

T-Marc

Ethernet and Circuit Emulation Service Demarcation Solution

Compact, cost-effective Ethernet/TDM demarcation switch support



▶ T-Marc-250 with Gigabit Ethernet uplink

▶ T-Marc-254 with Gigabit Ethernet uplink and CES



The T-Marc is a family of fully managed 10/100/1000 Ethernet demarcation gateway units. Some models have integrated pseudowire (PWE3) 4 ports T1/E1 circuit emulation (CES) modules.

The T-Marc has several unique features that make him "best of breed".

- One unit "does all". No need for separate switches and CES units. Saves space and cost.
- Guaranteed recovery time <50 mSec (average 15 mSec) based on M/RSTP (Multiple Rapid Spanning Tree).

With the T-Marc IP networks have better recovery time than traditional SDH/Sonet networks.

All latest standards supported:

- T-Marc provides service termination and demarcation over service providers' packet-based networks utilizing 802.3ah EFM (Ethernet First Mile), 802.3ag (IEEE, ITU, MEF) and IEEE802.1aj.
- Standards-based features provide extensive end-to-end **Operation Administration and Maintenance (OAM)** capabilities, such as performance monitoring, fault propagation, loopback, and remote

failure indications. This extensive OAM significantly lower OPEX costs.

- T-Marc's **CES functionality** helps to reduce CAPEX by deploying this single device to deliver new and legacy services. Up to 4 x T1/E1 (or fractional T1/E1) Circuit Emulation Service (CES) Modules integrated into the unit. Special CES, modules that can carry precise cellular backhaul is available.
- Several advanced features of security and Quality of Service.
- The T-Marc is modular with 4 x 10/100BaseTX ports and 1 x 100BaseFX, 1 x 10/100/1000BaseTX and 2 x 1000BaseX that can be fitted with extensive array of SFP's: multi, single mode and bidirectional (CWDM).
- The T-Marc is powered by the Telecom grade multi layer BiNOSCenter™ - EMS software that is used as standard by several Telecoms (TL-1 version available as well).
- The BiNOSCenter™ - EMS is available with all models. Yet, the BiNOSCenter™ can operate with several NMS/OSS systems.

All T-Marc family members are non-blocking and operate at wire speed. ■

Product Highlights

- ❖ Demarcation point between service provider's network and enterprise LAN
- ❖ Full support for voice, video, and data services
- ❖ Extensive Layer 2 functionality non-blocking with wire-speed switching capabilities
- ❖ Provides remote Ethernet, TDM demarcation and visibility
- ❖ Control, monitoring, line testing and loopback capabilities for fault isolation
- ❖ T1/E1 structured/unstructured CES support using state-of-the-art Pseudowire technology for 2G/3G cellular backhauling
- ❖ Comprehensive OAM and management functionality
- ❖ Powered by Telecom grade multi-layers EMS BiNOS Software
 - Flexible management options for remote alarms/provisioning
- ❖ Enhanced security and protection mechanisms
- ❖ Modular, scalable architecture
 - Up to 4 T1/E1s CES
 - Up to 2 Packetized T1/E1s
 - Up to 2 Packetized T3/E3s
 - Up to 4 x 10/100BaseTXs
 - Up to 1 x Combo 10/100/1000BaseTXs or 100/1000BaseFX
 - Up to 2 x 1000BaseX uplinks'
- ❖ Reduces CAPEX - compact, cost-effective solution is ideal for customer premises deployment
- ❖ Reduces OPEX - Minimizes unnecessarily expensive truck-rolls
- ❖ Works & Interoperable with many vendors NMS/OSS
- ❖ Compact 1RU x 1/2 19" pizza-box Desk, rack and wall-mounted

