# RS-232 Serial Port Pin-Out

In telecommunications, RS-232 (Recommended Standard 232) is a standard for serial binary data signals connecting between a DTE (Data Terminal Equipment) and a DCE (Data Circuit-terminating Equipment). It is commonly used in computer serial ports. - Wikipedia

Signal	Full Name	DB-9 Pin	DB-25 Pin
DCD	Data Carrier Detect	1	8
RXD	Receive Data	2	3
TXD	Transmit Data	3	2
DTR	Data Terminal Ready	4	20
GND	Signal Ground	5	7
DSR	Data Set Ready	6	6
RTS	Request To Send	7	4
CTS	Clear To Send	8	5
RI	Ready Indicator	9	22
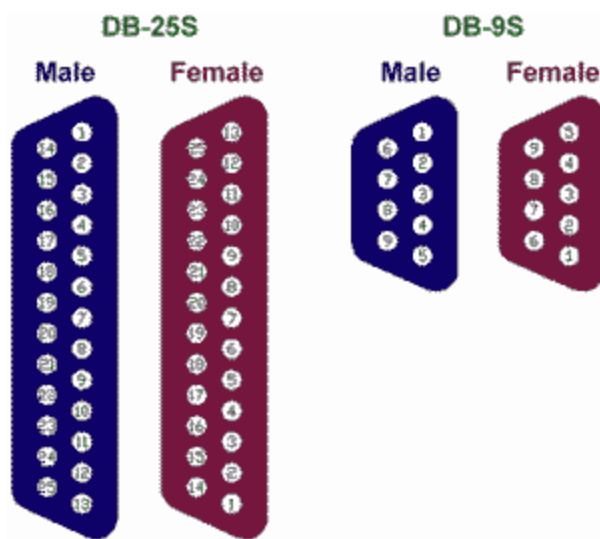
Signals:

- Transmitted Data (TxD) - Data sent from DTE to DCE.
- Received Data (RxD) - Data sent from DCE to DTE.

- Request To Send (RTS) - Asserted (set to logic 0, positive voltage) by DTE to prepare DCE to receive data. This may require action on the part of the DCE, e.g. transmitting a carrier or reversing the direction of a half-duplex channel. For the modern usage of "RTS/CTS handshaking," see the section of that name.
- Ready To Receive (RTR) - Asserted by DTE to indicate to DCE that DTE is ready to receive data. If in use, this signal appears on the pin that would otherwise be used for Request To Send, and the DCE assumes that RTS is always asserted; see RTS/CTS handshaking for details.
- Clear To Send (CTS) - Asserted by DCE to acknowledge RTS and allow DTE to transmit. This signaling was originally used with half-duplex modems and by slave terminals on multidrop lines: The DTE would raise RTS to indicate that it had data to send, and the modem would raise CTS to indicate that transmission was possible. For the modern usage of "RTS/CTS handshaking," see the section of that name.
- Data Terminal Ready (DTR) - Asserted by DTE to indicate that it is ready to be connected. If the DCE is a modem, this may "wake up" the modem, bringing it out of a power saving mode. This behaviour is seen quite often in modern PSTN and GSM modems. When this signal is de-asserted, the modem may return to its standby mode, immediately hanging up any calls in progress.
- Data Set Ready (DSR) - Asserted by DCE to indicate the DCE is powered on and is ready to receive commands or data for transmission from the DTE. For example, if the DCE is a modem, DSR is asserted as soon as the modem is ready to receive dialing or other commands; DSR is not dependent on the connection to the remote DCE (see Data Carrier Detect for that function). If the DCE is not a modem (e.g. a null modem cable or other equipment), this signal should be permanently asserted (set to 0), possibly by a jumper to another signal.
- Data Carrier Detect (DCD) - Asserted by DCE when a connection has been established with remote equipment.
- Ring Indicator (RI) - Asserted by DCE when it detects a ring signal from the telephone line.