

Cabling Specifications for the Universal Access Server

This appendix provides the following pinout information:

- Console and Auxiliary Port Signals and Pinouts
- Ethernet Cable Assembly and Pinouts
- Dual T1 PRI Card Port Pinouts
- Dual E1 PRI Card Cable Assemblies and Pinouts
- Alarm Cable Assembly and Pinouts

Note This appendix specifies pinouts only for the pins used. Pins not listed in the tables in this appendix are not connected.

Console and Auxiliary Port Signals and Pinouts

The AS5200 comes with a console and auxiliary cable kit, that contains the cable and adapters you need to connect a console (an ASCII terminal or PC running terminal emulation software) or modem to your AS5200. The console and auxiliary cable kit includes the following items:

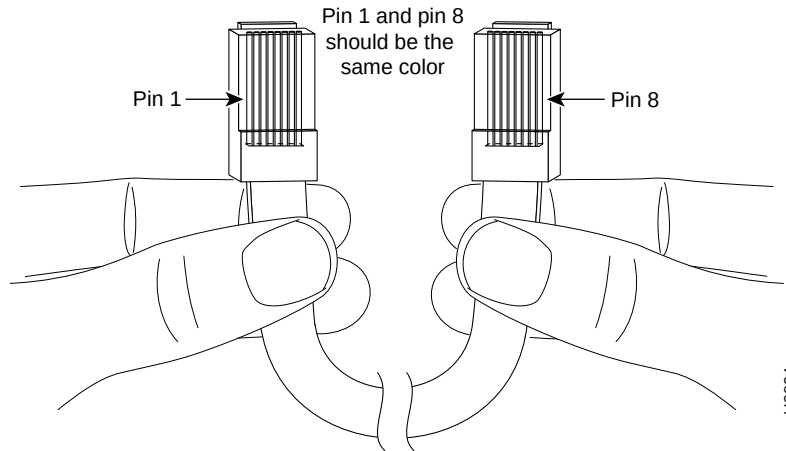
- RJ-45-to-RJ-45 roll-over cable. (See the next section, “Identifying a Roll-Over Cable,” for more information.)
- RJ-45-to-DB-9 female DTE adapter (labeled Terminal).
- RJ-45-to-DB-25 female DTE adapter (labeled Terminal).
- RJ-45-to-DB-25 male DCE adapter (labeled Modem).

For console connections, proceed to the section “Console Port Signals and Pinouts” later in this appendix; for modem connections, proceed to the section “Auxiliary Port Signals and Pinouts” later in this appendix.

Identifying a Roll-Over Cable

You can identify a roll-over cable by comparing the two modular ends of the cable. Holding the cables side-by-side, with the tab at the back, the wire connected to the pin on the outside of the left plug should be the same color as the wire connected to the pin on the outside of the right plug. (See Figure C-1.) If your cable was purchased from Cisco Systems, pin 1 will be white on one connector, and pin 8 will be white on the other (a roll-over cable reverses pins 1 and 8, 2 and 7, 3 and 6, and 4 and 5).

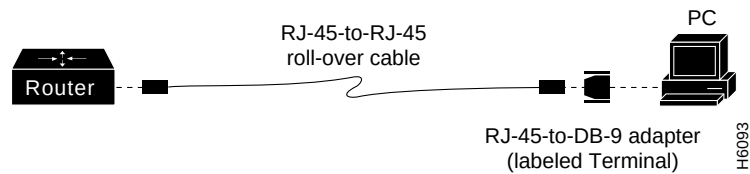
Figure C-1 Identifying a Roll-Over Cable



Console Port Signals and Pinouts

Use the RJ-45-to-RJ-45 roll-over cable and RJ-45-to-DB-9 female DTE adapter (labeled Terminal) to connect the console port to a PC running terminal emulation software. Figure C-2 shows how to connect the console port to a PC. Table C-1 lists the pinouts for the asynchronous serial console port, the RJ-45-to-RJ-45 roll-over cable, and the RJ-45-to-DB-9 female DTE adapter (labeled Terminal).

Figure C-2 Connecting the Console Port to a PC



Console and Auxiliary Port Signals and Pinouts

Table C-1 Console Port Signaling and Cabling Using a DB-9 Adapter

Console Port (DTE)	RJ-45-to-RJ-45 Roll-Over Cable		RJ-45-to-DB-9 Terminal Adapter	Console Device
Signal	RJ-45 Pin	RJ-45 Pin	DB-9 Pin	Signal
RTS	1 ¹	8	8	CTS
DTR	2	7	6	DSR
TxD	3	6	2	RxD
GND	4	5	5	GND
GND	5	4	5	GND
RxD	6	3	3	TxD
DSR	7	2	4	DTR
CTS	8 ¹	1	7	RTS

1. Pin 1 is connected internally to Pin 8.

Use the RJ-45-to-RJ-45 roll-over cable and RJ-45-to-DB-25 female DTE adapter (labeled Terminal) to connect the console port to a terminal. Figure C-3 shows how to connect the console port to a terminal. Table C-2 lists the pinouts for the asynchronous serial console port, the RJ-45-to-RJ-45 roll-over cable, and the RJ-45-to-DB-25 female DTE adapter (labeled Terminal).

Figure C-3 Connecting the Console Port to a Terminal

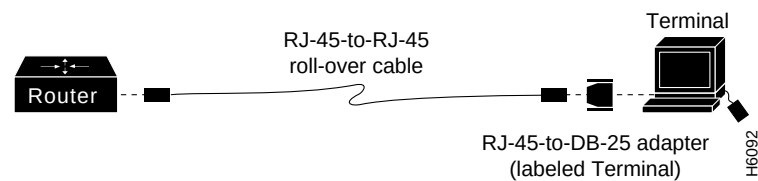


Table C-2 Console Port Signaling and Cabling Using a DB-25 Adapter

Console Port (DTE) ¹	RJ-45-to-RJ-45 Roll-Over Cable		RJ-45-to-DB-25 Terminal Adapter	Console Device
	RJ-45 Pin	RJ-45 Pin	DB-25 Pin	
RTS	1 ²	8	5	CTS
DTR	2	7	6	DSR
TxD	3	6	3	RxD
GND	4	5	7	GND
GND	5	4	7	GND
RxD	6	3	2	TxD
DSR	7	2	20	DTR
CTS	8 ¹	1	4	RTS

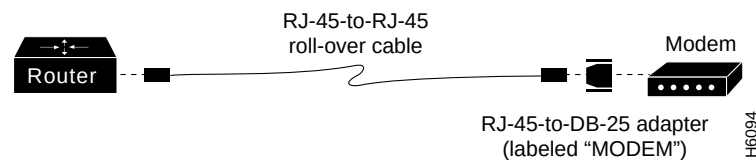
1. You can use the same cabling to connect a console to the auxiliary port.

2. Pin 1 is connected internally to Pin 8.

Auxiliary Port Signals and Pinouts

Use the RJ-45-to-RJ-45 roll-over cable and RJ-45-to-DB-25 male DCE adapter (labeled Modem) to connect the auxiliary port to a modem. Figure C-4 shows how to connect the auxiliary port to a modem. Table C-3 lists the pinouts for the asynchronous serial auxiliary port, the RJ-45-to-RJ-45 roll-over cable, and the RJ-45-to-DB-25 male DCE adapter (labeled Modem).

Figure C-4 Connecting the Auxiliary Port to a Modem



Ethernet Cable Assembly and Pinouts

Table C-3 Auxiliary Port Signaling and Cabling Using a DB-25 Adapter

AUX Port (DTE)	RJ-45-to-RJ-45 Roll-Over Cable		RJ-45-to-DB-25 Modem Adapter	Modem
Signal	RJ-45 Pin	RJ-45 Pin	DB-25 Pin	Signal
RTS	1	8	4	RTS
DTR	2	7	20	DTR
TxD	3	6	3	TxD
GND	4	5	7	GND
GND	5	4	7	GND
RxD	6	3	2	RxD
DSR	7	2	8	DCD
CTS	8	1	5	CTS

Ethernet Cable Assembly and Pinouts

This section describes the pinouts for the Ethernet ports and cables.

Figure C-5 shows an Ethernet attachment unit interface (AUI) cable assembly, and Table C-4 lists the AUI cable pinouts.

Figure C-5 Ethernet (AUI) Cable Assembly

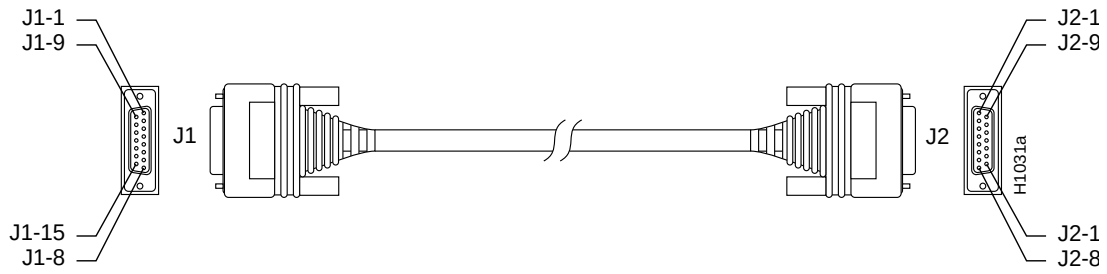


Table C-4 Ethernet (AUI) Cable Pinouts (DB-15)

Pin	Ethernet Circuit	Signal
3	DO-A	Data Out Circuit A
10	DO-B	Data Out Circuit B
11	DO-S	Data Out Circuit Shield
5	DI-A	Data In Circuit A
12	DI-B	Data In Circuit B
4	DI-S	Data In Circuit Shield
2	CI-A	Control In Circuit A
9	CI-B	Control In Circuit B
1	CI-S	Control In Circuit Shield
6	VC	Voltage Common
13	VP	Voltage Plus
14	VS	Voltage Shield (L25 and M25)
Shell	PG	Protective Ground

Dual T1 PRI Card Port Pinouts

Table C-5 lists the T1 PRI card port pinouts. Use a straight-through RJ-48C-to-RJ-48C cable to connect the T1 port to an RJ-48C jack.

Table C-5 T1 PRI Card Port (RJ-48C) Pinouts

RJ-48C 8 Pin¹	Description
1	Receive ring from telco
2	Receive tip from telco
4	Transmit ring to telco
5	Transmit tip to telco

1. Pins 3, 6, 7, and 8 are not used.

Dual E1 PRI Card Cable Assemblies and Pinouts

Four serial cables are available from Cisco Systems for connecting the E1 PRI card ports. All four have DB-15 connectors on the E1 end and either BNC, DB-15, twinax, or RJ-45 connectors on the network end. Figure C-6, Figure C-7, Figure C-8, and Figure C-9 show the E1 interface cables. Table C-6 lists the pinouts for the E1 interface cables connecting to the Dual E1 PRI card.

**Figure C-6 E1 Interface Cable for 75-Ohm, Unbalanced Connections
(with BNC Connectors)**

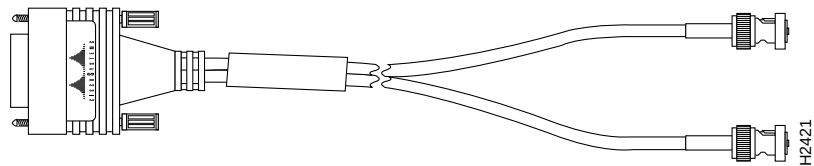


Figure C-7 E1 Interface Cable for 120-Ohm, Balanced Connections (with DB-15 Connector)

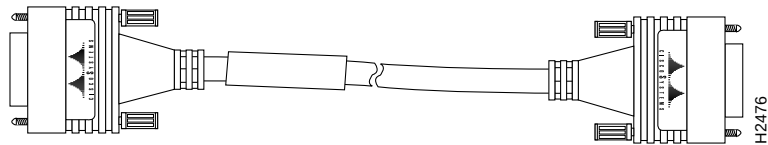


Figure C-8 E1 Interface Cable for 120-Ohm, Balanced Connections (with Twinax Connectors)

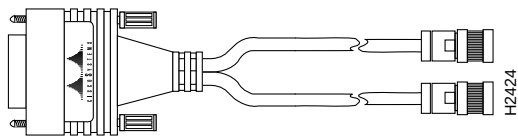


Figure C-9 E1 Interface Cable for 120-Ohm, Balanced Connections (with RJ-45 Connector)

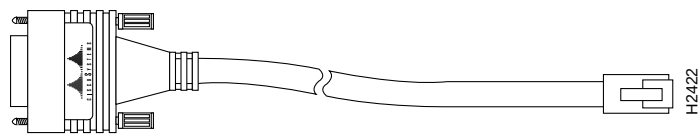


Table C-6 E1 Interface Cable Pinouts

CE1 End		Network End						
DB-15 ¹		BNC	DB-15		Twinax		RJ-45	
Pin	Signal ²	Signal	Pin	Signal	Pin	Signal	Pin	Signal
9	TX Tip	TX Tip	1	TX Tip	TX-1	TX Tip	14	TX Tip
2	TX Ring	TX Shield	9	TX Ring	TX-2	TX Ring	52	TX Ring

Synchronous Serial Cable Assemblies and Pinouts

CE1 End		Network End						
DB-15 ¹		BNC	DB-15		Twinax		RJ-45	
Pin	Signal ²	Signal	Pin	Signal	Pin	Signal	Pin	Signal
10	TX Shield	–	2	TX Shield	Shield	TX Shield	36	TX Shield
8	RX Tip	RX Tip	3	RX Tip	RX-1	RX Tip	41	RX Tip
15	RX Ring	RX Shield	11	RX Ring	RX-2	RX Ring	52	RX Ring
7	RX Shield	–	4	RX Shield	Shield	RX Shield	63	RX Shield

1. Any pins not described in this table are not connected.

2. TX = transmit; RX = receive.

Synchronous Serial Cable Assemblies and Pinouts

The illustrations and tables in this section provide assembly drawings and pinouts for the EIA-530 data communications equipment (DCE), EIA/TIA-232, EIA/TIA-449, V.35, and X.21 DTE and DCE cables, which are used with the five-in-one synchronous serial WAN port.

EIA-530

Figure C-10 shows the EIA-530 serial cable assembly, and Table C-7 lists the pinouts. Arrows indicate signal direction: a right arrow (—>) indicates DTE to DCE, and a left arrow (<—) indicates DCE to DTE.

Figure C-10 EIA-530 Serial Cable Assembly

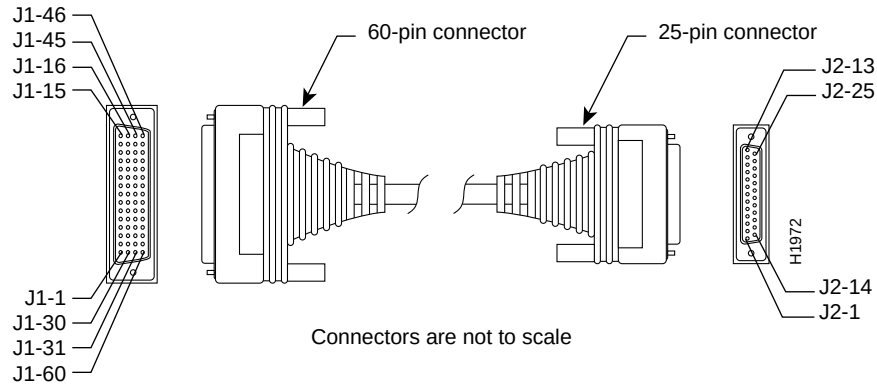


Table C-7 EIA-530 DTE Cable Pinouts (DB-60 to DB-25)

60 Pin	Signal	25 Pin	Signal	Direction DTE DCE ¹
J1-11	TxD/RxD+	J2-2	BA(A), TxD+	—>
J1-12	TxD/RxD–	J2-14	BA(B), TxD–	—>
J1-28	RxD/TxD+	J2-3	BB(A), RxD+	<—
J1-27	RxD/TxD–	J2-16	BB(B), RxD–	<—
J1-9	RTS/CTS+	J2-4	CA(A), RTS+	—>
J1-10	RTS/CTS–	J2-19	CA(B), RTS–	—>
J1-1	CTS/RTS+	J2-5	CB(A), CTS+	<—
J1-2	CTS/RTS–	J2-13	CB(B), CTS–	<—
J1-3	DSR/DTR+	J2-6	CC(A), DSR+	<—
J1-4	DSR/DTR–	J2-22	CC(B), DSR–	<—
J1-46	Shield_GND	J2-1	Shield	Shorted
J1-47	MODE_2	–	–	
J1-48	GND	–	–	Shorted
J1-49	MODE_1	–	–	

Synchronous Serial Cable Assemblies and Pinouts

60 Pin	Signal	25 Pin	Signal	Direction	
				DTE	DCE ¹
J1-5	DCD/DCD+	J2-8	CF(A), DCD+	<—	
J1-6	DCD/DCD–	J2-10	CF(B), DCD–	<—	
J1-24	TxC/RxC+	J2-15	DB(A), TxC+	<—	
J1-23	TxC/RxC–	J2-12	DB(B), TxC–	<—	
J1-26	RxC/TxCE+	J2-17	DD(A), RxC+	<—	
J1-25	RxC/TxCE–	J2-9	DD(B), RxC–	<—	
J1-44	LL/DCD	J2-18	LL	—>	
J1-45	Circuit_GND	J2-7	Circuit_GND	–	
J1-7	DTR/DSR+	J2-20	CD(A), DTR+	—>	
J1-8	DTR/DSR–	J2-23	CD(B), DTR–	—>	
J1-13	TxCE/TxC+	J2-24	DA(A),	—>	
J1-14	TxCE/TxC–	J2-11	TxCE+	—>	
			DA(B),		
			TxCE–		

1. The EIA-530 interface cannot be operated in DCE mode. A DCE cable is not available for the EIA-530 interface.

EIA/TIA-232

Figure C-11 shows the EIA/TIA-232 cable assembly. Table C-8 lists the DTE pinouts. Table C-9 lists the DCE pinouts. Arrows indicate signal direction: a right arrow (—>) indicates DTE to DCE, and a left arrow (<—) indicates DCE to DTE.

Figure C-11 EIA/TIA-232 Cable Assembly

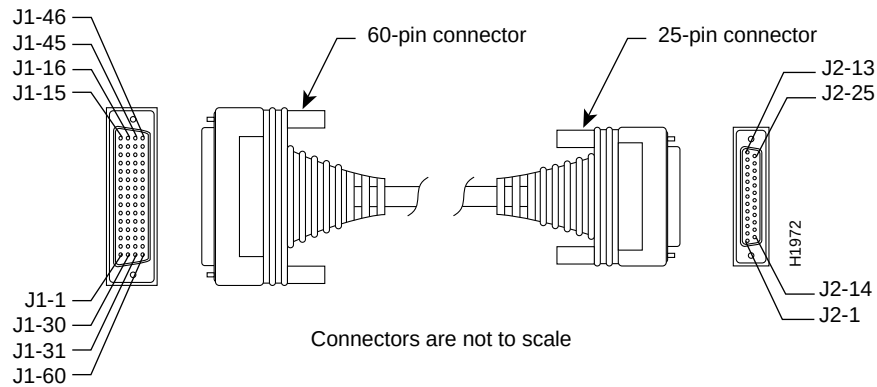


Table C-8 EIA/TIA-232 DTE Cable Pinouts (DB-60 to DB-25)

60 Pin	Signal	Description	Direction	25 Pin	Signal
J1-50	MODE_0	Shorting group	—	—	—
J1-51	GND				
J1-52	MODE_DCE				
J1-46	Shield GND	Single	—	J2-1	Shield GND
J1-41	TxD/RxD	Twisted pair no. 5	—>	J2-2	TxD
Shield	—		—	Shield	—
J1-36	RxD/TxD	Twisted pair no. 9	<—	J2-3	RxD
Shield	—		—	Shield	—
J1-42	RTS/CTS	Twisted pair no. 4	—>	J2-4	RTS
Shield	—		—	Shield	—

Synchronous Serial Cable Assemblies and Pinouts

60 Pin	Signal	Description	Direction	25 Pin	Signal
J1-35 Shield	CTS/RTS –	Twisted pair no. 10	<— –	J2-5 Shield	CTS –
J1-34 Shield	DSR/DTR –	Twisted pair no. 11	<— –	J2-6 Shield	DSR –
J1-45 Shield	Circuit GND –	Twisted pair no. 1	– –	J2-7 Shield	Circuit GND –
J1-33 Shield	DCD/LL –	Twisted pair no. 12	<— –	J2-8 Shield	DCD –
J1-37 Shield	TxC/NIL –	Twisted pair no. 8	<— –	J2-15 Shield	TxC –
J1-38 Shield	RxC/TxCE –	Twisted pair no. 7	<— –	J2-17 Shield	RxC –
J1-44 Shield	LL/DCD –	Twisted pair no. 2	—> –	J2-18 Shield	LTST –
J1-43 Shield	DTR/DSR –	Twisted pair no. 3	—> –	J2-20 Shield	DTR –
J1-39 Shield	TxCE/TxC –	Twisted pair no. 6	—> –	J2-24 Shield	TxCE –

Synchronous Serial Cable Assemblies and Pinouts

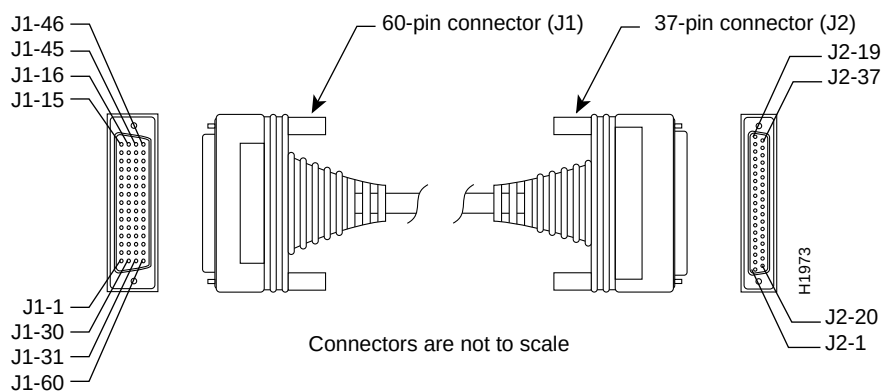
Table C-9 EIA/TIA-232 DCE Cable Pinouts (DB-60 to DB-25)

60 Pin	Signal	Description	Direction	25 Pin	Signal
J1-50 J1-51	MODE_0 GND	Shorting group	—	—	—
J1-46	Shield GND	Single	—	J2-1	Shield GND
J1-36 Shield	RxD/TxD —	Twisted pair no. 9	<— —	J2-2 Shield	TxD —
J1-41 Shield	TxD/RxD —	Twisted pair no. 5	—> —	J2-3 Shield	RxD —
J1-35 Shield	CTS/RTS —	Twisted pair no. 10	<— —	J2-4 Shield	RTS —
J1-42 Shield	RTS/CTS —	Twisted pair no. 4	—> —	J2-5 Shield	CTS —
J1-43 Shield	DTR/DSR —	Twisted pair no. 3	—> —	J2-6 Shield	DSR —
J1-45 Shield	Circuit GND —	Twisted pair no. 1	— —	J2-7 Shield	Circuit GND
J1-44 Shield	LL/DCD —	Twisted pair no. 2	—> —	J2-8 Shield	DCD —
J1-39 Shield	TxCE/TxC —	Twisted pair no. 7	—> —	J2-15 Shield	TxC —
J1-40 Shield	NIL/RxC —	Twisted pair no. 6	—> —	J2-17 Shield	RxC —
J1-33 Shield	DCD/LL —	Twisted pair no. 12	<— —	J2-18 Shield	LTST —
J1-34 Shield	DSR/DTR —	Twisted pair no. 11	<— —	J2-20 Shield	DTR —
J1-38 Shield	RxC/TxCE —	Twisted pair no. 8	<— —	J2-24 Shield	TxCE —

EIA/TIA-449

Figure C-12 shows the EIA/TIA-449 cable assembly. Table C-10 lists the DTE pinouts. Table C-11 lists the DCE pinouts. Arrows indicate signal direction: a right arrow (→) indicates DTE to DCE, and a left arrow (←) indicates DCE to DTE.

Figure C-12 EIA/TIA-449 Cable Assembly



Synchronous Serial Cable Assemblies and Pinouts

Table C-10 EIA/TIA-449 DTE Cable Pinouts (DB-60 to DB-37)

60 Pin	Signal	Description	Direction	37 Pin	Signal
J1-49 J1-48	MODE_1 GND	Shorting group	—	—	—
J1-51 J1-52	GND MODE_DCE	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-1	Shield GND
J1-11 J1-12	TxD/RxD+ TxD/RxD—	Twisted pair no. 6	—> —>	J2-4 J2-22	SD+ SD—
J1-24 J1-23	TxC/RxC+ TxC/RxC—	Twisted pair no. 9	<— <—	J2-5 J2-23	ST+ ST—
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 11	<— <—	J2-6 J2-24	RD+ RD—
J1-9 J1-10	RTS/CTS+ RTS/CTS—	Twisted pair no. 5	—> —>	J2-7 J2-25	RS+ RS—
J1-26 J1-25	RxC/TxCE+ RxC/TxCE—	Twisted pair no. 10	<— <—	J2-8 J2-26	RT+ RT—
J1-1 J1-2	CTS/RTS+ CTS/RTS—	Twisted pair no. 1	<— <—	J2-9 J2-27	CS+ CS—
J1-44 J1-45	LL/DCD Circuit_GND	Twisted pair no. 12	—> —	J2-10 J2-37	LL SC
J1-3 J1-4	DSR/DTR+ DSR/DTR—	Twisted pair no. 2	<— <—	J2-11 J2-29	DM+ DM—
J1-7 J1-8	DTR/DSR+ DTR/DSR—	Twisted pair no. 4	—> —>	J2-12 J2-30	TR+ TR—
J1-5 J1-6	DCD/DCD+ DCD/DCD—	Twisted pair no. 3	<— <—	J2-13 J2-31	RR+ RR—
J1-13 J1-14	TxCE/TxC+ TxCE/TxC—	Twisted pair no. 7	—> —>	J2-17 J2-35	TT+ TT—
J1-15 J1-16	Circuit_GND Circuit_GND	Twisted pair no. 9	— —	J2-19 J2-20	SG RC

Synchronous Serial Cable Assemblies and Pinouts

Table C-11 EIA/TIA-449 DCE Cable Pinouts (DB-60 to DB-37)

60 Pin	Signal	Description	Direction	37 Pin	Signal
J1-49 J1-48	MODE_1 GND	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-1	Shield GND
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 11	<— <—	J2-4 J2-22	SD+ SD—
J1-13 J1-14	TxCE/TxC+ TxCE/TxC—	Twisted pair no. 7	—> —>	J2-5 J2-23	ST+ ST—
J1-11 J1-12	TxD/RxD+ TxD/RxD—	Twisted pair no. 6	—> —>	J2-6 J2-24	RD+ RD—
J1-1 J1-2	CTS/RTS+ CTS/RTS—	Twisted pair no. 1	<— <—	J2-7 J2-25	RS+ RS—
J1-24 J1-23	TxC/RxC+ TxC/RxC—	Twisted pair no. 9	—> —>	J2-8 J2-26	RT+ RT—
J1-9 J1-10	RTS/CTS+ RTS/CTS—	Twisted pair no. 5	—> —>	J2-9 J2-27	CS+ CS—
J1-29 J1-30	NIL/LL Circuit_GND	Twisted pair no. 12	—> —	J2-10 J2-37	LL SC
J1-7 J1-8	DTR/DSR+ DTR/DSR—	Twisted pair no. 4	—> —>	J2-11 J2-29	DM+ DM—
J1-3 J1-4	DSR/DTR+ DSR/DTR—	Twisted pair no. 2	<— <—	J2-12 J2-30	TR+ TR—
J1-5 J1-6	DCD/DCD+ DCD/DCD—	Twisted pair no. 3	—> —>	J2-13 J2-31	RR+ RR—
J1-26 J1-25	RxC/TxCE+ RxC/TxCE—	Twisted pair no. 10	<— <—	J2-17 J2-35	TT+ TT—
J1-15 J1-16	Circuit_GND Circuit_GND	Twisted pair no. 8	— —	J2-19 J2-20	SG RC

V.35

Figure C-13 shows the V.35 cable assembly. Table C-12 lists the DTE pinouts. Table C-13 lists the DCE pinouts. Arrows indicate signal direction: a right arrow (—>) indicates DTE to DCE, and a left arrow (<—) indicates DCE to DTE.

Figure C-13 V.35 Cable Assembly

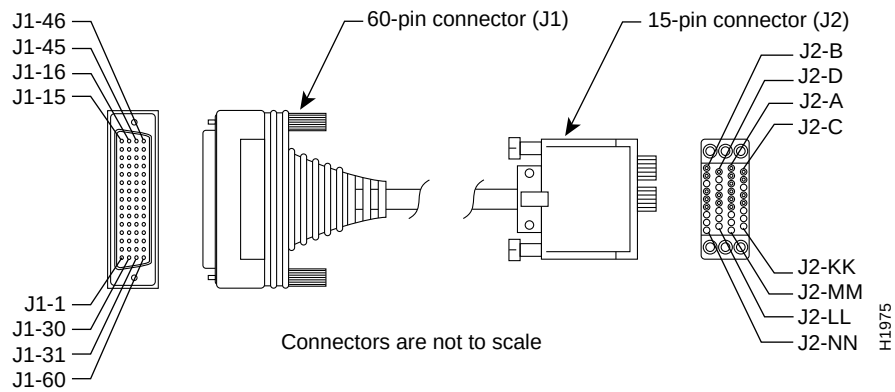


Table C-12 V.35 DTE Cable Pinouts (DB-60 to 34-Pin)

60 Pin	Signal	Description	Direction	34 Pin	Signal
J1-49 J1-48	MODE_1 GND	Shorting group	—	—	—
J1-50 J1-51 J1-52	MODE_0 GND MODE_DCE	Shorting group	—	—	—
J1-53 J1-54 J1-55 J1-56	TxC/NIL RxC_TxCE RxD/TxD GND	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-A	Frame GND

Synchronous Serial Cable Assemblies and Pinouts

60 Pin	Signal	Description	Direction	34 Pin	Signal
J1-45 Shield	Circuit_GND —	Twisted pair no. 12	— —	J2-B Shield	Circuit GND —
J1-42 Shield	RTS/CTS —	Twisted pair no. 9	—> —	J2-C Shield	RTS —
J1-35 Shield	CTS/RTS —	Twisted pair no. 8	<— —	J2-D Shield	CTS —
J1-34 Shield	DSR/DTR —	Twisted pair no. 7	<— —	J2-E Shield	DSR —
J1-33 Shield	DCD/LL —	Twisted pair no. 6	<— —	J2-F Shield	RLSD —
J1-43 Shield	DTR/DSR —	Twisted pair no. 10	—> —	J2-H Shield	DTR —
J1-44 Shield	LL/DCD —	Twisted pair no. 11	—> —	J2-K Shield	LT —
J1-18 J1-17	TxD/RxD+ TxD/RxD—	Twisted pair no. 1	—> —>	J2-P J2-S	SD+ SD—
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 5	<— <—	J2-R J2-T	RD+ RD—
J1-20 J1-19	TxCE/TxC+ TxCE/TxC—	Twisted pair no. 2	—> —>	J2-U J2-W	SCTE+ SCTE—
J1-26 J1-25	RxC/TxCE+ RxC/TxCE—	Twisted pair no. 4	<— <—	J2-V J2-X	SCR+ SCR—
J1-24 J1-23	TxC/RxC+ TxC/RxC—	Twisted pair no. 3	<— <—	J2-Y J2-AA	SCT+ SCT—

Synchronous Serial Cable Assemblies and Pinouts

Table C-13 V.35 DCE Cable Pinouts (DB-60 to 34-Pin)

60 Pin	Signal	Description	Direction	34 Pin	Signal
J1-49 J1-48	MODE_1 GND	Shorting group	—	—	—
J1-50 J1-51	MODE_0 GND	Shorting group	—	—	—
J1-53 J1-54 J1-55 J1-56	TxC/NIL RxC_TxCE RxD/TxD GND	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-A	Frame GND
J1-45 Shield	Circuit_GND —	Twisted pair no. 12	— —	J2-B Shield	Circuit GND —
J1-35 Shield	CTS/RTS —	Twisted pair no. 8	<— —	J2-C Shield	RTS —
J1-42 Shield	RTS/CTS —	Twisted pair no. 9	—> —	J2-D Shield	CTS —
J1-43 Shield	DTR/DSR —	Twisted pair no. 10	—> —	J2-E Shield	DSR —
J1-44 Shield	LL/DCD —	Twisted pair no. 11	—> —	J2-F Shield	RLSD —
J1-34 Shield	DSR/DTR —	Twisted pair no. 7	<— —	J2-H Shield	DTR —
J1-33 Shield	DCD/LL —	Twisted pair no. 6	<— —	J2-K Shield	LT —
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 5	<— <—	J2-P J2-S	SD+ SD—
J1-18 J1-17	TxD/RxD+ TxD/RxD—	Twisted pair no. 1	—> —>	J2-R J2-T	RD+ RD—
J1-26 J1-25	RxC/TxCE+ RxC/TxCE—	Twisted pair no. 4	<— <—	J2-U J2-W	SCTE+ SCTE—

Synchronous Serial Cable Assemblies and Pinouts

60 Pin	Signal	Description	Direction	34 Pin	Signal
J1-22	NIL/RxC+	Twisted pair no. 3	—>	J2-V	SCR+
J1-21	NIL/RxC-		—>	J2-X	SCR-
J1-20	TxCE/TxC+	Twisted pair no. 2	—>	J2-Y	SCT+
J1-19	TxCE/TxC-		—>	J2-AA	SCT-

X.21

Figure C-14 shows the X.21 cable assembly. Table C-14 lists the DTE pinouts. Table C-15 lists the DCE pinouts. Arrows indicate signal direction: a right arrow (—>) indicates DTE to DCE, and a left arrow (<—) indicates DCE to DTE.

Figure C-14 X.21 Cable Assembly

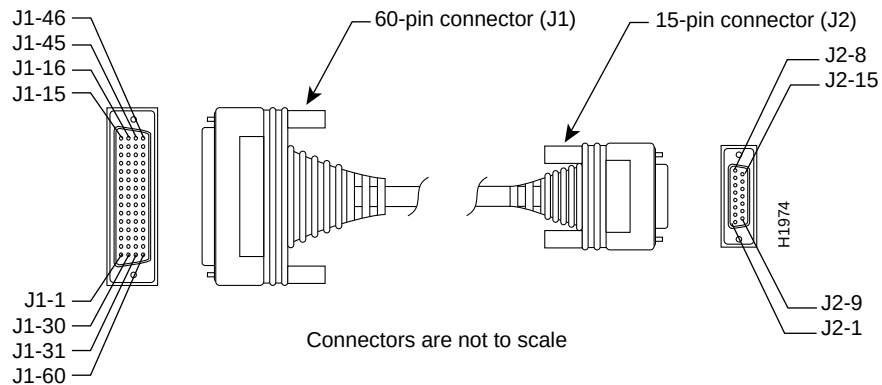


Table C-14 X.21 DTE Cable Pinouts (DB-60 to DB-15)

60 Pin	Signal	Description	Direction	15 Pin	Signal
J1-48 J1-47	GND MODE_2	Shorting group	—	—	—
J1-51 J1-52	GND MODE_DCE	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-1	Shield GND
J1-11 J1-12	TxD/RxD+ TxD/RxD—	Twisted pair no. 3	—> —>	J2-2 J2-9	Transmit+ Transmit—
J1-9 J1-10	RTS/CTS+ RTS/CTS—	Twisted pair no. 2	—> —>	J2-3 J2-10	Control+ Control—
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 6	<— <—	J2-4 J2-11	Receive+ Receive—
J1-1 J1-2	CTS/RTS+ CTS/RTS—	Twisted pair no. 1	<— <—	J2-5 J2-12	Indication+ Indication—
J1-26 J1-25	RxC/TxCE+ RxC/TxCE—	Twisted pair no. 5	<— <—	J2-6 J2-13	Timing+ Timing—
J1-15 Shield	Control_GND —	Twisted pair no. 4	— —	J2-8 Shield	Control GND —

Table C-15 X.21 DCE Cable Pinouts (DB-60 to DB-15)

60 Pin	Signal	Description	Direction	15 Pin	Signal
J1-48 J1-47	GND MODE_2	Shorting group	—	—	—
J1-46	Shield_GND	Single	—	J2-1	Shield GND
J1-28 J1-27	RxD/TxD+ RxD/TxD—	Twisted pair no. 6	<— <—	J2-2 J2-9	Transmit+ Transmit—
J1-1 J1-2	CTS/RTS+ CTS/RTS—	Twisted pair no. 1	<— <—	J2-3 J2-10	Control+ Control—
J1-11 J1-12	TxD/RxD+ TxD/RxD—	Twisted pair no. 3	—> —>	J2-4 J2-11	Receive+ Receive—

Alarm Cable Assembly and Pinouts

60 Pin	Signal	Description	Direction	15 Pin	Signal
J1-9	RTS/CTS+	Twisted pair no. 2	—>	J2-5	Indication+
J1-10	RTS/CTS–		—>	J2-12	Indication–
J1-24	TxC/RxC+	Twisted pair no. 4	—>	J2-6	Timing+
J1-23	TxC/RxC–		—>	J2-13	Timing–
J1-15	Control_GND	Twisted pair no. 5	–	J2-8	Control GND
Shield	–		–	Shield	–

Alarm Cable Assembly and Pinouts

Table C-16 lists the pinouts for the alarm port.

Table C-16 Alarm Port Pinouts

Pin	Description
1	Normally open
2	Common
3	Normally closed