4.2 Keyboard and Mouse Ports

4.2.1 General Information

Some styles of keyboards can be used on systems other than the ones they were originally shipped on. For this reason, this section identifies the keyboard and/or mouse system connection separately from any connections on the keyboard itself.

4.2.1.1 Types of Keyboard and Mouse System Connections

Keyboard and mouse connections to the system are either through a combined keyboard/mouse interface, or through PS/2 style keyboard and mouse interfaces, which are carried on separate cables. The connectors used are either a 15 pin D (DB-15), a 9 pin D (DB-9), a 6 pin mini-DIN or a PS/2 style 6 pin mini-DIN. Table 4-18 defines which chassis have which types of interfaces. The Origin200 has connectors for keyboard and mouse, but are reserved for future use.

Table 4-18 Keyboard & Mouse System Connections on SGI Platforms

Chassis Type	Model	Combined Keyboard & Mouse			Separate Keyboard & Mouse
		15 Pin (DB-15)	9 Pin (DB-9)	6 Pin Mini-DIN	PS/2 Style (6 Pin Mini-DIN)
Documented in Section		**4.2.2**	**4.2.3**	**4.2.4**	**4.2.5 & 4.2.6**
Twin Tower 12 Slot	All	X			
Twin Tower 15 Slot	All	X			
Predator Rack	All	X			
Diehard Single Tower	All	X			
Diehard2	All	X			
Personal IRIS	4D/20, 25		X		
	4D/30, 35			X	
Indigo	All			X	
Terminator Rack	All			X	
Eveready Deskside	All			X	
Indigo2	All				X
Indy	All				X
O2	All				X
OCTANE	All				X
Origin200*	All				X
Origin2000 & Onyx2 Deskside	All				X

4.2.1.2 Keyboard and Mouse Voltages and Interfaces

The table below shows the supply voltage(s) and logic levels for the keyboard and mouse as well as the type of interface each device has.

Table 4-19 Keyboard & Mouse Voltages and Interfaces

Interface	Platform	Supply Voltage	Logic Levels Mark/Space	Interface
DB-15 Keyboard/Mouse	All Twin Tower, Single Tower, Predator Rack	+12 V/ -12 V	-12/+12	EIA-232
DB-9 Keyboard/Mouse	4D/20, 25	+12 V/ -12 V	-12/+12	EIA-232
6 Pin Mini-DIN Keyboard/Mouse	4D/30, 35,	+8 V		EIA-232
	Indigo R3K	+5 V		EIA-232
	Indigo R4K	+12 V		EIA-232
	Terminator, Eveready	+ 12 V	-12/+12	EIA-232
6 Pin Mini-DIN PS/2 Keyboard	Indigo^2, Indy, O2, OCTANE, Origin200, Origin2000, Onyx2	+5 V	0/+5	TTL
6 Pin Mini-DIN PS/2 Mouse	Indigo^2, Indy, O2, OCTANE, Origin200, Origin2000, Onyx2	+5 V	0/+5	TTL

4.2.1.3 Keyboard Styles

There are four styles of keyboards for the system.

4D Style - This keyboard has a captive cable with a DB-15 connector for the system. This keyboard has a DB-9 connector on each side of the keyboard for the mouse connection. This is the keyboard used from the inception of the 4D series up until the Diehard2 platform. The mouse intended for this keyboard was an optical mouse.

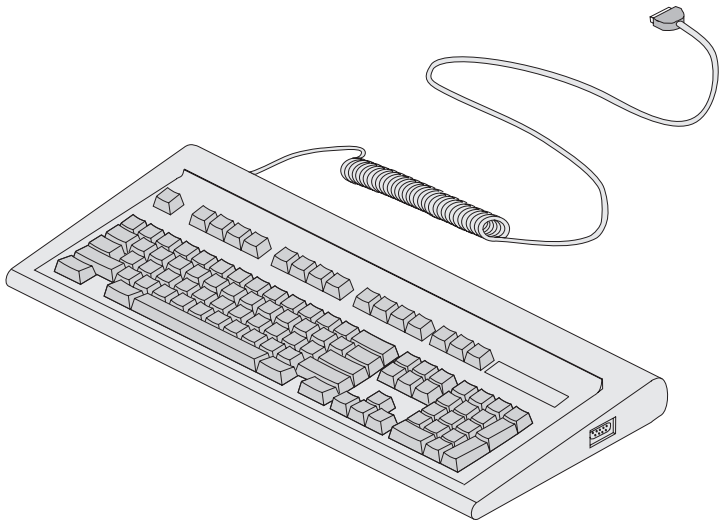

Figure 4-11 4D Style Keyboard

Personal IRIS Style - This keyboard has two DB-9 connectors. One is used for connecting to the system while the other is used to connect the mouse. This keyboard originally shipped first with the Personal IRIS. The mouse shipped with this keyboard was an optical mouse.

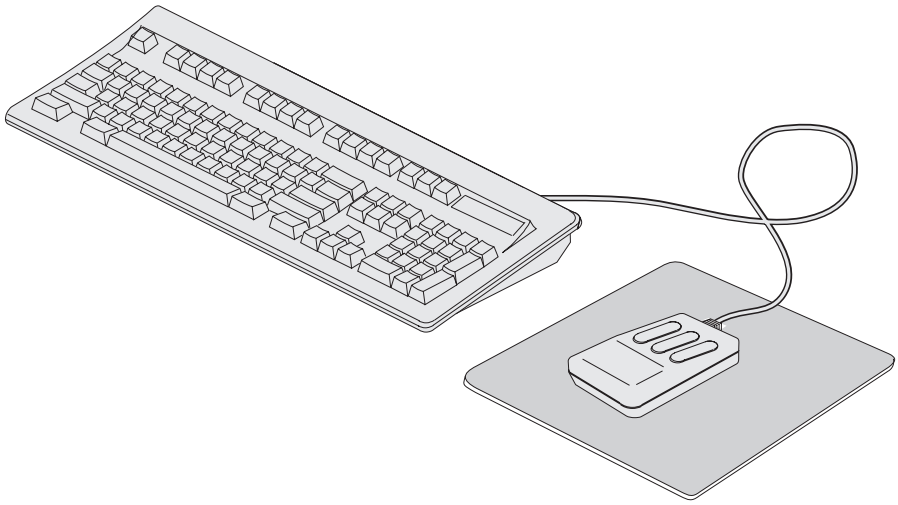

Figure 4-12 Personal IRIS Style Keyboard and Mouse

Indigo Style - This keyboard has two 6 pin mini-DIN connectors. One is used for connecting to the system while the other is used to connect the mouse. The two connectors are wired identically. The mouse originally shipped with the Indigo was a mechanical mouse. With the appropriate cable (DB-9 to 6 pin mini-DIN) this keyboard can be used on an older style Personal IRIS. Starting with the Eveready / Terminator chassis this style of keyboard was shipped with the high-end systems.

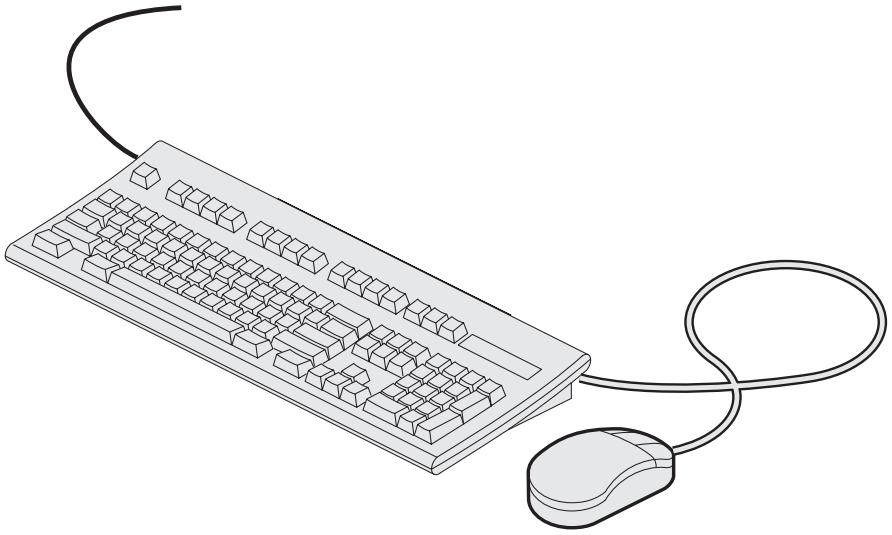

Figure 4-13 Indigo Style Keyboard & Mouse

PS/2 Style - This keyboard style has a captive cable for connecting to the system. There are no connectors available on this keyboard for connecting the mouse. This keyboard was originally shipped with the Indigo^2 and Indy.

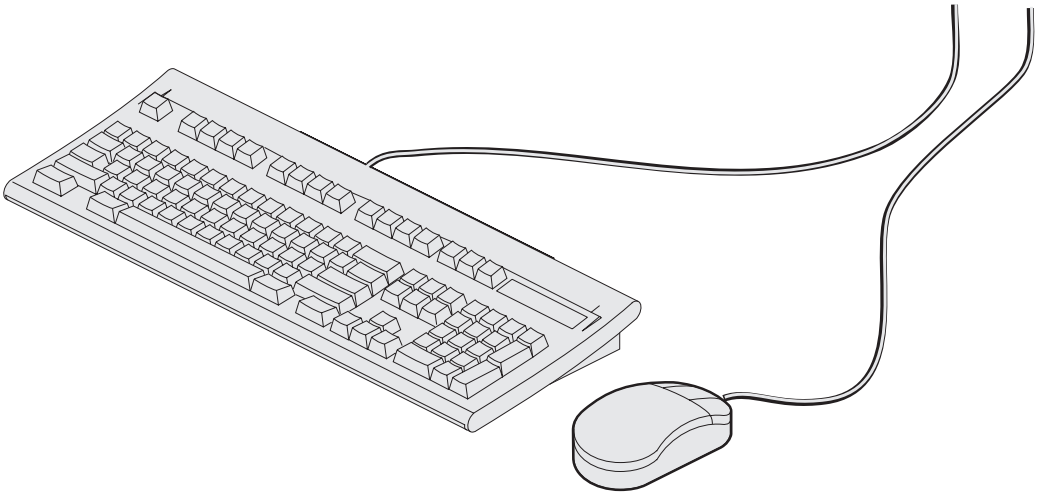

Figure 4-14 PS / 2 Style Keyboard & Mouse

4.2.2 DB-15 Keyboard/Mouse System Connection

4.2.2.1 Connector Drawing

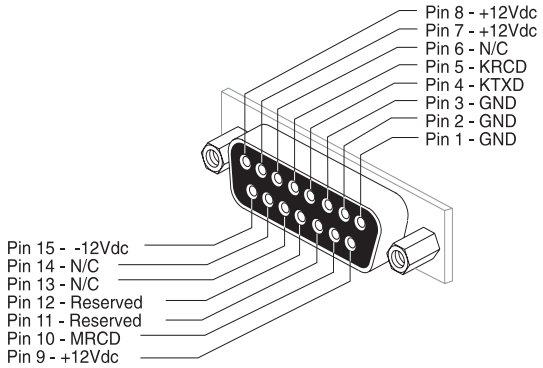

Figure 4-15 DB-15 Keyboard / Mouse Connector

4.2.2.2 Pinout

Table 4-20 DB-15 Keyboard / Mouse System Connector Pinout

Pin	Signal Name	Description	Input/Output
1	GND	Ground	-
2	GND	Ground	-
3	GND	Ground	-
4	KTXD	Keyboard Transmit Data	Output
5	KRCD	Keyboard Receive Data	Input
6	N/C	No Connection	-
7	+12Vdc	Power	Output
8	+12 Vdc	Power	Output
9	+12 Vdc	Power	Output
10	MRCD	Mouse Transmit Data	Input
11	RES	Reserved	-
12	RES	Reserved	-
13	N/C	No Connection	-
14	N/C	No Connection	-
15	-12 Vdc	Power	Output

1. Maximum current draw on the +12 Vdc lines is 1 amp.
2. Maximum current draw on the -12 Vdc line is 1 amp.

4.2.3 DB-9 Keyboard/Mouse System Connection

4.2.3.1 Connector Drawing

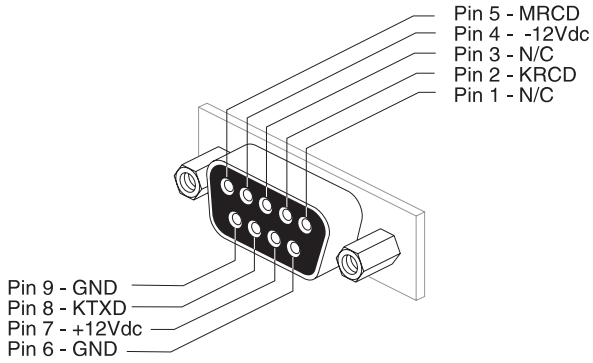

Figure 4-16 DB-9 Keyboard / Mouse Connector

4.2.3.2 Pinout

Table 4-21 DB-9 Keyboard / Mouse System Connector Pinout

Pin	Signal Name	Description	Input/Output
1	N/C	No Connection	-
2	KRCD	Keyboard Receive Data	Input
3	N/C	No Connection	-
4	-12 Vdc	Power	Output
5	MRCD	Mouse Receive Data	Input
6	GND	Ground	-
7	+12 Vdc	Power	Output
8	KTXD	Keyboard Transmit Data	Output
9	GND	Ground	-

4.2.4 6 Pin Mini-DIN Keyboard/Mouse System Connection

4.2.4.1 Connector Drawing

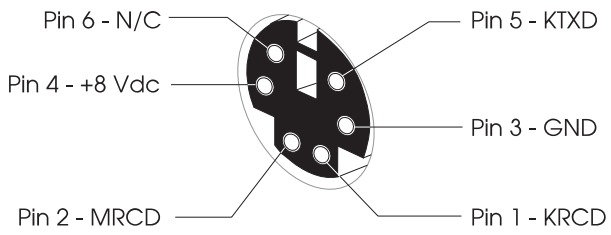

Figure 4-17 6 Pin Mini-DIN Keyboard / Mouse Connector

4.2.4.2 Pinout

Table 4-22 6 Pin Mini-DIN Keyboard / Mouse System Connector Pinout

Pin	Signal Name	Description	Input/Output
1	KRCD	Keyboard Receive	Input
2	MRCD	Mouse Receive	Input
3	GND	Ground	-
4	+5/8/12 Vdc[1]	Power	Output (1 Amp Max)
5	KTXD	Keyboard Transmit	Output
6	N/C	No Connection	-

1. Consult the table on page 4-23 to determine the supplied voltage.

4.2.5 PS/2 Keyboard System Connection (6 Pin Mini-DIN)

4.2.5.1 Connector Drawing

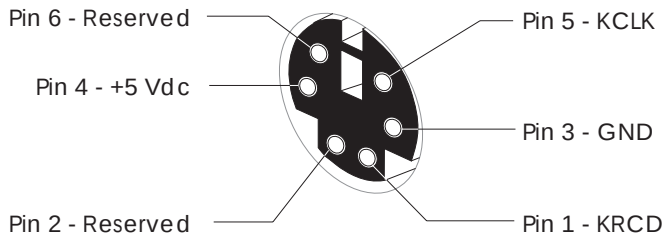

Figure 4-18 PS/2 Keyboard Connector

4.2.5.2 Pinout

Table 4-23 6 Pin Mini-DIN Keyboard System Connector Pinout

Pin	Signal Name	Description	Input/Output
1	KRCD	Keyboard Receive	Input
2		Reserved	-
3	GND	Ground	Output
4	+5 Vdc	Power	Output (1 Amp Max)
5	KCLK	Keyboard Clock	Output
6		Reserved	-

4.2.6 PS/2 Mouse System Connection (6 Pin Mini-DIN)

4.2.6.1 Connector Drawing

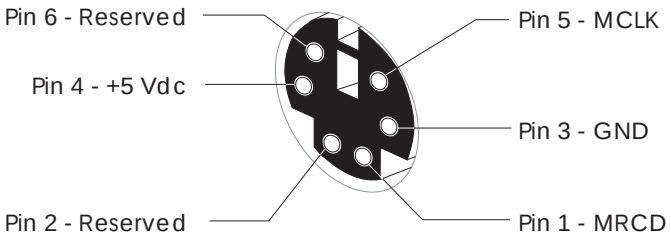

Figure 4-19 PS/2 Mouse Connector

4.2.6.2 Pinout

Table 4-24 6 Pin Mini-DIN Mouse System Connector Pinout

Pin	Signal Name	Description	Input/Output
1	MRCD	Mouse Receive	Input
2	-	Reserved	-
3	GND	Ground	Output
4	+5 Vdc	Power	Output (1 Amp Max)
5	MCLK	Mouse Clock	Output
6	-	Reserved	-

4.2.7 DB-9 Mouse Connection (4D Style Keyboard)

This mouse is not a device that sends its information in the form of a serial stream of data including the codes for button presses. This mouse connection was part of the custom keyboard used for the original 4D series of systems.

4.2.7.1 Connector Drawing

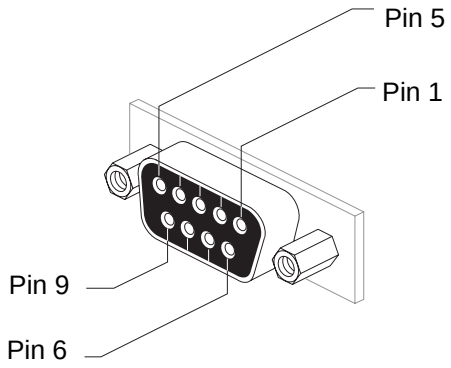

Figure 4-20 DB-9 Mouse Connector

4.2.7.2 Pinout

Table 4-25 DB-9 Mouse System Connector Pinout (4D Keyboard)

Pin	Signal Name	Description	Input/Output
1	VCC	+12 Volts	-
2	XA		Input
3	XB or -5V		Input/-
4	YA		Input
5	YB or MTXD		Input
6	Left Button		Input
7	Middle Button		Input
8	Right Button		Input
9	GND	Ground	-