

TRM/ERM T1/E1 Rack Mount



Fractional T1 Concentrator

The TRM series product is a Rack Type T1(DS1) DSU/CSU for Fractional T1 Digital Access which is nested in a hub to provide an economic solution for central office installations. There are 13 slots available for G.703 T1 cards for installation into the TRM RACK. An optional SNMP card can be installed into the last slot for configuration and management, leaving 12 slots available for line cards. The SNMP card provides both local control via an RS-232C Craft port and remote management using industry standard SNMP protocol via an Ethernet 10BASE-T connection. Each Line card may be linked to a remote TTU01 standalone T1 Access Unit for various LAN, Video Conference, or Hosts over T1(DS1) network services.

The TRM accommodates a redundant power supply as optional equipment, which may derive power from AC (100-240) or DC (-48V) power sources. The power supply modules provide power redundancy and are hot swappable even during the Line cards' data transmissions. Individual Line cards are also hot swappable.

The TRM provides all interface connection on the rear panel. When cards are inserted and power applied, LEDs will show the T1 Line and data port status on the front panel. On the rear panel, Terminal Blocks are utilized for balanced T1 Line interface connections. Adapter cables are used to convert the DB-26F DCE data ports for V.35, RS-530, X.21, or 10Base-T Ethernet Bridge operation.

Features

- Central Solution in Standard 19" RACK
- Up to 13 cards can be installed.
- High density & compact, 4U high.
- Hot Swapping of cards and redundant power supplies (optional).
- LED Line status display on each card.
 - PWR
 - TD
 - RD
 - RTS
 - DCD
 - TxCLK Loss
 - R. Alarm
 - Sync Loss
 - Y. Alarm
 - Err
 - Test
- Test Pushbutton switches on each card.
 - Local digital loopback
 - Local analog loopback
 - Remote loopback
 - Pattern Generator
- All Interface connectors on the Rear Panel.
- Different Power Source Options, AC or DC.
- Optional SNMP network management system card.
- Compliance with ITU-T G.703, G.704, G.706, G.733, and G.824, ANSI T1.403.

Specifications

- **DS1 Line**
- **Framing** Unframed/Framed D4(SF)/ESF
- **Bit Rate** 1.544Mbps
- **Line Codes** AMI B8ZS
- **Line impedance** 100 Ohms Balanced
- **Relative receive level** 0 to -36dB
- **Transmit Level**
 - **Pulse Amplitude** Nominal 3.00V±10%
 - **Zero Amplitude** ±0.1 V
- **Transmit frequency tracking**
 - **Internal timing** ±30ppm
 - **Loopback timing** ±50ppm
 - **External timing** ±100ppm
- **Jitter performance** According to ITU-T G.824
- **Complies with** ITU-T G.703, G.704, G.706 and G.733, ANSIT1.403
- **Interface connectors** 5 Pin Wire Connector (balanced)

Specifications (Cont.)

User Data Channels

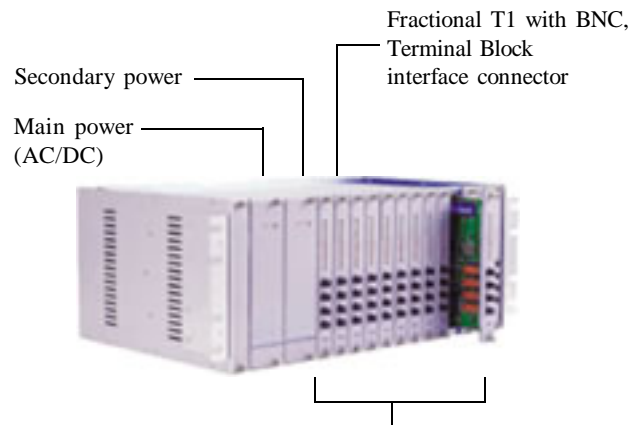
- **Interfaces type**
 - RS-530
 - X.21
 - V.35
 - RS-449
 - 10Base-T Bridge
- **Interface connector** High density DB26 Female
- **Line code** NRZ
- **Data rate** 1.536Mbps Unframed, Framed
N x 56kbps or N x 64kbps
where N equal 1 to 24

- **Clock modes**
- **Clock mode 0 (DCE1)** Rx and Tx clocks (recovered) to the synchronous DTE
- **Clock mode 1 (DCE2)** Rx and Tx clocks (internal oscillator) to the sync. DTE
- **Clock mode 2 (DTE1)** Rx clock to the sync. device, Tx clock from the sync. device
- **Clock mode 3 (DTE2)** Rx and Tx clock from the sync. DCE (from ETC and ERC pin)
- **Clock mode 4 (DTE3)** Rx and Tx clocks from the sync. DCE (all from ETC pin)
- **Control signals** CTS constantly ON
DSR constantly ON, except during test loops
DCD constantly ON or follows RTS, except during signal loss

- **Time slot allocation** User defined

Ordering Information

TRM/RACK	RACK Cage
ERM/AC	AC power plug-in module
ERM/DC	DC-48V power plug-in module
TRM/FT1	Fractional T1(DS1) Line card
TRM/T1U	Unframed Only T1 Line card
TRM/SNMP	SNMP plug-in card



13 line card can be installed into the rack,
12 when the SNMP option is installed.

TRM OVERVIEW

TRM Interface Cards

T1 Digital Access Unit-RACK Mount



Product: TRM/V35
Connection: HD26 to V35/MB34
Cable M/F



Product: TRM/RS530
Connection: HD26M to RS-530/DB25
Cable M/F



Product: TRM/RS449
Connection: HD26M to RS-449/DB37
Cable M/F



Product: TRM/X21
Connection: HD26M to X.21/DB15
Cable M/F



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* Specifications subject to change without notice.

