iMARC 9788
CSU/DSU

9788 Features

- Feature level can be remotely field upgraded with OpenLane NMS and upgrade keys

Diagnostic Option

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

SLM Option

- SLA reporting - Loss of Data, Class of Service, latency, availability
- Real-time and historical performance reporting
- Threshold driven alarms for a wide range of parameters

A Flexible Solution

The 9788 CSU/DSU provides a G.SHDSL termination, and features FRF.8 ATM to Frame Relay conversion. This is ideal for using G.SHDSL as an access method for connection to Frame Relay networks. The unit features a V.35 interface for connection to a separate router. The iMarc 9788 available with both diagnostic and SLM feature levels, combines a router with a G.SHDSL modem for cost-effective, single unit connections of customer Ethernet LANs to G.SHDSL access facilities.

A Future Proof Investment

The iMarc DSL 9788 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 iMarc unit and network.

Features and Capabilities

The iMarc 9788 CSU/DSU is a component in the family of intelligent iMarc access products. The iMarc 9788 allows you to perform end-to-end service level management across a hybrid DSL/ATM or Frame Relay network and provides important benefits for large-scale deployment of Frame Relay 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.

Benefits

- Minimize maintenance trips with remote management, remote upgrades
- No-hassle installation
- Advanced diagnostics isolate network vs. router problems
- Catch transient problems with threshold driven alarms
- Standards-based management for direct control from any SNMP manager

CTDI Global Engineering, Repair & Logistics

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iMARC 9788 Technical Specifications

WAN Interface
- Symmetrical ITU-T G.991.2 G.SHDSL via 8-pin RJ48
- Line Rate: 200 kbps to 2.320 Mbps
- Line Framing: ATM transport (G.991.2)
- Line Coding: Trellis Coded Pulse Amplitude Modulation
- Network Protocol: ATM

Serial Interface
- Data – 25 position DB25 (ISO 2110)

Ethernet Interface
- 10/100 Base-T auto-sensing
- Auto-detection
- Protocols: TCP/IP, RIPv1&2, OSPF
- IP Addressing: DHCP (client & server)
- Security: NAT, PAT
- IEEE 802.1D transparent, self-learning bridge

COM Port Interface
- 9 position EIA-232

Management Interface
- Telnet console management
- Industry defacto CLI (Routers only)
- Full SNMP manageability
- RFC 1213 – SNMP MIB II
- RFC 1659 – RS-232 MIB
- RFC 1673 – Interface Group Evolution
- RFC 1604 – Frame Relay Service
- RFC 2115 – Frame Relay DTE
- RFC 1757 – RMON Version 1
- RFC 2021 – RMON Version 2
- RFC 2515 – ATM
- Enterprise MIB

Diagnostics
- Network Loop: SHDSL network loopback timing
- Network, AAL1 adaptive
- AAL1, Circuit Emulation Service (af-vtoa-0078.000)
- Mode: short haul, long haul

Frame Relay / ATM (Serial Port Only)
- FRF.8

Standards Support
- ITU-T recommendation G.991.2 G.SHDSL
- 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
- ATM UNI 3.1
- AAL-5 support
- ITU-T Recommendation Q.922 “Annex A Core Aspects”
- FRF.8 Frame Relay To ATM Service Interworking
- RFC 1490/2427 – MPO

Physical Characteristics
Stand alone (Desktop)
- 2.1" H x 8.7" W x 6.2" D (5.3 cm x 22.1 cm x 15.7 cm)
- Weight: 1.38 lbs. (0.62 kg)

Power
- Power Supply: External 100-240 VAC, 50-60 Hz, auto ranging
- Power : 10 W max (27.4 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 products complies with or has obtained Regulatory Agency approval at least against the following standards:
  - EMC – Emission (Class A): FCC part 15
  - Safety: UL 60950-1, CSA C22.2 No 60950-1
  - Telecom: FCC Part 68, IC CS-03

Warranty and Support
- One (1) year warranty