Onyx 300 graphics system; L1 port on the NUMAlink module; USB port on the USB hub.	See Figure 1-12 on page 13 and Table 1-7 on page 13

DB9 Connector

Figure 1-6 shows the DB9 connector pin assignments for the serial port 1 and serial port 2 located on the rear panel of the SGI Origin 300 server and SGI Onyx 300 graphics system.

Figure 1-7 shows the DB9 connector pin assignments for the L1 console port on the SGI Origin 300 server and SGI Onyx 300 graphics system and for the console and modem ports located on the rear panel of the L2 controller.

Note: The pin assignments for the L1 console port, console port, and modem port are different from the pin assignments for the serial port 1 and serial port 2 because Pin 9 of the L1 console port, console port, and modem port is not connected.

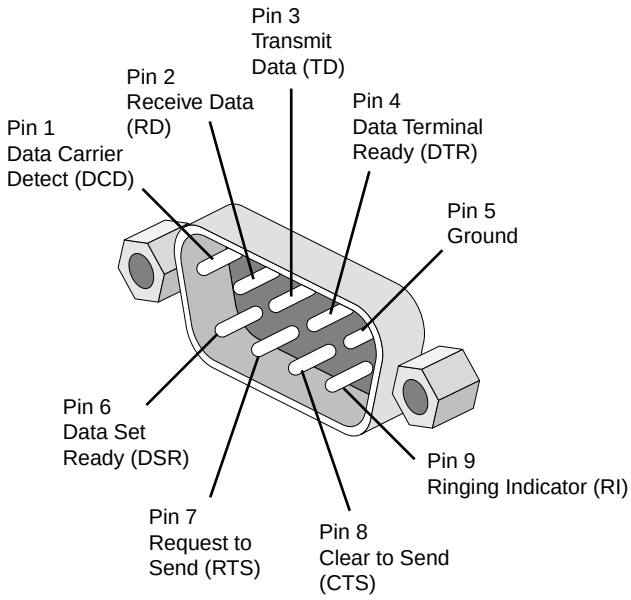

Figure 1-6 DB9 Pin Assignments for Serial Port 1 and Serial Port 2

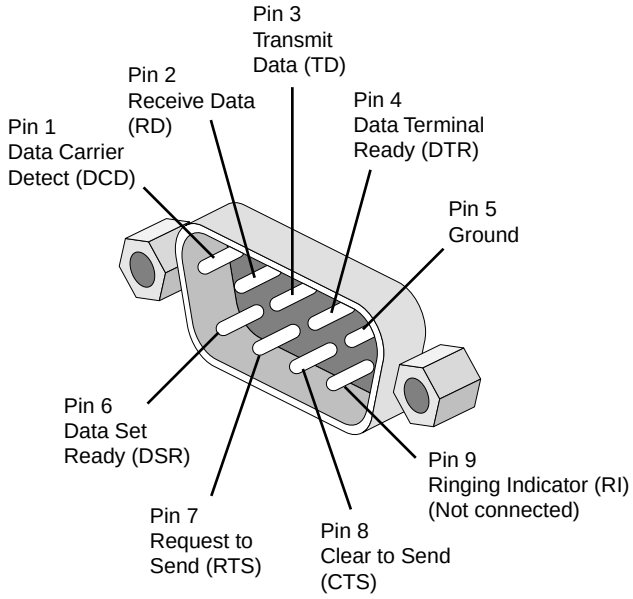

Figure 1-7 DB9 Pin Assignments for L1 Console Port, Console Port, and Modem Port

RJ-45 Connector

Figure 1-8 shows the pin assignments for the RJ-45 connector located on the rear panel of the SGI Origin 300 server, SGI Onyx 300 graphics system, and L2 controller.

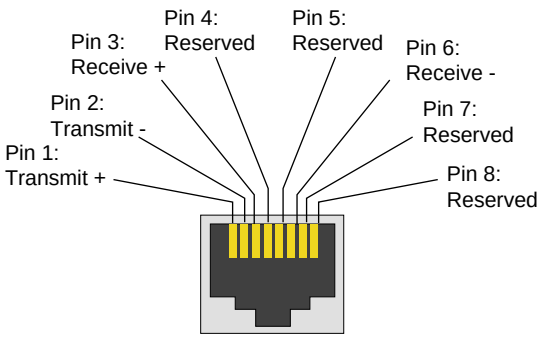

Figure 1-8 RJ-45 Connector Pin Assignments

External SCSI Port Connector

Figure 1-9 shows the external SCSI VHDCI connector pin locations for the external SCSI connector located on the rear panel of the SGI Origin 300 server and SGI Onyx 300 graphics system. These pin locations are also used for the two SCSI connectors located on the rear panel of the TP900 storage module. Table 1-4 lists the pin assignments for these SCSI ports.

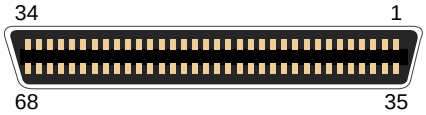

Figure 1-9 External SCSI Port Pin Number Locations

Table 1-4 SCSI VHDCI Pin Assignments

Pin Number	Signal Name	Pin Number	Signal Name
1	+DB (12)	35	-DB (12)
2	+DB (13)	36	-DB (13)
3	+DB (14)	37	-DB (14)
4	+DB (15)	38	-DB (15)
5	+DB (P1)	39	-DB (P1))
6	+DB (0)	40	-DB (0)
7	+DB (1)	41	-DB (1)
8	+DB (2)	42	-DB (2)
9	+DB (3)	43	-DB (3
10	+DB (4)	44	-DB (4)
11	+DB (5)	45	-DB (5)
12	+DB (6)	46	-DB (6)
13	+DB (7)	47	-DB (7)
14	+DB (P0)	48	-DB (P0)

Table 1-4 (continued) SCSI VHDCI Pin Assignments

Pin Number	Signal Name	Pin Number	Signal Name
15	Ground	49	Ground
16	DIFFSENS	50	Ground
17	TERMPWR	51	TERMPWR
18	TERMPWR	52	TERMPWR
19	Reserved	53	Reserved
20	Ground	54	Ground
21	+ATN	55	-ATN
22	Ground	56	Ground
23	+BSY	57	-BSY
24	+ACK	58	-ACK
25	+RST	59	-RST
26	+MSG	60	-MSG
27	+SEL	61	-SEL
28	+CD	62	-CD
29	+REQ	63	-REQ
30	+IO	64	-IO
31	+DB (8)	65	-DB (8)
32	+DB (9)	66	-DB (9)
33	+DB (10)	67	-DB(10)
34	+DB (11)	68	-DB (11)

Stereo Jack Connector Conductor

Figure 1-10 shows the stereo jack connector conductors for the RT interrupt input and RT interrupt output ports on the SGI Origin 300 server and SGI Onyx 300 graphics system. Table 1-5 lists the conductor assignments for the stereo jack connector.

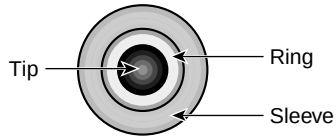

Figure 1-10 Stereo Jack Connector Conductors

Table 1-5 Stereo Jack Connector Conductor Assignments

Conductor	Function
Tip	Interrupt (active low)
Ring	+5 V
Sleeve	Chassis ground and cable shield

USB Type A Connector

Figure 1-11 shows the USB type A connector pin number locations for the USB port 1 and USB port 2 located on the rear panel of the SGI Origin 300 server and SGI Onyx 300 graphics system. These pin number locations are also used for the four USB ports on the USB hub that connect to the SGI Origin 300 server. Table 1-6 lists the pin assignments for the USB type A connector pins.

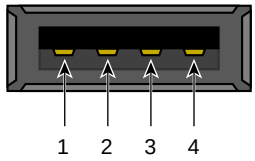

Figure 1-11 USB Type A Connector Pin Number Locations

Table 1-6 USB Type A Connector Pin Assignments

Signal	Color	Pin Number
+Data	Green	3
-data	White	2
VCC	Red	1
Ground	Black	4

USB Type B Connector

Figure 1-12 shows the USB type B connector pin number locations for the USB L1 port located on the rear panel of the SGI Origin 300 server and SGI Onyx 300 graphics system, for the L1 port on the NUMAlink module, and for the USB type B port connector on the USB hub that connects to the L2 controller. Table 1-7 lists the pin assignments for the USB type B connector.

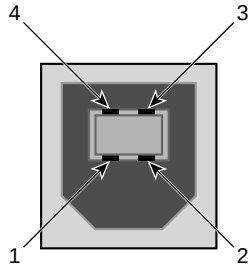

Figure 1-12 USB Type B Connector Pin Number Locations

Table 1-7 USB Type B Connector Pin Assignments

Signal	Color	Pin Number
+Data	Green	3
-data	White	2
VCC	Red	1
Ground	Black	4