APPLICATION NOTE ANI14



DTE and DCE Terminology Explained

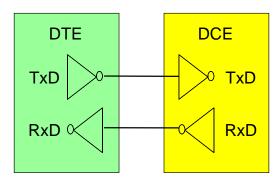
INTRODUCTION

Standard telecom protocols such as X.25 define the two ends of a communications link as either the DTE (Data Termination Equipment) or the DCE (Data Channel Equipment). Normally terminal devices (PCs, dumb-terminals, peripherals) are DTE and channel-servicing equipment (modems, CSU, line termination equipment) are DCE. Devices that route or filter data (routers, bridges, encryption devices) may have both types of ports. Most Serial Communications Controllers (SCC) can be configured to operate in either mode.

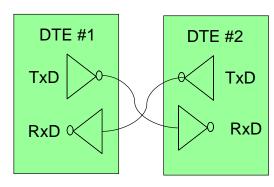
By convention, signal names are referenced to the DTE. So as an example the Transmit Data (TxD) signal will originate from the DTE. A DTE will connect TxD to a line driver but the DCE will connect a line receiver. This is often a source of confusion for people unfamiliar with this terminology.

In order for two DTE devices to communicate the TxD driver output of each must be cross connected to the RxD receiver input of the other. Adapters that do this are known as a "null modem" because they allow the two DTE to communicate as if a modem (DCE) was connecting them. Adapter plugs or cross-over cables are available for this purpose or can be easily fabricated.

DTE connected to DCE



DTE connected to another DTE (NULL MODEM)



Signal connections between a SCC and Sipex drivers and receivers remain the same whether it is operating as a DTE or DCE.

For further assistance:

Email: <u>Sipexsupport@sipex.com</u>

WWW Support page: http://www.sipex.com/content.aspx?p=support

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Sipex Corporation Headquarters and Sales Office 233 South Hillview Drive Milpitas, CA95035

tel: (408) 934-7500 faX: (408) 935-7600

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