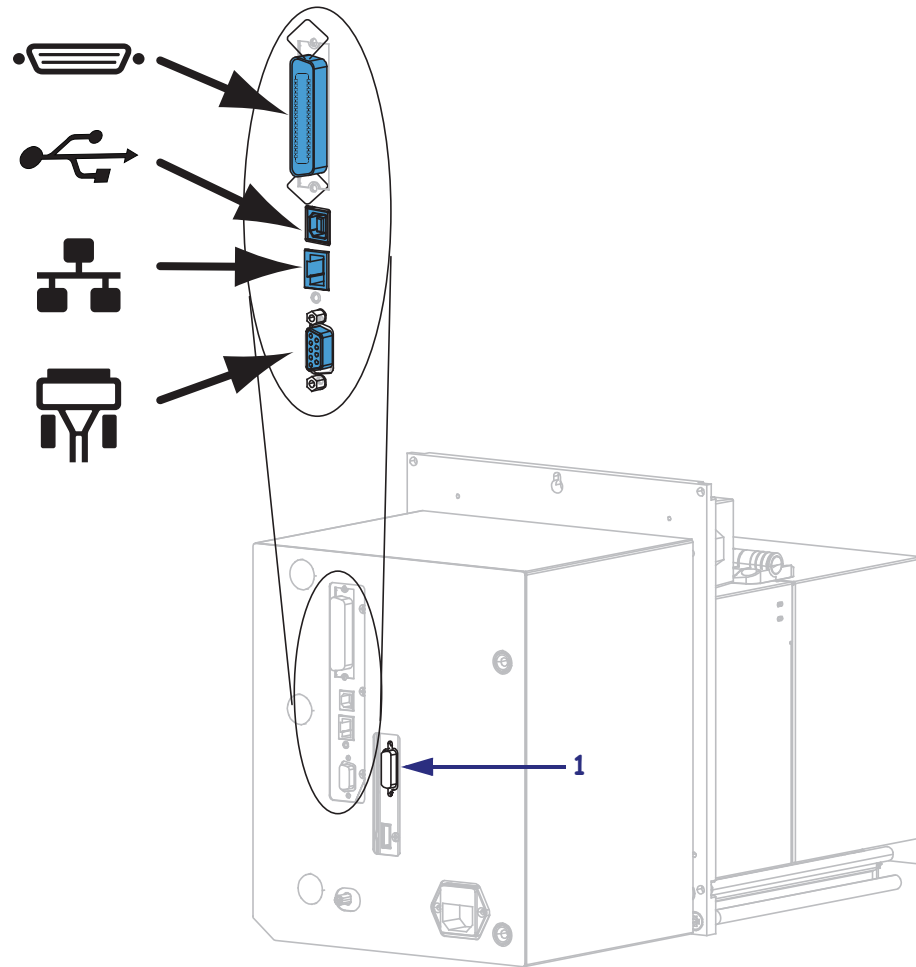


Select a Data Communication Interface

You may connect your print engine to a computer using one or more of the available connections. The standard connections are shown in Figure 8. A ZebraNet wired or wireless print server option or a parallel port may also be present on your print engine.

Figure 8 • Communication Interfaces







	parallel port
	USB port
	wired Ethernet port
	serial port
1	applicator port

Table 4 on page 56 provides basic information about data communication interfaces that you can use to connect your print engine to a computer. You may send label formats to the print engine through any data communication interface that is available. Select an interface that is supported by both your print engine and your computer or your Local Area Network (LAN).

Caution • Ensure that the print engine power is off (O) before connecting data communications cables. Connecting a data communications cable while the power is on (I) may damage the print engine.

Table 4 • Data Communication Interfaces

Interface	Standard or Option	Description
RS-232 Serial	Standard	<p>Limitations and Requirements</p> <ul style="list-style-type: none"> • Maximum cable length of 50 ft (15.24 m). • You may need to change print engine parameters to match the host computer. • You need to use a null-modem adaptor to connect to the print engine if using a standard modem cable. <p>Connections and Configuration The baud rate, number of data and stop bits, the parity, and the XON/XOFF or DTR control must match those of the host computer.</p>
USB	Standard	<p>Limitations and Requirements</p> <ul style="list-style-type: none"> • Maximum cable length of 16.4 ft (5 m). • No print engine parameter changes required to match the host computer. <p>Connections and Configuration No additional configuration is necessary.</p>
8-bit Parallel data interface	Standard	<p>Limitations and Requirements</p> <ul style="list-style-type: none"> • Maximum cable length of 10 ft (3 m). • Recommended cable length of 6 ft (1.83 m). • No print engine parameter changes required to match the host computer. • A wired or wireless print server (if installed) takes up this port on the print engine. <p>Connections and Configuration No additional configuration is necessary.</p>

Serial Data Port

To communicate using the serial data port of the print engine, you must choose the number of data bits, parity, and handshaking. Parity applies only to data transmitted by the print engine because the parity of received data is ignored.

The values selected must be the same as those used by the host equipment connected to the print engine. Default print engine settings are 9600 baud, 8 data bits, no parity, and XON/XOFF. The print engine will accept any host setting for stop bits.

Hardware Control Signal Descriptions

For all RS-232 input and output signals, the print engine follows both the Electronics Industries Association (EIA) RS-232 and the Consultative Committee for International Telegraph and Telephone (CCITT) V.24 standard signal level specifications.

When DTR/DSR handshaking is selected, the Data Terminal Ready (DTR) control signal output from the print engine controls when the host computer may send data. DTR ACTIVE (positive voltage) permits the host to send data. When the print engine places DTR in the INACTIVE (negative voltage) state, the host must not send data.



Note • When XON/XOFF handshaking is selected, data flow is controlled by the ASCII Control Codes DC1 (XON) and DC3 (XOFF). The DTR Control lead has no effect.

Request To Send (RTS) is a control signal from the print engine that is connected to the Clear To Send (CTS) input at the host computer.

Pin Configuration


Connect the serial data cable to the female DB-9 connector on the back of the print engine. For all RS-232 connections through a DB-25 cable, use a DB-9 to DB-25 interface module (see [DB-9 to DB-25 Connections on page 72](#)).

Table 9 shows the pin configuration of the serial data connector.

Table 9 • Serial Connector Pin Configuration

Pin No.	Name	Description
1	–	Unused and unterminated
2	RXD	Receive data—data input to print engine
3	TXD	Transmit data—data output from print engine
4	DTR	Data terminal ready—output from print engine
5	SG	Signal ground
6	DSR	Data set ready—input to print engine
7	RTS	Request to send—output from print engine

Table 9 • Serial Connector Pin Configuration (Continued)

Pin No.	Name	Description
8	CTS	Clear to send—input to print engine
9	+5 VDC	+5 VDC at 750 mA The maximum current draw may be limited by option configuration.  Important • To enable this capability, a qualified service technician must install a jumper on the print engine’s main logic board on JP1, pins 2 and 3.

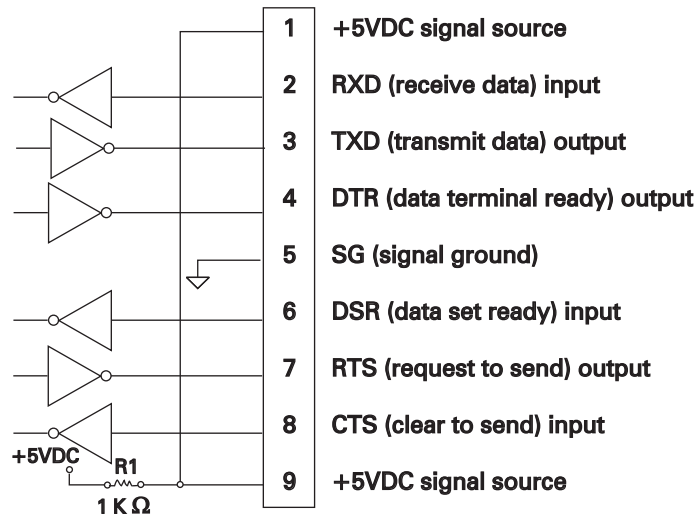
RS-232 Interface Connections

The print engine is configured as Data Terminal Equipment (DTE). [Figure 11](#) shows the internal connections of the print engine’s RS-232 connector.



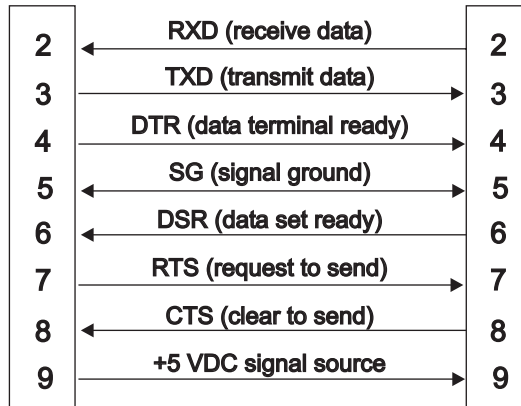
Note • Use a null modem (crossover) cable to connect the print engine to a computer or any other DTE device.

Figure 11 • RS-232 DB9 MLB Connections



When the print engine is connected via its RS-232 interface to Data Communication Equipment (DCE) such as a modem, use a standard RS-232 (straight-through) interface cable. [Figure 12](#) illustrates the connections required for this cable.

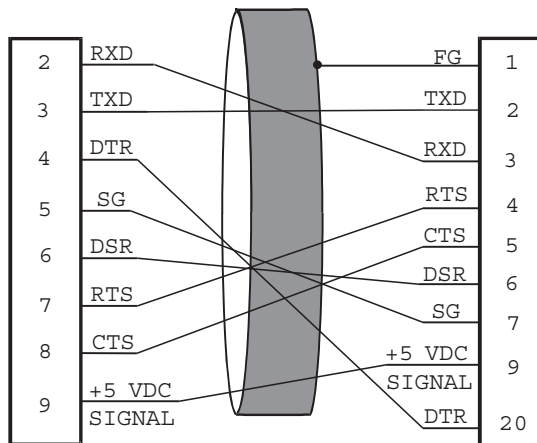
Figure 12 • RS-232 to DCE Cable Connectors



DB-9 to DB-25 Connections

To connect the print engine's RS-232 DB-9 interface to a DB-25 connector, an interface adapter is required. A generic DB-25 adapter can be used, although the +5 VDC signal source would not be passed through the adapter. Figure 13 shows the connections required for the DB-9 to DB-25 interface.

Figure 13 • DB-9 to DB-25 Cable Connections



Modem Connection

When the print engine is connected via its RS-232 interface to Data Communication Equipment (DCE) such as a modem, use a standard RS-232 (straight-through) interface cable. Figure 14 shows the connections required for this cable.

Figure 14 • RS-232 Cable Connections

