Universal Data Channel Card for TMS Systems

Introduction to UDC

The Universal Data Channel card (UDC) is a single-channel data module that provides the channel interface for data multiplexed by the TMS. Data channel cards are controlled by the CIC module and can be programmed to accept any of the following types of data:

- Synchronous
- Asynchronous
- Isochronous
- Anisochronous (data transition-encoded according to ITU-T R.111 standards)

Major Features

- Selectable interfaces: EIA/TIA-232-E, MIL-STD-188-114, EIA RS-422/423, V.35, X.21 (X.27), and ITU-T V.25
- Programmable standard and special data rates from 75 bps to 2.048 Mbps.
- Hard options set the UDC for DTE or DCE interface characteristics to connect data termination or data communications equipment.
- Hyper Plug-In Card allows error-free operation in the presence of up 32 bits of frame jitter (RS-422 or V.35 only).

Table 1: UDC Types & Options

UDC Module Type	GDC Part No.
UDC for EIA/TIA-232-E	036M078-001
UDC for EIA RS-422	036M078-002
UDC for EIA RS-423	036M078-003
UDC for ITU-T V.35	036M078-004
Hyper Plug-In Card Assembly (RS-422 only)	036M078-005
Hyper Plug-In Card Assembly (V.35 only)	036M078-006

Modular and Flexible

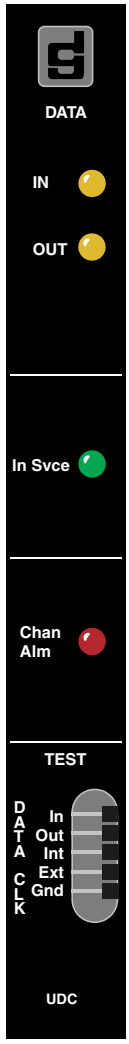
The UDC is installed in any slot of a TMS-3000 expansion shelf or a TMS Compact expansion shelf. Data channel interface connections are made at the rear panel of the Expansion shelf. Front panel indicators provide status and alarm information. Front panel also provides test points for the following parameters:

- transmit/receive data in or out of the channel
- internal or external clock
- signal ground

Interface Options

The Data Channel module may be set to operate according to any of the following interfaces: EIA/TIA-232-E, MIL-STD-188-114, EIA RS-422/423, V.35, X.21 (X.27), and ITU-T V.25. Normally all interface control signals are at EIA/TIA-232-E levels that are unbalanced at all times.

The UDC accepts up to four input control signals from a channel device and transmits the states of these signals to the remote channel card where they are applied to the channel device as output control signals. The off-to-on transition of one of these signals may be transmitted as an in-band control, permitting rapid channel turnaround for polling and other channel applications.



Hyper Plug-In Option

The Hyper Plug-In card mounts on the UDC module to allow data channels to operate error free in the presence of up to 32 bits of frame jitter. This feature extends the receive buffer up to 64 bits. Frame jitter can occur on high speed (384 Kbps or greater) data channels when more than one common card frame is "intermixed" by a CIC receive FIFO.

The Hyper Plug-In Card is recommended when a CIC is configured for a Data Channel of 384 Kbps (or greater) and more than one common card (ACC, CIC, ACM, or CDA module) has channels terminating on the CIC. The CIC must be terminating low speed channels (19.2 Kbps).

For a Hyper Plug-In Card application on a circuit which is configured between two TMS nodes, a Hyper Plug-In Card needs to be installed on the UDC modules at both ends.

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