

# Cable Pinouts

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This appendix lists the pinouts for the cables you can use with the Cisco 1005 router.

Table A-1 lists the pinouts for the 10BaseT port.

**Table A-1** 10BaseT Port Pinouts

Pin	Description
1	TX+
2	TX-
3	RX+
4	-
5	-
6	RX-
7	-
8	-

Table A-2 lists the pinouts for a straight-through 10BaseT cable, which is used to connect the router to an Ethernet hub.

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**Table A-2 Straight-Through 10BaseT Cable (RJ-45 to RJ-45)**

<b>RJ-45 Pin</b>	<b>Signal</b>	<b>Direction</b>	<b>RJ-45 Pin</b>
1	TX+	—>	1
2	TX-	—>	2
3	RX+	<—	3
4	–	–	4
5	–	–	5
6	RX-	<—	6
7	–	–	7
8	–	–	8

Table A-3 lists the pinouts for a crossover 10BaseT cable, which is used to connect the router to an Ethernet network interface card.

**Table A-3 Crossover 10BaseT Cable (RJ-45 to RJ-45)**

<b>RJ-45 Pin</b>	<b>Signal</b>	<b>Direction</b>	<b>RJ-45 Pin</b>	<b>Signal</b>
1	TX+	—>	3	RX+
2	TX-	—>	6	RX-
3	RX+	<—	1	TX+
4	–	–	4	–
5	–	–	5	–
6	RX-	<—	2	TX-
7	–	–	7	–
8	–	–	8	–

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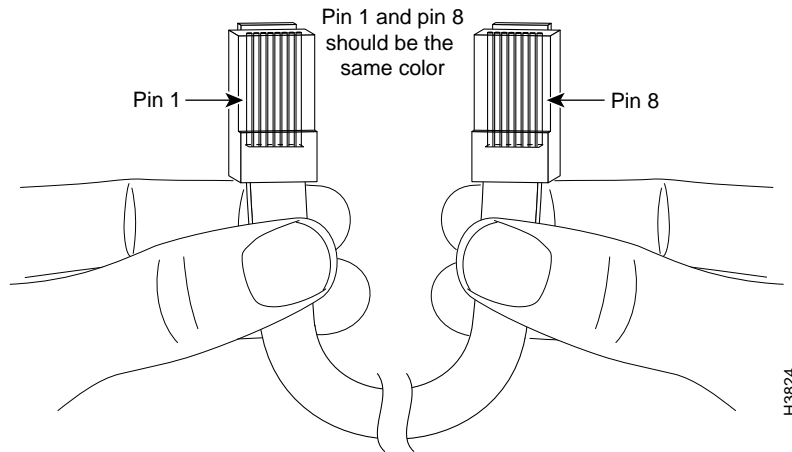
The EIA/TIA-232 console port is configured as data terminal equipment (DTE) and uses an RJ-45 connector. A console cable kit is provided with your router to connect a console (an ASCII terminal or PC running terminal emulation software) to the console port. The console cable kit contains an RJ-45-to-RJ-45 roll-over cable and a RJ-45-to-DB-25 female DTE adapter (labeled “Terminal”). Table A-4 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.

**Table A-4 Console Cable and Adapter Pinouts**

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

You can identify a roll-over cable by comparing the two modular ends of the cable. (See Figure A-1.) Holding the cables in your hand, side-by-side, with the tab at the back, the wire connected to the pin on the outside of the left connector (pin 1) should be the same color as the pin on the outside of the right connector (pin 8). On Cisco cables, pin 1 is white on one connector, and pin 8 is white on the other connector.

**Figure A-1 Identifying a Roll-Over Cable**



## Shielded Serial Transition Cable Pinouts

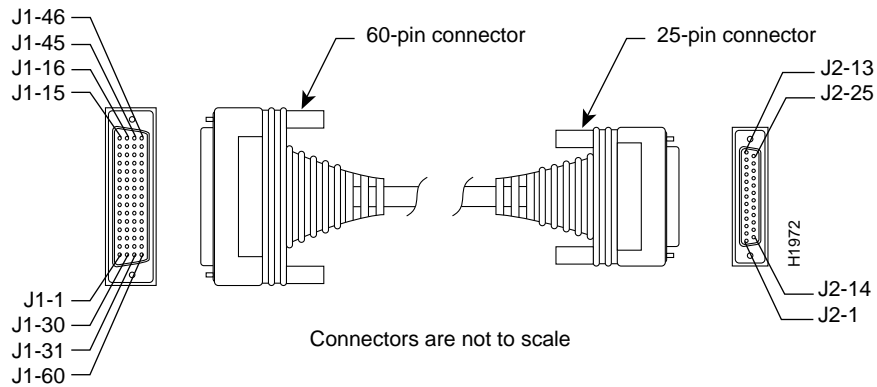
The serial port on the router uses a universal port, a 60-pin receptacle that supports the following serial interfaces: EIA/TIA-232, EIA/TIA-449, X.21, V.35, and EIA-530. The shielded serial transition cable determines the electrical interface type. The router end of all of the cables is a 60-pin connector.

DTE connectors have a plug connector at the network end. (DCE connectors have a receptacle at the network end.) However, V.35 is available in DTE mode with a connector of either gender at the network end. The serial port operates in DTE mode only.

The tables that follow list the signal pinouts for the DTE mode serial transition cables for each router interface type.

Figure A-2 shows the EIA/TIA-232 serial cable assembly, and Table A-5 lists the EIA/TIA-232 cable pinouts.

**Figure A-2 EIA/TIA-232 Serial Cable Assembly**



**Table A-5 EIA/TIA-232 DTE Cable Pinouts (DB-60 to DB-25)**

60 Pin <sup>1</sup>	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	–
J1-35	CTS/RTS	Twisted pair no. 10	<–	J2-5	CTS
Shield	–		–	Shield	–

## Shielded Serial Transition Cable Pinouts

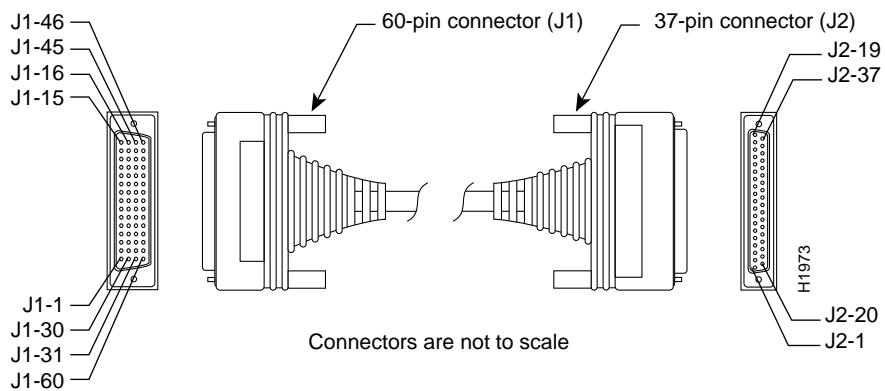
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60 Pin <sup>1</sup>	Signal	Description	Direction	25 Pin	Signal
J1-34 Shield	DSR/DTR –	Twisted pair no. 11	<— –	J2-6 Shield	DSR –
J1-45 Shield	Circuit GND –	Twisted pair no. 1	– –	J2-7 Shield	Circuit GND –
J1-33 Shield	DCD/LL –	Twisted pair no. 12	<— –	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 –

1. Any pin not referenced is not connected.

Figure A-3 shows the EIA/TIA-449 serial cable assembly, and Table A-6 lists the EIA/TIA-449 cable pinouts.

**Figure A-3 EIA/TIA-449 Serial Cable Assembly**



**Table A-6 EIA/TIA-449 DTE Cable Pinouts (DB-60 to DB-37)**

60 Pin <sup>1</sup>	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-

## Shielded Serial Transition Cable Pinouts

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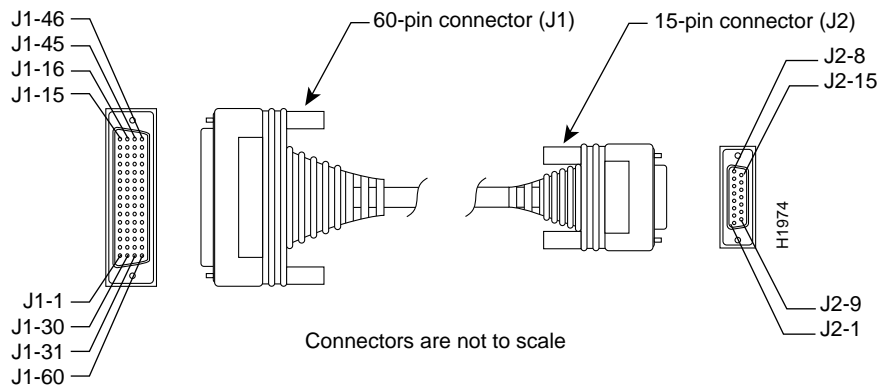
60 Pin <sup>1</sup>	Signal	Description	Direction	37 Pin	Signal
J1-26	RxC/TxCE+	Twisted pair no. 10	<—	J2-8	RT+
J1-25	RxC/TxCE-		<—	J2-26	RT-
J1-1	CTS/RTS+	Twisted pair no. 1	<—	J2-9	CS+
J1-2	CTS/RTS-		<—	J2-27	CS-
J1-44	LL/DCD	Twisted pair no. 12	—>	J2-10	LL
J1-45	Circuit_GND		—	J2-37	SC
J1-3	DSR/DTR+	Twisted pair no. 2	<—	J2-11	DM+
J1-4	DSR/DTR-		<—	J2-29	DM-
J1-7	DTR/DSR+	Twisted pair no. 4	—>	J2-12	TR+
J1-8	DTR/DSR-		—>	J2-30	TR-
J1-5	DCD/DCD+	Twisted pair no. 3	<—	J2-13	RR+
J1-6	DCD/DCD-		<—	J2-31	RR-
J1-13	TxCE/TxC+	Twisted pair no. 7	—>	J2-17	TT+
J1-14	TxCE/TxC-		—>	J2-35	TT-
J1-15	Circuit_GND	Twisted pair no. 9	—	J2-19	SG
J1-16	Circuit_GND		—	J2-20	RC

1. Any pin not referenced is not connected.



Figure A-4 shows the X.21 cable assembly, and Table A-7 lists the X.21 cable pinouts.

**Figure A-4 X.21 Cable Assembly**



**Table A-7 X.21 DTE Cable Pinouts (DB-60 to DB-15)**

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

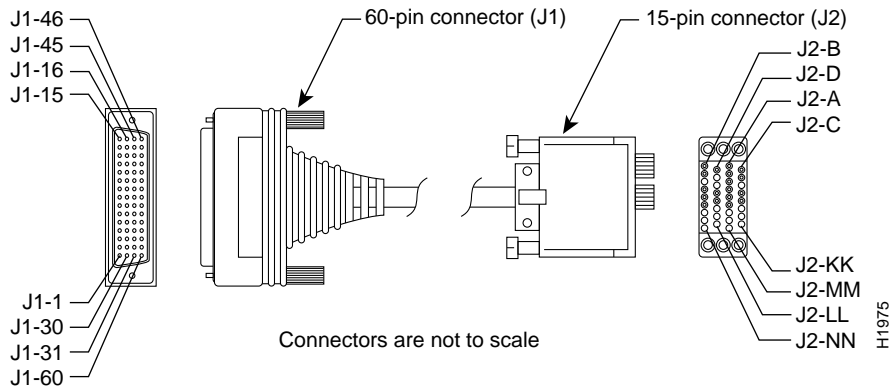
## Shielded Serial Transition Cable Pinouts

60 Pin <sup>1</sup>	Signal	Description	Direction	15 Pin	Signal
J1-26	RxC/TxCE+	Twisted pair no. 5	←	J2-6	Timing+
J1-25	RxC/TxCE-		←	J2-13	Timing-
J1-15	Control_GND	Twisted pair no. 4	-	J2-8	Control GND
Shield	-		-	Shield	-

1. Any pin not referenced is not connected.

Figure A-5 shows the V.35 cable assembly and Table A-8 lists the V.35 cable pinouts.

**Figure A-5 V.35 Cable Assembly**



**Table A-8 V.35 Cable Pinouts (DB-60 to 34-Pin)**

60 Pin <sup>1</sup>	Signal	Description	Direction	34 Pin	Signal
J1-49	MODE_1	Shorting group	-	-	-
J1-48	GND				
J1-50	MODE_0	Shorting group	-	-	-
J1-51	GND				
J1-52	MODE_DCE				

## Shielded Serial Transition Cable Pinouts

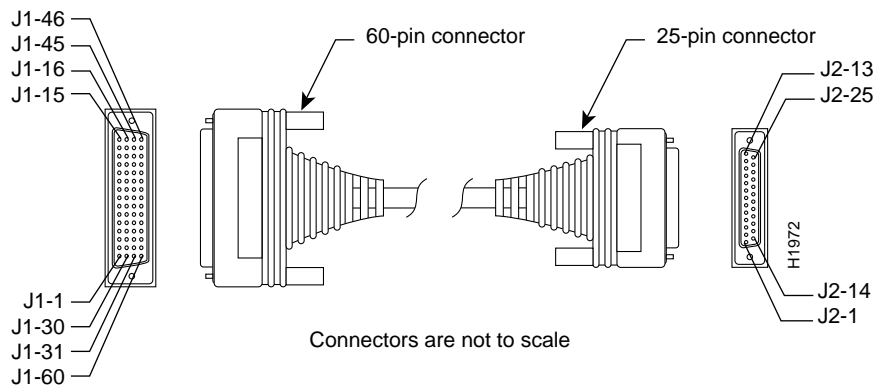
60 Pin <sup>1</sup>	Signal	Description	Direction	34 Pin	Signal
J1-53	TxC/NIL	Shorting group	-	-	-
J1-54	RxC_TxCE				
J1-55	RxD/TxD				
J1-56	GND				
J1-46	Shield_GND	Single	-	J2-A	Frame GND
J1-45	Circuit_GND	Twisted pair no. 12	-	J2-B	Circuit GND
Shield	-		-	Shield	-
J1-42	RTS/CTS	Twisted pair no. 9	→	J2-C	RTS
Shield	-		-	Shield	-
J1-35	CTS/RTS	Twisted pair no. 8	←	J2-D	CTS
Shield	-		-	Shield	-
J1-34	DSR/DTR	Twisted pair no. 7	←	J2-E	DSR
Shield	-		-	Shield	-
J1-33	DCD/LL	Twisted pair no. 6	←	J2-F	RLSD
Shield	-		-	Shield	-
J1-43	DTR/DSR	Twisted pair no. 10	→	J2-H	DTR
Shield	-		-	Shield	-
J1-44	LL/DCD	Twisted pair no. 11	→	J2-K	LT
Shield	-		-	Shield	-
J1-18	TxD/RxD+	Twisted pair no. 1	→	J2-P	SD+
J1-17	TxD/RxD-		→	J2-S	SD-
J1-28	RxD/TxD+	Twisted pair no. 5	←	J2-R	RD+
J1-27	RxD/TxD-		←	J2-T	RD-
J1-20	TxCE/TxC+	Twisted pair no. 2	→	J2-U	SCTE+
J1-19	TxCE/TxC-		→	J2-W	SCTE-
J1-26	RxC/TxCE+	Twisted pair no. 4	←	J2-V	SCR+
J1-25	RxC/TxCE-		←	J2-X	SCR-
J1-24	TxC/RxC+	Twisted pair no. 3	←	J2-Y	SCT+
J1-23	TxC/RxC-		←	J2-AA	SCT-

1. Any pin not referenced is not connected.

## Shielded Serial Transition Cable Pinouts

Figure A-6 shows the EIA-530 cable assembly, and Table A-9 lists the EIA-530 DTE cable pinouts.

**Figure A-6 EIA-530 Cable Assembly**



**Table A-9 EIA-530 DTE Cable Pinouts (DB-60 to DB-25)**

60 Pin <sup>1</sup>	Signal	25 Pin	Signal	Direction	
				DTE	DCE <sup>2</sup>
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	—	—		

## Shielded Serial Transition Cable Pinouts

60 Pin <sup>1</sup>	Signal	25 Pin	Signal	Direction	
				DTE	DCE <sup>2</sup>
J1-48	GND	–	–	Shorted	
J1-49	MODE_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), TxCE+	—>	
J1-14	TxCE/TxC–	J2-11	DA(B), TxCE–	—>	

1. Any pin not referenced is not connected.

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

## Shielded Serial Transition Cable Pinouts

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