# PacketBand-TDM-4 & -3MC



The PacketBand-TDM-4 (TDM-4) supplies clocklocked clear channel or structured E1/T1 circuits over Ethernet, IP, or MPLS networks. It supports up to four E1/T1s and can be used in pairs or with other members of the PacketBand range.

## Features

- Multi-standard TDM pseudowire support: CESoPSN, SATOP, TDM over IP
- Highly accurate and stable clock recovery
- G.823 Synchronization levels
- Various clocking options for different network types and clock recovery requirements
- "Inter-works" with other PacketBand family members
- Up to 4 E1/T1 interfaces
- (2) 10/100/1000Mbps RJ45 interfaces
- (1) 100/1000Mbps SFP interface
- Support for Jumbo Packets up to 10,240 bytes on Ethernet ports
- TDM packets can be assigned IP Diffserv (DSCP) or ToS and 802.1p CoS values
- Supports full 802.1q tagging and associated 802.1p CoS prioritization levels
- All egress packets, including TDM links, can be prioritized across four output queues
- ▶ 802.1Q VLAN including Q-in-Q
- Link Aggregation Control Protocol (LACP)
- Rapid Spanning Tree Protocol (RSTP)
- Rate limiting
- ▶ Remote management with DbManager
  - + Configuration changes
  - + Alarms & Events
  - + Graphs
  - + Loopbacks and pings
  - + "Sniffer" / monitor port
  - + Software / Firmware updates

# Specifications

Clock Recovery	Capable of exceeding G.823 Synchronous Interface requirements (subject to network performance)
TDM port (E1)	4 ports User switchable E1/T1 RJ45 connector Presents as DCE (crossed cable for DTE) 120 Ohm 75 Ohm user-selectable via converter cable G.703 unstructured G.704 channelized ITU G.706 Selectable CRC4/non-CRC4 HDB3 Transparent to user signaling
TDM port (T1)	4 ports User switchable T1/E1 RJ45 connector Presents as DCE (crossed cable for DTE) 100 Ohm Unframed 1.544Mbps Framed 1.536Mbps (robbed-bit) ESF or D4 selectable B8ZS or AMI selectable Transparent to user signaling
Ethernet Interfaces	2 x RJ45 UTP 10/100/1GE Auto-sensing or manual SFP cage (module not supplied) for various fibre modes
Local Management Port	RJ12 Asynchronous Auto-sensing to 115kbps Also remote access via packet network Dry contact alarm relay pins 4, 5, 6
Oscillator Performance	Hold-over 24hrs 4ppb Aging per day 0.5ppb Temperature Stability 14ppb
IP & MAC Address	Single MAC address, IP address, subnet mask and default gateway, Support for DHCP
Configuration	Held in non-volatile memory
Power (AC)	Internal via IEC connector Auto-sensing 96VAC-240VAC Max consumption 0.2Amps RMS @230VAC MTBF 400,000hrs
Power (DC)	1. Nominal -48VDC, 4mm terminal block, -33VDC to -75VDC, 0.35A max, MTBF 1,790,000hrs 2. Nominal -24VDC, 4mm terminal block, -18VDC to -75VDC, 0.55A max, MTBF 800,000hrs 3. Wide range DC, Internal via 4mm terminal block, -19VDC to -72VDC, Max consumption 0.35A @ -48VDC MTBF 1,790,000 hours
Dimensions	Width: 8.86" (225 mm] Depth: 7.87" (200 mm] Height: 1.73" (44 mm]
Environment	Operating Temperature -20°C to +55°C Humidity 10-90% non-condensing
Safety	EC EN60950-1:2002 ACA TS001:1997 ACS/NZ60950:2000 AS/NZS3260:1993 IEC950
Warranty	1 year hardware & software

# **Ordering Information**

## PB-TDM-4-AC

Quad T1/E1 CESoPSN unit. (2xUTP) 10/100/ GE ports and (1xSFP) port for WAN with Asymmetrical and Plesicchronous clocking. Includes LACP, RSTP, Enhanced Clock, 64 logical links, serial control cable and DbManager Lite. AC Power.

#### PB-TDM-4-DC

Quad T1/E1 CESoPSN unit. (2xUTP) 10/100/ GE ports and (1xSFP) port for WAN with Asymmetrical and Plesiochronous clocking. Includes LACP, RSTP, Enhanced Clock, 64 logical links, serial control cable and DbManager Lite. DC Power.

#### PB-TDM-3MC-AC

Quad T1/E1 CESoPSN unit. (2xUTP) 10/100/ GE ports and (1xSFP) port for WAN with Asymmetrical and Plesiochronous clocking. Includes multicast option. Also includes LACP, RSTP, Enhanced Clock, 64 logical links, serial control cable and DbManager Lite. AC Power.

#### PB-TDM-3MC-24VDC

Quad T1/E1 CESoPSN unit. (2xUTP) 10/100/ GE ports and (1xSFP) port for WAN with Asymmetrical and Plesicohronous clocking. Includes multicast option. Also includes LACP, RSTP, Enhanced Clock, 64 logical links, serial control cable and DbManager Lite. 24 VDC Power.

## PB-TDM-3MC-48VDC

Quad T1/E1 CESoPSN unit. (2xUTP) 10/100/ GE ports and (1xSFP) port for WAN with Asymmetrical and Plesiochronous clocking. Includes multicast option. Also includes LACP, RSTP, Enhanced Clock, 64 logical links, serial control cable and DbManager Lite. 48 VDC Power.

Optional Accessories (sold separately)

## PB/cont

Replacement serial controller cable CABLE-TDM-STR PRI/BRI, T1, E1 Straight through

CABLE-TDM-X

PRI/BRI, T1, E1 crossed PB/cnack/75BNC/01

120 Ohm RJ45 to 75 Ohm dual BNC conversion cable 20cm

SINGLE-RMK-S

19" rack mount kit for smaller case

DUAL-RMK-S 19" rack mount kit for two smaller units side by side

PB/RMK/W/1 Wall mount kit

