



CTDI Products: End-to-End Solutions

eMarc 9126 CSU/DSU

eMarc Features

- Provides a clean T1/E1 demarcation point with ethernet or serial connection to Router
- Available in two Feature configurations: Diagnostic and Service Level Monitoring (SLM)
- Feature level can be remotely field upgraded with software updates and feature keys
- Provides ethernet service to customers utilizing existing Frame Relay and PPP networks.

Diagnostic Option

- Automatic Frame Relay installation, including timeslot and LMI type sensing
- End-to-end non-disruptive diagnostics
- Alarm log
- In-band remote management
- Dual firmware loads for non-disruptive remote upgrades

SLM Option

- Real-time and historical performance reporting
- Threshold driven alarms for a wide range of parameters
- SLA reporting - Loss of Data, Class of Service, latency, availability
- Application Monitoring – monitor utilization of up to 10 user-defined IP applications
- VoIP Service Level Monitoring – voice quality reporting on a per-call basis

An Intelligent Ethernet T1/E1 CSU/DSU Solution

The eMarc 9126 is ideal for providing customer premise termination of T1 and E1 services including:

- Leased Lines
- Frame Relay/PPP access facilities
- IP networks that use Frame Relay/PPP as the layer-2 protocol
- TDM drop and insert to a DSX port (provides T1 channelized voice or data user interface)

With features that help sites get in service faster, stay up longer, and get repaired sooner, eMarc is built to support the most demanding enterprise network environments. eMarc provides versatility needed to adapt to changes in network technology as new services and applications are introduced.

A Flexible Next Generation Access Device

The eMarc 9126 CSU/DSU is available in two feature sets:

- Basic diagnostic feature set provides basic frame relay and diagnostic capability
- Service Level Management (SLM) provides basic features, plus reporting and monitoring

Full Service Level Management (SLM) capability can be activated in units that have the basic diagnostic feature set at any time. This is an optional feature that adds real-time and historical network performance monitoring and SLA (Service Level Agreement) reporting capabilities to your eMarc unit and network.

An Intelligent Demarcation

The eMarc 9126 CSU/DSU is the latest addition to CTDI's family of intelligent access products. The 9126 allows you to perform end-to-end service level management across a Frame Relay or PPP network and provides important benefits for large-scale deployment of FR/PPP services, including full diagnostic and SLM functionality, proactive and historical diagnostics, SLM software upgradeability, and critical QoS capabilities to ensure the quality of service required for each application.

Simplified Management

The eMarc 9126 offers simplified, cost effective end-to-end network management capabilities. It provides service providers and enterprise customers the ability to verify SLAs, isolate performance problems, determine appropriate bandwidth needs, and monitor network trends to aid in future capacity planning.

Benefits

- Allows Service Providers to offer ethernet access using common FR/PPP WAN services independent of Customer premise router. Minimal configuration required.
- Minimize maintenance trips with remote management, remote upgrades
- No-hassle installation
- Advanced diagnostics isolate network vs. customer equipment-related problems
- Catch transient problems with threshold-driven alarms
- Standards-based management for direct control from any SNMP manager
- Built in diagnostic Modem for Out of Band management

eMarc 9126 Technical Specifications

WAN Interface

- T1/E1 via 8-pin RJ48
- Line rate: up to 1.536 Mbps (T1), 2.048Mbps (E1)
- Line Framing: D4, ESF
- Line Coding: AMI, B8ZS, HDB3

DSX-1 Interface

- T1/E1 via 8-pin RJ48

Serial Interface

- Data - RS-530/V.35 via DB-25 connector

Ethernet Interface

10/100 Base-T Auto-sensing

- Auto-detection
- IEEE 802.3

Modem Interface

- Via 6 position RJ11C
- Data rate: up to 56 Kbps
- Line Protocol: PPP, SLIP

COM Port Interface

- 9 position EIA-232

Management Interface

- Telnet console management
- Full SNMP manageability
- RMON Version 1, RMON Version 2
- RFC 1213 - SNMP MIB II
- RFC 1659 - RS-232 MIB
- RFC 1573 - Interface Group Evolution
- RFC 1406 - DS1/E1 MIB
- RFC 1604 - Frame Relay Service
- RFC 2110 - Frame Relay DTE
- RFC 1757 - RMON Version 1
- RFC 2021 - RMON Version 2
- Enterprise MIB
- RADIUS CDR Voice Call Reporting

Standards Support

- AT&T Frame Relay Service Specification
- Sprint Frame Relay Interface Specification 5136.03
- ANSI TI.606, 617, 618 Frame Relay Bearer Services and Protocols
- ITU-T Recommendation Q.933 Annex A
- ANSI TI-617 Annex D
- ITU-T Recommendation I.122/I.233
- FRF 1.1 UNI
- ITU-T Recommendation X.36
- RFC 1990 – MLPPP
- RFC 1661 – PPP/LCP
- RFC 1332 – IPCP
- RFC 2507/2508/2509 – IPHC

Physical Characteristics

- Stand alone (Desktop)
- 1.8" H x 11.8" W x 8.3" D (4.6 cm H x 30 cm W x 21 cm D)
- Weight: 1.7 lbs (0.77 kg)

Power

- Power supply: External 100-240 VAC 50-60Hz, auto range
- Power: 10 W max (35 BTU/hr)

Environmental Tolerances

- Operating Temperature: 32F to 122F (0C to 50C)
- Non-operating temperature: -4F to 158F (-20C to 70C)
- Humidity: 5% to 85%, non-condensing

Regulatory - Compliance & Agency Approval

- This product complies with or has obtained Regulatory Agency approval at least against the following standards:
 - EMC - Emission (Class A): FCC part 15
 - Safety
 - Telecom: FCC Part 68, IC CS-03

Warranty and Support

- One (1) year warranty

