



PortServer[®] TS, Digi Connect[®], and Digi One[®] Products

Cable Guide

Revision history—90000253

Revision	Date	Description
G	2013	Initial release.
H	February 2019	Updated branding and made editorial enhancements.
J	June 2020	Updated cabling information: RJ45 10-pin to DB9F modem cable and RJ45 10-pin to DB25F modem cable

Trademarks and copyright

Digi, Digi International, and the Digi logo are trademarks or registered trademarks in the United States and other countries worldwide. All other trademarks mentioned in this document are the property of their respective owners.

© 2019 Digi International Inc. All rights reserved.

Disclaimers

Information in this document is subject to change without notice and does not represent a commitment on the part of Digi International. Digi provides this document “as is,” without warranty of any kind, expressed or implied, including, but not limited to, the implied warranties of fitness or merchantability for a particular purpose. Digi may make improvements and/or changes in this manual or in the product(s) and/or the program(s) described in this manual at any time.

Warranty

To view product warranty information, go to the following website:

www.digi.com/howtobuy/terms

Send comments

Documentation feedback: To provide feedback on this document, send your comments to techcomm@digi.com.

Customer support

Digi Technical Support: Digi offers multiple technical support plans and service packages to help our customers get the most out of their Digi product. For information on Technical Support plans and pricing, contact us at +1 952.912.3444 or visit us at www.digi.com/support.

Contents

Cabling solutions by Digi product and device

DB9 and DB25 DTE/console/terminal/printer adapters

- RJ45 to DB9 cable adapter 10
- RJ45 to DB25F cable adapter 11
- RJ45 to DB25M console adapter 12
- RJ45 to DB25M printer adapter 13
- RJ45 to DB25M modem adapter 14

DB9 DTE/console/terminal/printer cables

- RJ45 to DB9F terminal emulator cable 16
- RJ45 (Altpin on) to DB9F terminal emulator cable 17
- RJ45 10-pin to DB9F terminal emulator cable 18
- RJ45 (Altpin on) to DB9M terminal/printer cable 19
- RJ45 to DB9M terminal/printer cable 20

DB25 DTE/console/terminal/printer cables

- RJ45 (Altpin on) to DB25F terminal emulator cable 22
- RJ45 10-pin to DB25F terminal emulator cable 23
- RJ45 to DB25M terminal/printer cable 24
- RJ45 10-pin to DB25M terminal/printer cable 25

Digi-to-Digi Cables

- Async RJ45 to RJ45 crossover cable - for cross-connecting Digi asynchronous ports together 27
- RJ45 to DB9M modem adapter 28

DB25 and DB9 modem cables

- RJ45 (Altpin on) to DB25M modem cable 30
- RJ45 (Altpin on) to DB9M modem cable 31
- RJ45 10-pin to DB9M modem cable 32
- RJ45 10-pin to DB9F modem cable 33
- RJ45 10-pin to DB25M modem cable 34
- RJ45 10-pin to DB25F modem cable 35

Specialty cables

Cisco console cables	37
Digi RJ45 to RJ45 cable adapters: 8-pin	37
RJ45 (Altpin On) to RJ45 Cisco console adapter	37

Cabling solutions by Digi product and device

Digi Passport and Digi CM products use different pinouts, please refer to the appropriate product documentation.

RJ-45 to	Male or female	Straight or crossover	Applications	Cable or adapter	Part number	Pin out	Cable identifier
DB-9	F	Crossover	Bay Accelar, Nortel and other DB-9 DTE devices	Cable	76000645 (4')	RJ45 10-pin to DB9F terminal emulator cable	61090048
				Adapter (4-pack)	76000697	RJ45 to DB9 cable adapter	N/A



RJ-45 to	Male or female	Straight or crossover	Applications	Cable or adapter	Part number	Pin out	Cable identifier
DB-9	M	Crossover	The unit provides a single upstream (standard B-type receptacle) and 14 downstream (standard A-type receptacles) USB 2.0 compliant ports. The unit will attach to the upstream device as a Full-/Highspeed hub. The downstream ports support Low-Speed, Full-Speed and High-Speed downstream devices. Each downstream facing port provides a green LED status indicator. Color definitions are as follows: E devices with DB-9 female ports	Cable	76000264 (4')	RJ45 10-pin to DB9F terminal emulator cable	61080048
				Adapter	None	None	N/A
DB-9	F	Straight	Modems and other DCE devices with DB-9 male ports	Cable	76000201 (4')	RJ45 10-pin to DB9F modem cable	61070024 61070048
				Adapter	None	None	N/A
DB-9	M	Straight	Modems and other DCE devices with DB-9 female ports	Cable	76000240 (4')	RJ45 10-pin to DB9M modem cable	61060024 61060048
				Adapter (4-pack)	76000701	RJ45 to DB9M modem adapter	N/A

RJ-45 to	Male or female	Straight or crossover	Applications	Cable or adapter	Part number	Pin out	Cable identifier
DB-25	M	Crossover	Sun Sparc, Sun Ultra, terminals, printers and other DTE devices with DB-25 female ports	Cable	76000238 (4')	RJ45 10-pin to DB25F terminal emulator cable	61040048
				Adapter (4-pack)	76000698	RJ45 to DB25M console adapter	N/A
DB-25	F	Crossover	Cisco, IBM and other DTE devices with DB-25 male ports	Cable	N/A	RJ45 10-pin to DB25F terminal emulator cable	61050048
				Adapter (4-pack)	76000699	RJ45 to DB25F cable adapter	N/A
DB-25	M	Straight	Modems and other DCE devices with DB-25 female ports	Cable	76000195 (4')	RJ45 10-pin to DB25M modem cable	61020024
				Adapter (4-pack)	76000700	RJ45 to DB25M modem adapter	N/A
DB-25	F	Straight	Modems and other DCE devices with DB-25 male ports	Cable	76000199 (4')	RJ45 10-pin to DB25F modem cable	61030024 61030048
				Adapter	None	N/A	N/A



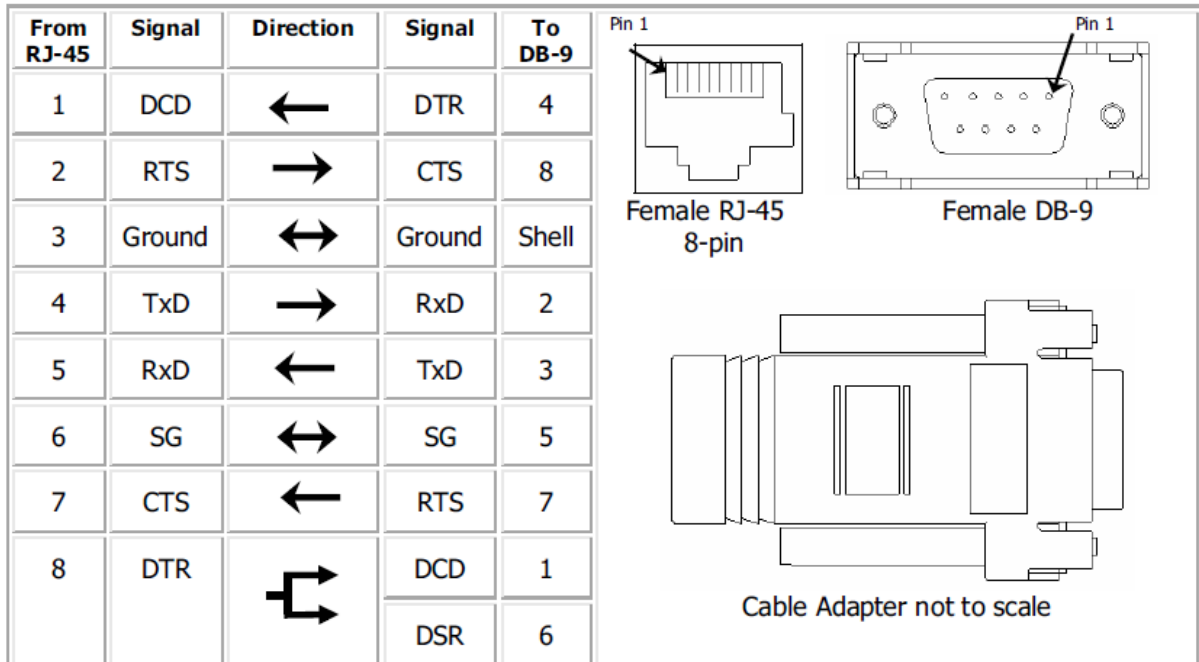
RJ-45 to	Male or female	Straight or crossover	Applications	Cable or adapter	Part number	Pin out	Cable identifier
RJ-45	M	*Special*	For use with Cisco and Sun RJ-45 console ports.	Cable	76000631 (6')	RJ45 (Altpin On) to RJ45 Cisco console adapter	63000222-02
				Adapter	None	None	N/A

- All RJ-45 to DBx cables are 10-pin. Only the RJ-45 to RJ-45 cable is an 8-pin cable.
- All RJ-45 adapters are 8-pin. When using these adapters with modems or other applications that require DCD on pin 1, you must turn on altpin.
- If altpin is turned off, the hardware signal on pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.

DB9 and DB25 DTE/console/terminal/printer adapters

- RJ45 to DB9 cable adapter 10
- RJ45 to DB25F cable adapter 11
- RJ45 to DB25M console adapter 12
- RJ45 to DB25M printer adapter 13
- RJ45 to DB25M modem adapter 14

RJ45 to DB9 cable adapter



* Arrows indicate which direction the signal is flowing.

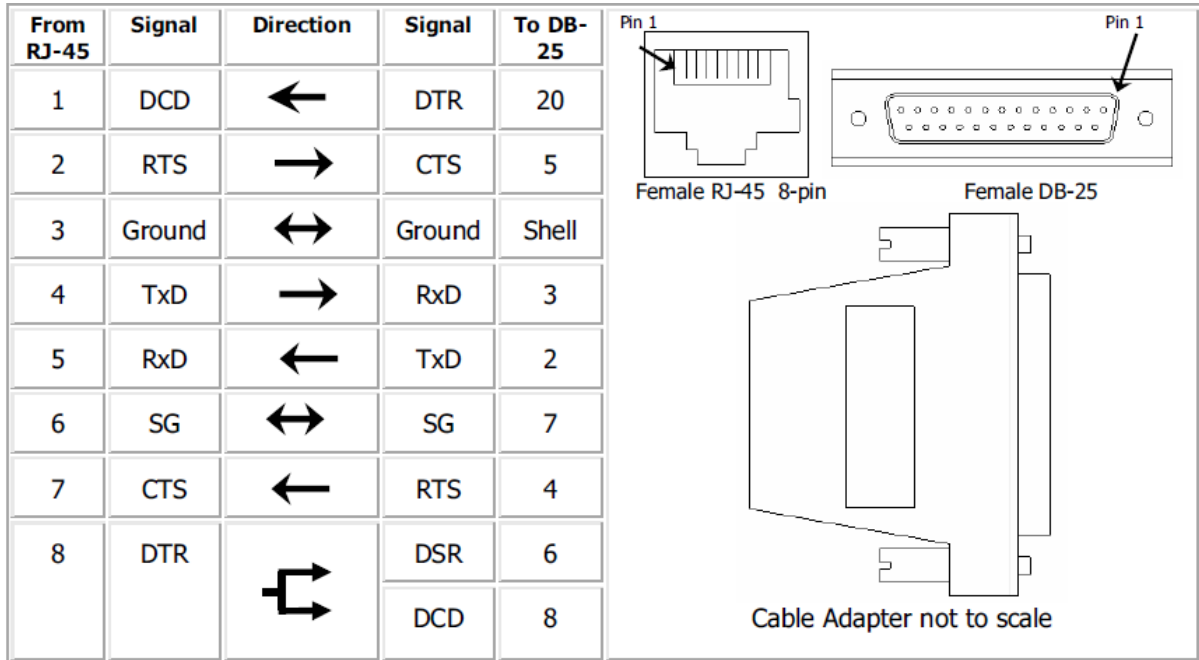
This cable can be purchased from Digi:

- DB9F Console Adapter: part #[76000697](#)

Notes:

- All RJ45 cable adapters are 8-pin.
- Altpin should be turned on when using this cable adapter so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable adapter utilizes the RTS signal of the serial device for hardware flow control (RTS/CTS).

RJ45 to DB25F cable adapter



* Arrows indicate which direction the signal is flowing.

This cable can be purchased from Digi:

- DB25F Console Adapter: part # [76000699](#)

Notes:

- All RJ45 cable adapters are 8-pin.
- Altpin should be turned on when using this cable adapter so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable adapter utilizes the RTS signal of the serial device for hardware flow control (RTS/CTS).

RJ45 to DB25M console adapter

From RJ-45	Signal	Direction	Signal	To DB-25
1	DCD	←	DTR	20
2	RTS	→	CTS	5
3	Ground	↔	Ground	Shell
4	TxD	→	RxD	3
5	RxD	←	TxD	2
6	SG	↔	SG	7
7	CTS	←	RTS	4
8	DTR	↔	DSR	6
			DCD	8

Female RJ-45 8-pin

Male DB-25

Cable Adapter not to scale

* Arrows indicate which direction the signal is flowing.

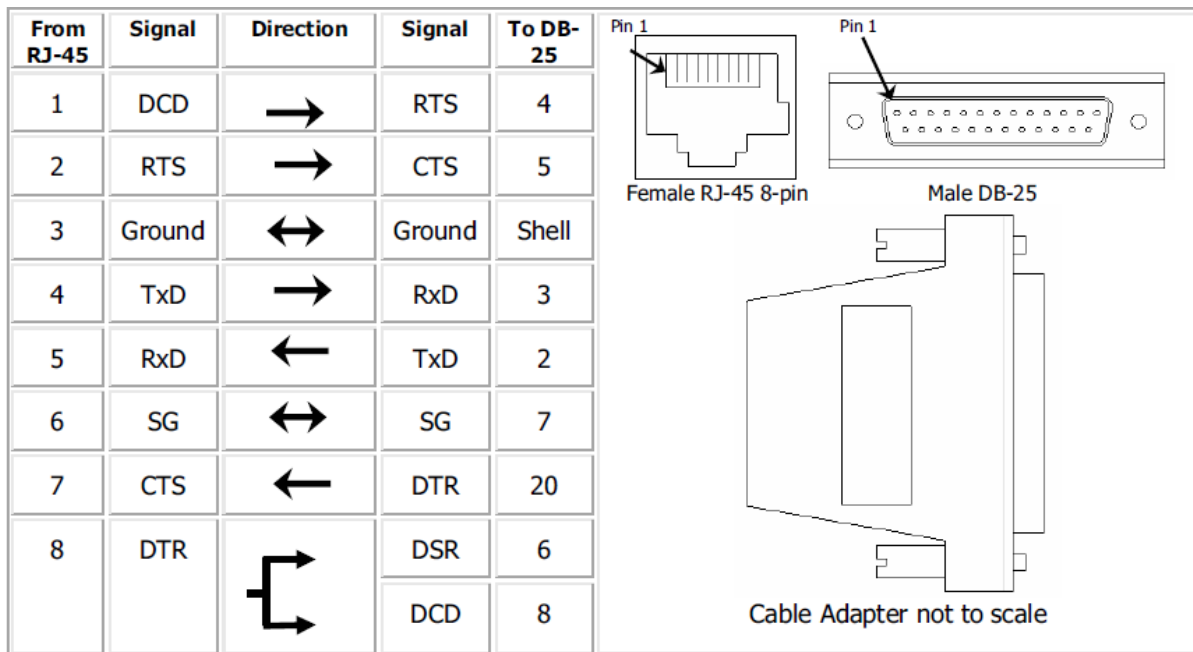
This cable can be purchased from Digi:

- DB25M Console Adapter: part #[76000698](#)

Notes:

- All RJ45 cable adapters are 8-pin.
- Altpin should be turned on when using this cable adapter so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable adapter utilizes the RTS signal of the serial device for hardware flow control (RTS/CTS).

RJ45 to DB25M printer adapter

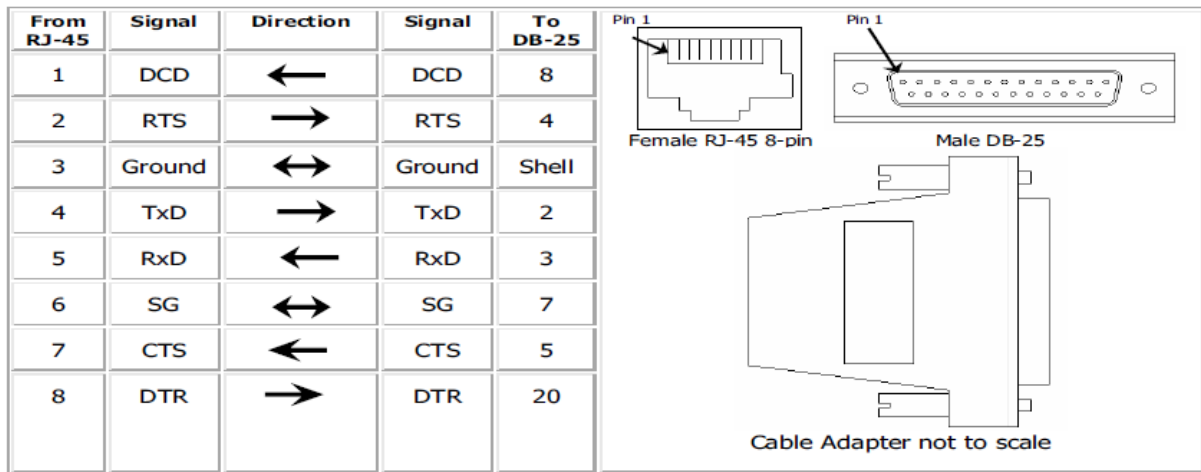


* Arrows indicate which direction the signal is flowing.

Notes:

- All RJ45 cable adapters are 8-pin.
- For use with Printers. This adapter utilizes the DTR signal of the serial device (instead of RTS) for hardware flow control (RTS/CTS).
- Okidata printers may use SSD (pin 11) instead of DTR (pin 20) on DB25 side of above diagram. If this is the case, the printer should be set to SSD+.
- Altpin should be turned on when using this cable so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.

RJ45 to DB25M modem adapter



* Arrows indicate which direction the signal is flowing.

This cable can be purchased from Digi:

- DB25M Modem Adapter: part # [76000700](#)

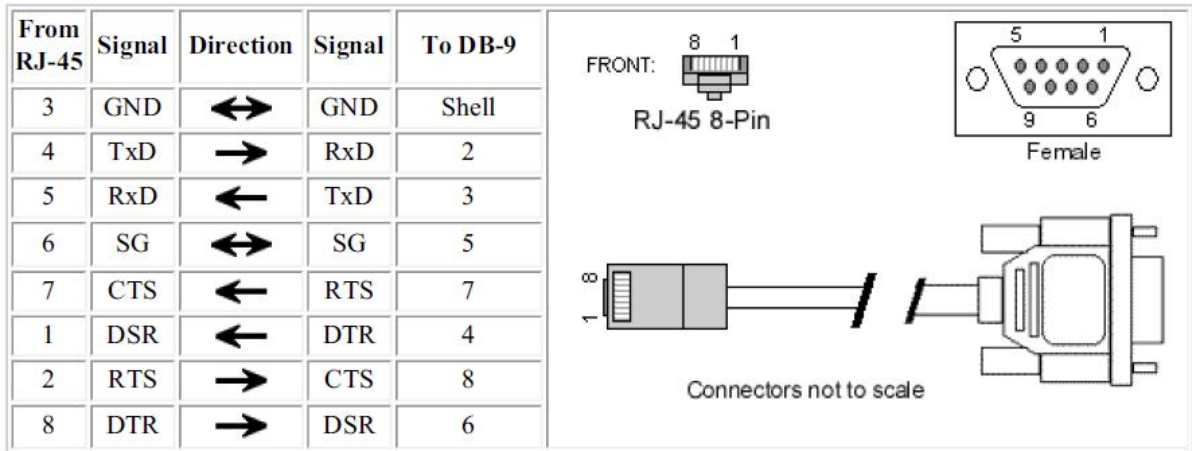
Notes:

- All RJ45 cable adapters are 8-pin.
- When using this adapter with a modem or other applications that require DCD on pin 1, you must turn on altpin.
- If altpin is turned off, the hardware signal on pin 1 becomes DSR instead of DCD.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

DB9 DTE/console/terminal/printer cables

- RJ45 to DB9F terminal emulator cable 16
- RJ45 (Altpin on) to DB9F terminal emulator cable 17
- RJ45 10-pin to DB9F terminal emulator cable 18
- RJ45 (Altpin on) to DB9M terminal/printer cable 19
- RJ45 to DB9M terminal/printer cable 20

RJ45 to DB9F terminal emulator cable

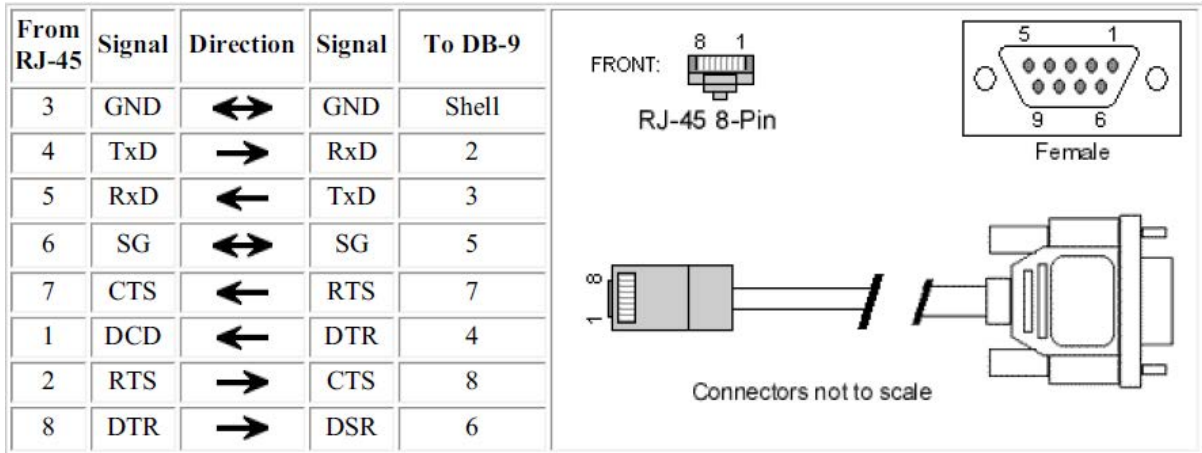


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned off when using this cable so that pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable utilizes the RTS signal of the PC terminal emulator for hardware flow control (RTS/CTS).

RJ45 (Altpin on) to DB9F terminal emulator cable

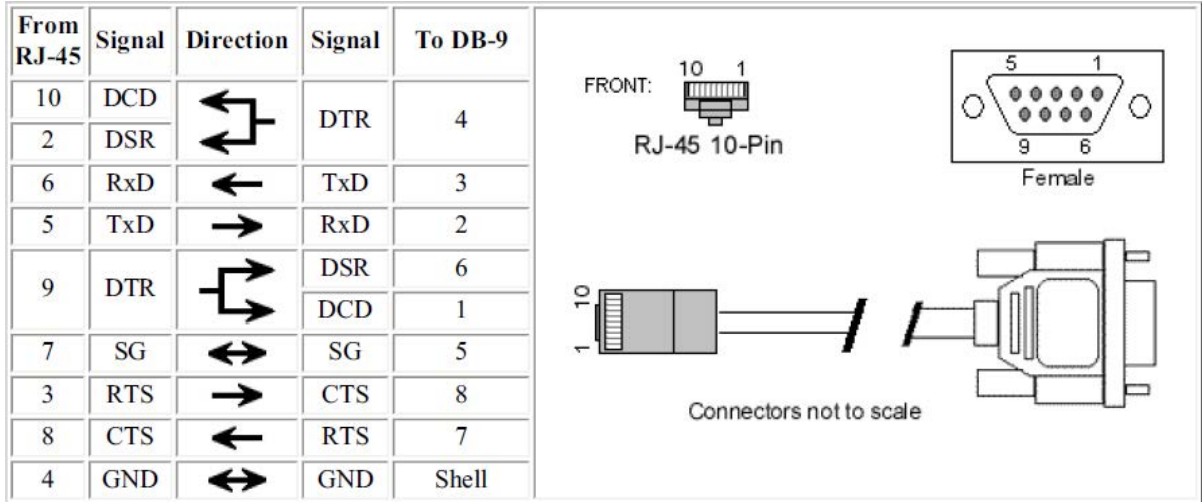


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable utilizes the RTS signal of the PC terminal emulator for hardware flow control (RTS/CTS).

RJ45 10-pin to DB9F terminal emulator cable



* Arrows indicate which direction the signal is flowing

This cable can be purchased from Digi:

- 4' RJ-45 to DB9 Male Crossover: part #76000264

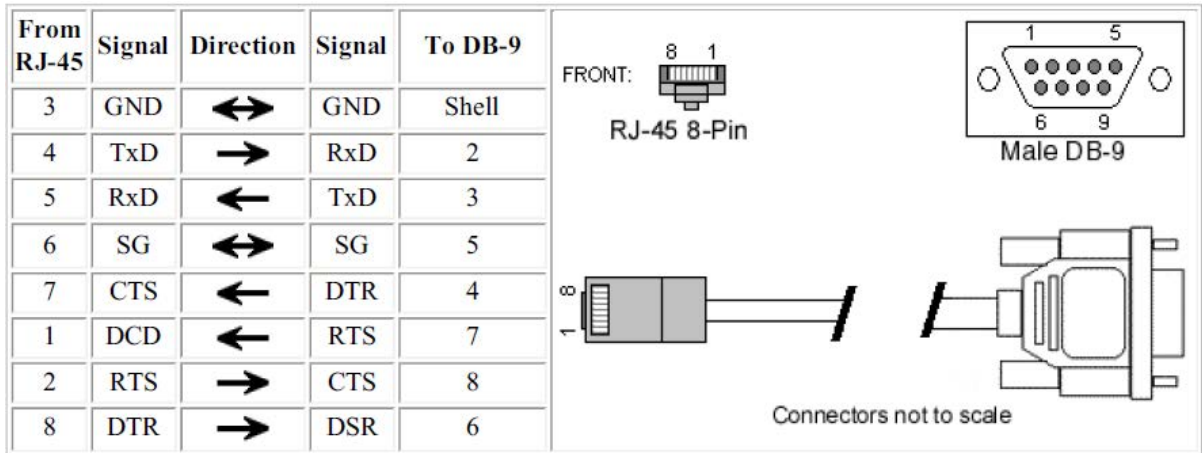
This cable can be purchased from Digi:

- 4' RJ-45 to DB9F crossover: part #76000645

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the RTS signal of the PC terminal emulator for hardware flow control (RTS/CTS).

RJ45 (Altpin on) to DB9M terminal/printer cable

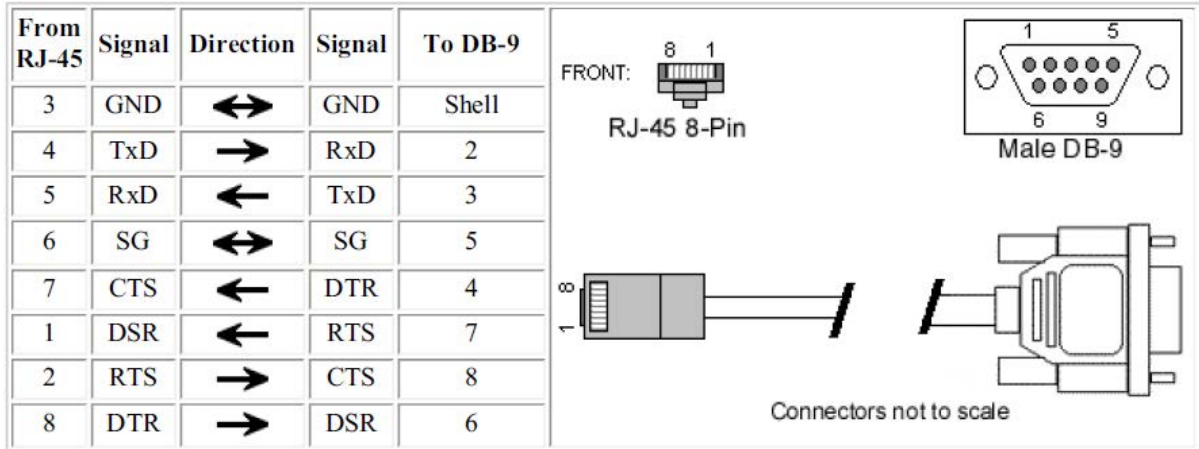


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable utilizes the DTR signal of the terminal/printer for hardware flow control (RTS/CTS).
- EIA-232 cables cannot exceed 2500 pF.

RJ45 to DB9M terminal/printer cable



* Arrows indicate which direction the signal is flowing.

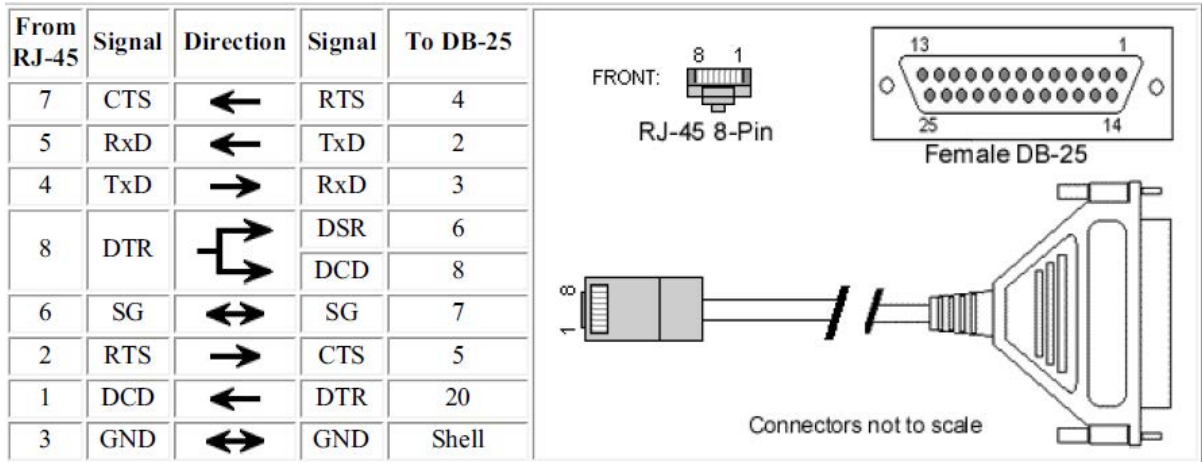
Notes:

- Altpin should be turned off when using this cable so that pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable utilizes the DTR signal of the terminal/printer for hardware flow control (RTS/CTS).

DB25 DTE/console/terminal/printer cables

- RJ45 (Altpin on) to DB25F terminal emulator cable22
- RJ45 10-pin to DB25F terminal emulator cable23
- RJ45 to DB25M terminal/printer cable24
- RJ45 10-pin to DB25M terminal/printer cable25

RJ45 (Altpin on) to DB25F terminal emulator cable

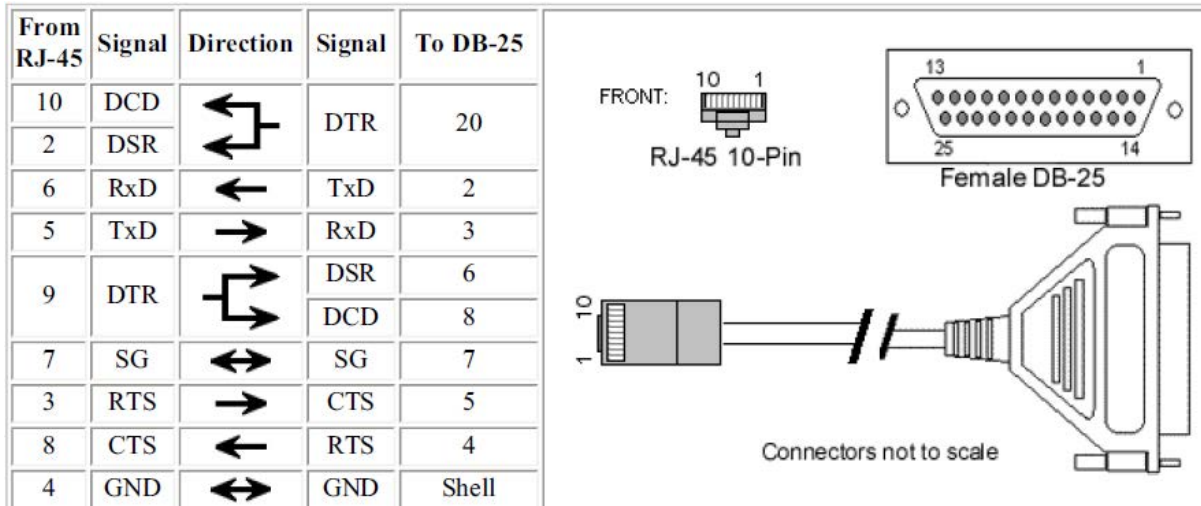


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable so that DTR will drive DCD (standard usage).
- If Altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.

RJ45 10-pin to DB25F terminal emulator cable



* Arrows indicate which direction the signal is flowing.

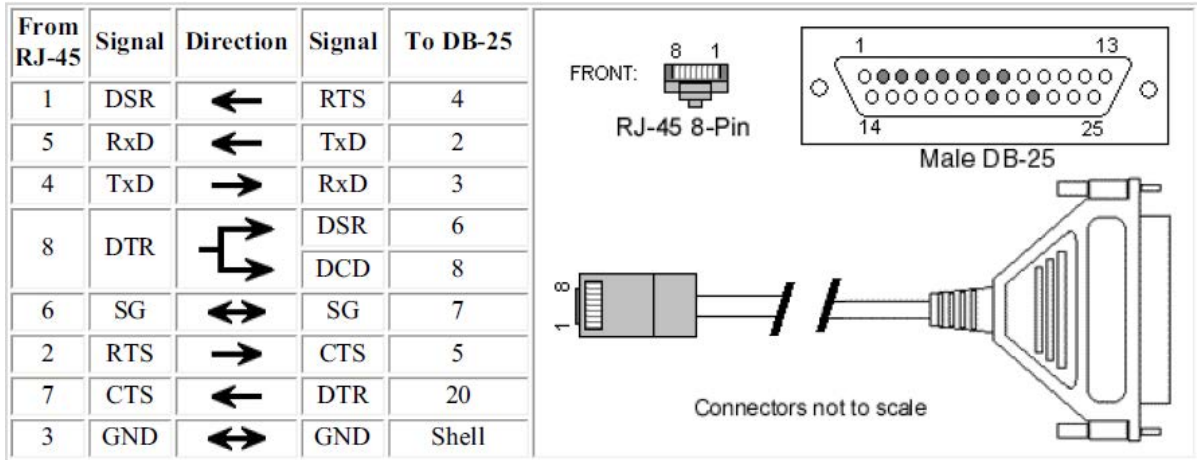
This cable can be purchased from Digi:

- 4' RJ-45 to DB25 Male Crossover: part #76000238

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the RTS signal of the PC terminal emulator for hardware flow control (RTS/CTS).

RJ45 to DB25M terminal/printer cable

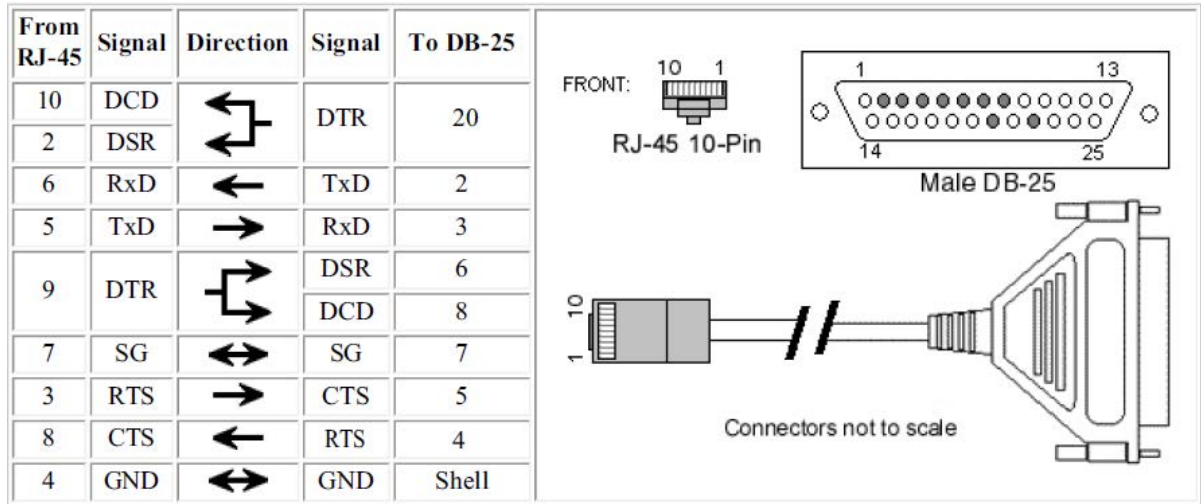


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable so that DTR will drive DCD (standard usage).
- If altpin is turned off, the hardware signal on RJ45 pin 1 becomes DSR instead of DCD. This alternative can be used if DCD is not required, and DSR is needed instead.
- This cable utilizes the DTR signal of the terminal/printer for hardware flow control (RTS/CTS).
- Okidata printers may use SSD (pin 11) instead of DTR (pin 20) on DB25 side of above diagram. If this is the case, the printer should be set to SSD+.

RJ45 10-pin to DB25M terminal/printer cable



* Arrows indicate which direction the signal is flowing.

This cable can also be purchased from Digi (part: RJ-45 10-pin to DB-25 - Part #76000238)

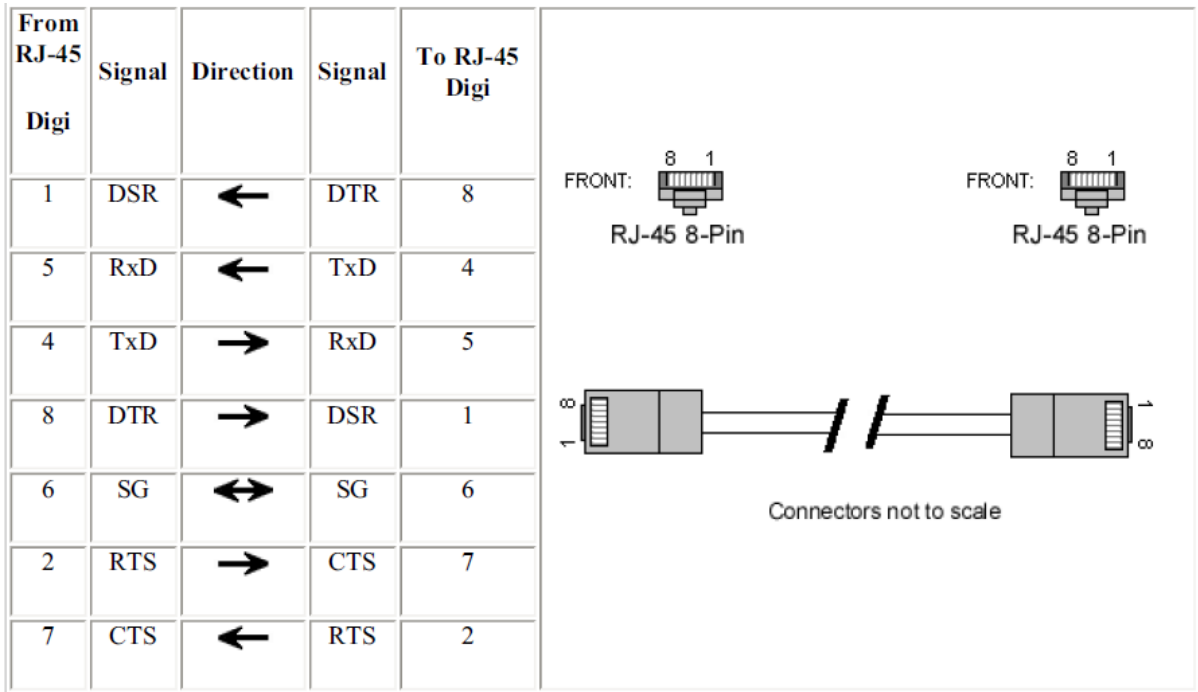
Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the DTR signal of the terminal/printer for hardware flow control (RTS/CTS).
- Okidata printers may use SSD (pin 11) instead of DTR (pin 20) on DB25 side of above diagram. If this is the case, the printer should be set to SSD+.

Digi-to-Digi Cables

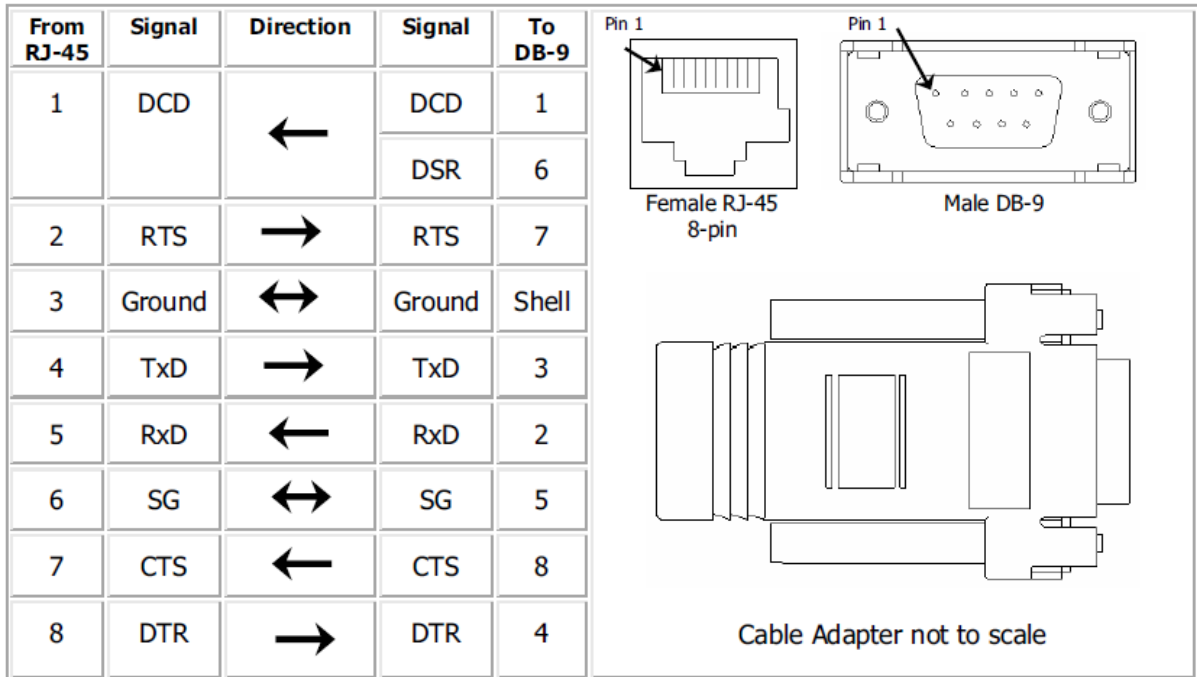
Async RJ45 to RJ45 crossover cable - for cross-connecting Digi asynchronous ports together 27
RJ45 to DB9M modem adapter 28

Async RJ45 to RJ45 crossover cable - for cross-connecting Digi asynchronous ports together



* Arrows indicate which direction the signal is flowing.

RJ45 to DB9M modem adapter



* Arrows indicate which direction the signal is flowing.

This cable can be purchased from Digi:

- DB9M Modem Adapter: part #[76000701](#)

Notes:

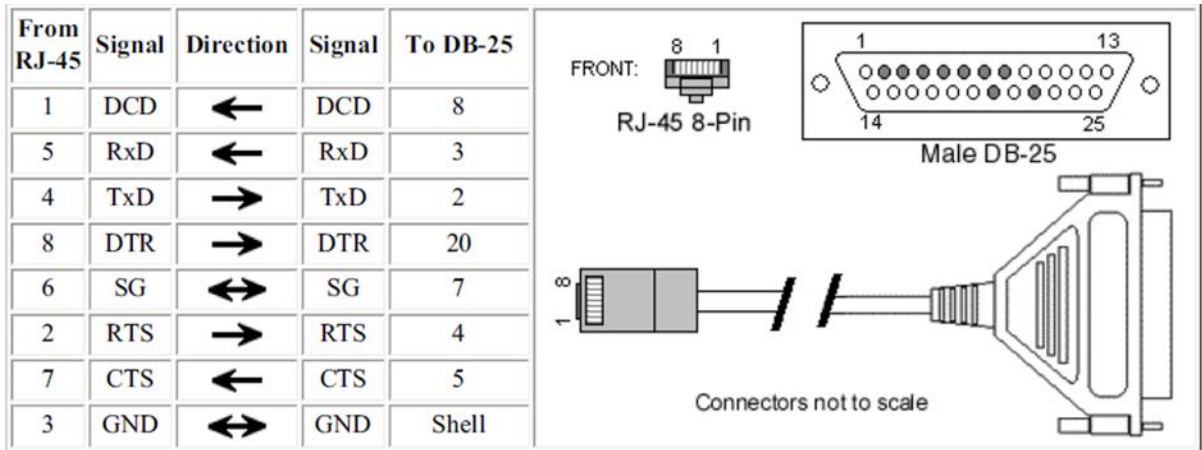
- All RJ45 cable adapters are 8-pin.
- When using this adapter with a modem or other applications that require DCD on pin 1, you must turn on altpin.
- If altpin is turned off, the hardware signal on pin 1 becomes DSR instead of DCD.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

DB25 and DB9 modem cables

- RJ45 (Altpin on) to DB25M modem cable 30
- RJ45 (Altpin on) to DB9M modem cable 31
- RJ45 10-pin to DB9M modem cable 32
- RJ45 10-pin to DB9F modem cable 33
- RJ45 10-pin to DB25M modem cable 34
- RJ45 10-pin to DB25F modem cable 35

RJ45 (Altpin on) to DB25M modem cable

The table shows the wiring diagram for an EIA-232 RJ45 8-pin connector, with Altpin on, to a DB25 modem cable.



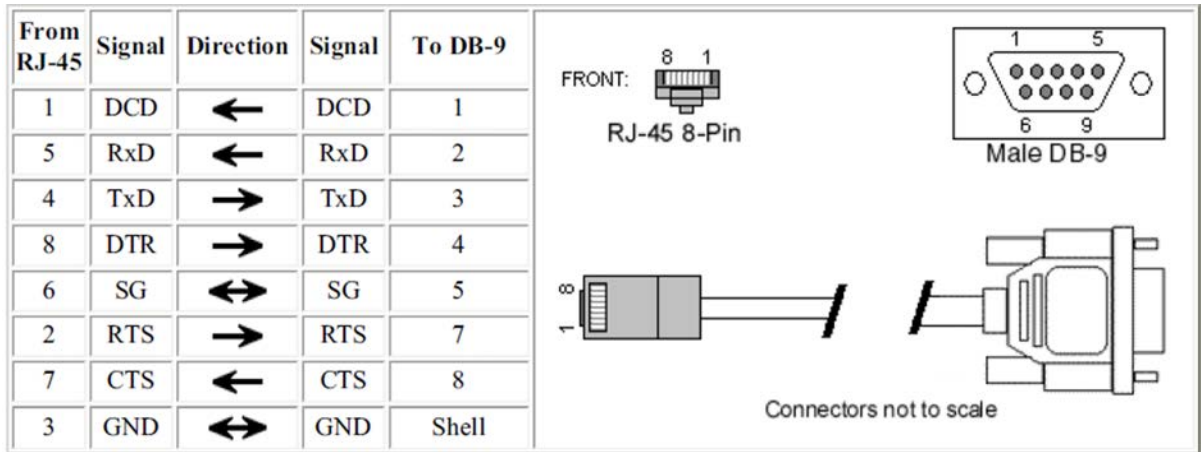
* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

RJ45 (Altpin on) to DB9M modem cable

The table shows the wiring diagram for an EIA-232 RJ45 8-pin connector, with Altpin on, to a DB9 modem cable.

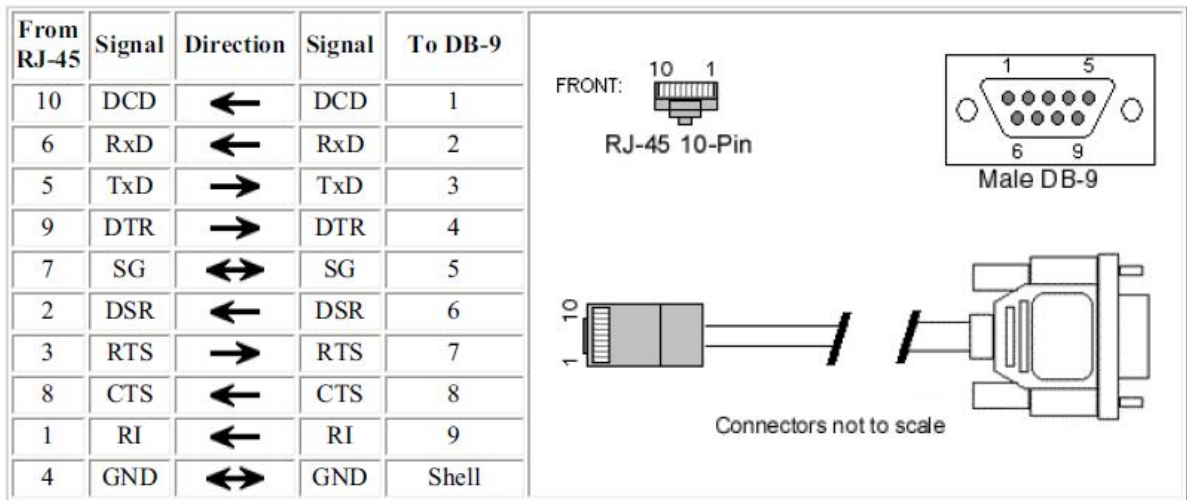


* Arrows indicate which direction the signal is flowing.

Notes:

- Altpin should be turned on when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

RJ45 10-pin to DB9M modem cable



* Arrows indicate which direction the signal is flowing.

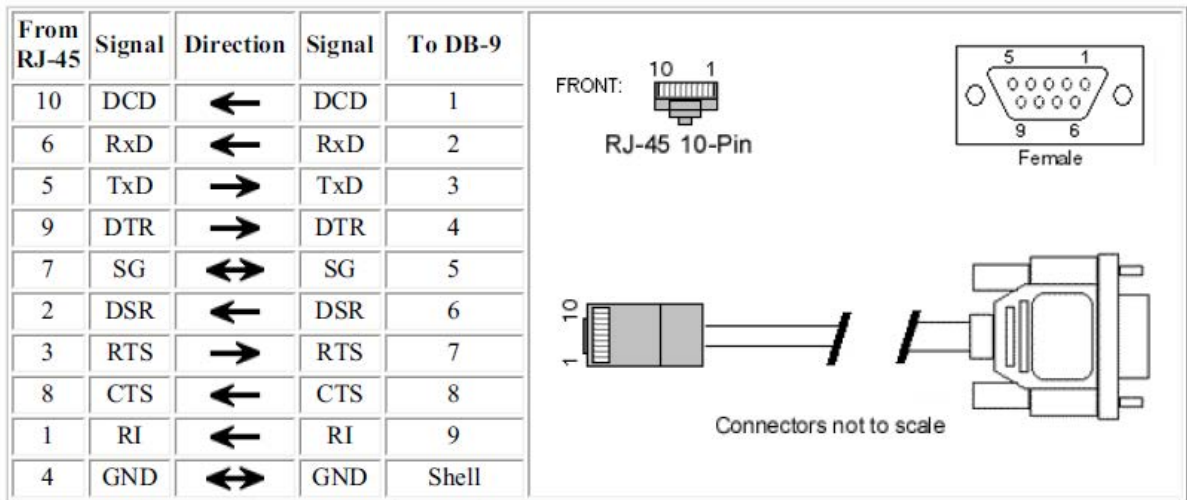
This cable can be purchased from Digi:

- 4' RJ-45 to DB9 Male straight: part #76000240

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

RJ45 10-pin to DB9F modem cable



* Arrows indicate which direction the signal is flowing.

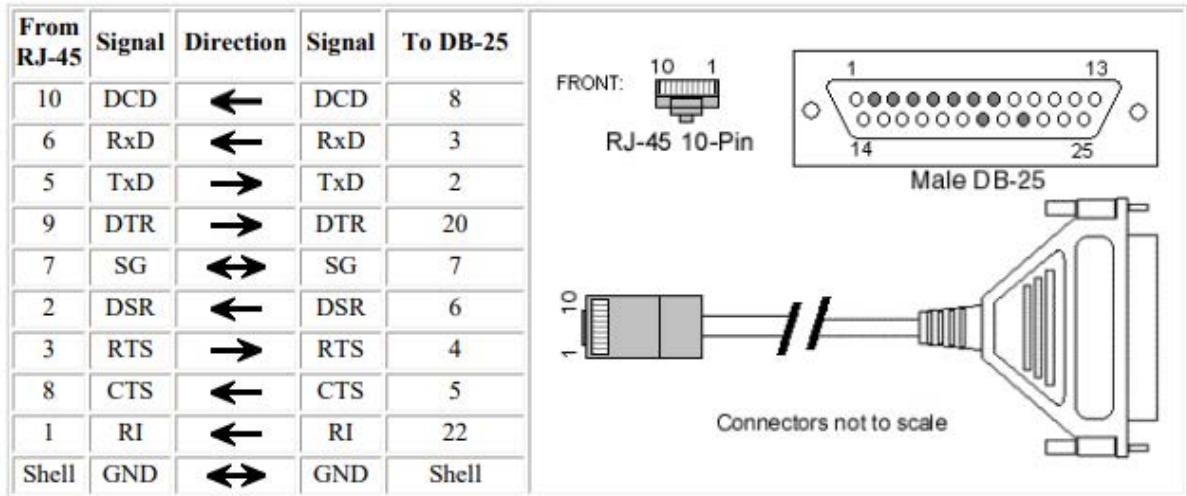
This cable can be purchased from Digi:

- 4' RJ-45 to DB9 Female straight: part #76000201

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

RJ45 10-pin to DB25M modem cable



* Arrows indicate which direction the signal is flowing.

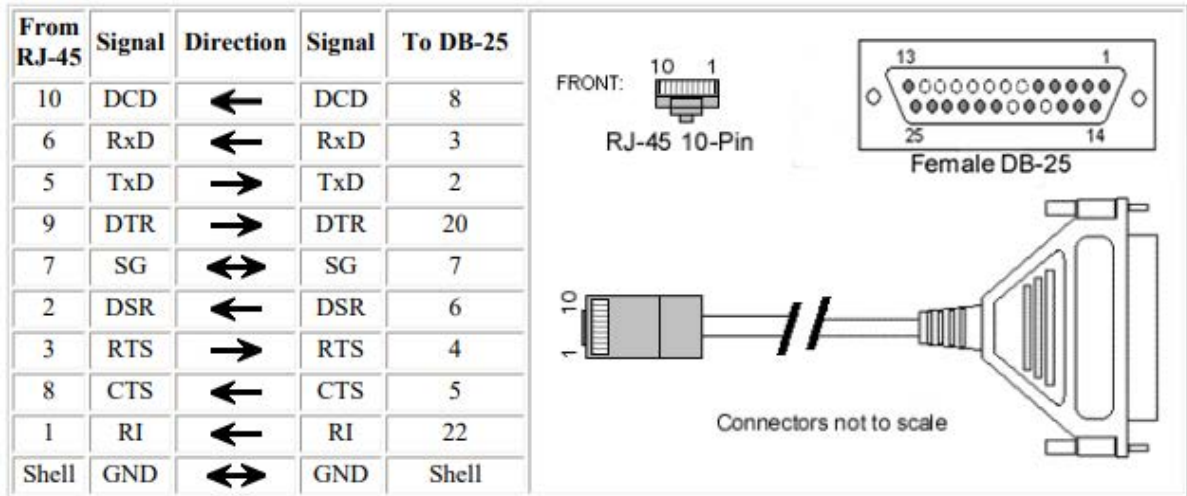
This cable can be purchased from Digi:

- 4' RJ-45 10-pin to DB25 Male Straight: part #76000195

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

RJ45 10-pin to DB25F modem cable



* Arrows indicate which direction the signal is flowing.

This cable can be purchased from Digi:

- 4' RJ-45 10-pin to DB25 Male Straight: part #76000199

Notes:

- Altpin should be turned off when using this cable.
- This cable utilizes the CTS signal of the modem for hardware flow control (RTS/CTS).

Specialty cables

Cisco console cables 37

Cisco console cables

Digi RJ45 to RJ45 cable adapters: 8-pin

RJ45 to RJ45 cable adapters can be purchased from Digi. These adapters consist of an 8-pin RJ45 plug connected to another 8-pin RJ45 plug with a crossover cable. These cables are used to connect the Digi devices to the serial console port of Cisco and Sun Netra devices. Pinout information and a graphic is included later in this chapter. See [Digi RJ45 to RJ45 cable adapters: 8-pin](#) for pinout and graphic information.

Part numbers for RJ45 to RJ45 8-pin crossover cable for Cisco & Sun Netra

Cable description	Part #	Cable identifier
Cable RJ45 to RJ45 8-pin (single pack)	76000631	63000222-02

RJ45 (Altpin On) to RJ45 Cisco console adapter

The wiring diagram for an Altpin RJ-45 8-pin to a Cisco Console RJ-45 8-pin adapter cable is shown in the following table.

Table 1: EIA-232 Altpin RJ-45 to RJ-45

From RJ-45	Signal	Direction	Signal	To RJ-45 Cisco
1	DCD	←	DTR	2
5	RxD	←	TxD	3
4	TxD	→	RxD	6
8	DTR	→	DSR	7
6	SG	↔	SG	5
2	RTS	→	CTS	8
7	CTS	←	RTS	1
3	GND	↔	GND	4

FRONT: RJ-45 8-Pin

FRONT: RJ-45 8-Pin

Connectors not to scale

* Arrows indicate which direction the signal is flowing.

This cable can be purchased from Digi:

- 6' RJ-45 to RJ-45 for Sun Netra/Cisco: part #[76000631](#)

Notes:



- Works for most current Cisco routers.
- Be careful not to swap cable ends. One end will go to DIGI and the other to the router.
- Altpin should be turned on when using this cable.

For more information contact us:



USAT | Connect What's Critical
605 Eastowne Drive, Chapel Hill, NC 27514

Phone: (888) 550-8728
Email: info@usatcorp.com
Web: <https://usatcorp.com>