RS-530 to RS-449 Adapter Cable

Part # 2537FM

MicroGate Systems, Ltd

http://www.microgate.com

Overview

This document describes the Microgate RS-530 to RS-449 adapter cable, part number 2537FM. This cable converts the RS-530 serial interface (DB-25 plug) on Microgate serial products to the legacy RS-449 standard (DC-37 plug). The cable's DB-25 receptacle mates to the DB-25 plug of Microgate serial products (DTE) and a DC-37 plug mates to a DCE device with a DC-37 receptacle. The cable is 6 feet (1.8 meters) in length.

DTE and DCE

Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) are designations applied to end points of a serial connection. DTE is a source or destination of data. DCE is a device, such as a MODEM, that converts data to a form for transmission. These designations determine which signals are considered inputs or outputs from the perspective of the attached equipment. For example, the transmit data signal is a DTE output and a DCE input.

Microgate serial products are DTE devices and the table below specifies input/output from the perspective of the DTE.

DTE devices connect directly to DCE devices. This adapter cable is intended for direct connection of a DTE to a DCE. Connecting two DTE devices directly requires a separate cross over cable or intermediate device (Null MODEM) to connect outputs to the appropriate inputs. For example, a cross over cable would connect the transmit data signal of one DTE to the receive data signal of the other DTE.

D-Subminiature Connectors

D-Subminiature (D-Sub) connectors are a class of connectors with a D shaped metal shell used for I/O applications such as serial communications. The connectors come in plug and receptacle versions. D-Sub naming depends on the shell size and number of pins.

DB-25	B Size Shell	25 pins
DC-37	C Size Shell	37 pins

The DC-37 connector is sometimes incorrectly referred to as DB-37.

Electrical and Pin Assignment Standards

RS-422, RS-485 and ITU V.11 define electrical properties of differential signals.
RS-232 and ITU V.28 define electrical properties of single ended signals.
RS-530 defines pin assignments for a DB-25 connector.
RS-449 defines pin assignments for a DC-37 connector.

RS-530 to RS-449 Adapter Cable Pin Assignments

Signal	Electrical	DB-25 Receptacle RS-530 Pin	DC-37 Plug RS-449 Pin	Direction
TxD (-/A), Transmit Data	RS-422/V.11	2	4	Output
RxD (-/A), Receive Data	RS-422/V.11	3	6	Input
RTS (-/A), Request to Send	RS-422/V.11	4	7	Output
CTS (-/A), Clear to Send	RS-422/V.11	5	9	Input
DSR (-/A), Data Set Ready	RS-422/V.11	6	11	Input
Signal Ground		7	19	
DCD (-/A), Data Carrier Detect	RS-422/V.11	8	13	Input
RxC (+/B), Receive Clock	RS-422/V.11	9	26	Input
DCD (+/B), Data Carrier Detect	RS-422/V.11	10	31	Input
AuxClk (+/B), DTE Clock	RS-422/V.11	11	35	Output
TxC (+/B), Transmit Clock	RS-422/V.11	12	23	Input
CTS (+/B), Clear to Send	RS-422/V.11	13	27	Input
TxD (+/B), Transmit Data	RS-422/V.11	14	22	Output
TxC (-/A), Transmit Clock	RS-422/V.11	15	5	Input
RxD (+/B), Receive Data	RS-422/V.11	16	24	Input
RxC (-/A), Receive Clock	RS-422/V.11	17	8	Input
LL, Local Loopback Control	RS-232/V.28	18	10	Output
RTS (+/B), Request to Send	RS-422/V.11	19	25	Output
DTR (-/A), Data Terminal Ready	RS-422/V.11	20	12	Output
RL, Remote Loopback Control	RS-232/V.28	21	14	Output
DSR (+/B), Data Set Ready	RS-422/V.11	22	29	Input
DTR (+/B), Data Terminal Ready	RS-422/V.11	23	30	Output
AuxClk (-/A) DTE Clock	RS-422/V.11	24	17	Output