

24-port SHDSL MiniDSLAM

SMD2000-24T-DC, SMD2000-24E-DC

Delivering Symmetrical DSL to the Small Business and Home Office



Overview

Net to Net Technologies' SMD2000-24 is a 24-port, small form factor MiniDSLAM that delivers symmetrical data rates at up to 2.3 Mbps per port. The SMD2000-24 is ideal for deploying high-speed, business class SHDSL in a Remote Terminal/Street Cabinet, or as a small-scale Central Office or in-building DSL solution.

Designed specifically for Remote Terminal/Street Cabinet collocation, the SMD2000-24 is environmentally hardened, remotely manageable, and only requires a single rack unit (1.75" or 1 "U"). Within US markets the SHDSL MiniDSLAM can utilize the existing T1/E1 technology within Digital Loop Carrier (DLC) systems for data backhaul to the main Central Office. Telcos are now able to deploy extremely high-speed SHDSL services to those service areas served through DLCs. The T1/E1 backhaul capability means that the SHDSL MiniDSLAM provides a solution for rural areas where previously DSL deployment was uneconomical due to the high cost of OC-3/12 backhaul costs. This opens exciting new opportunities for the Competitive Operator or ISP in these locations.

The SMD2000-24 provides 24 individual single copper pair SHDSL lines, allowing for data rates ranging from 144Kbps up to 2.3Mbps symmetrical bandwidth at distances up to 24,000 feet (7,315 meters) on each port. The SMD2000-24 also supports Net to Net's Loop Bonding technology, which allows the service provider to bond up to 24 copper pairs for bandwidths up to 27 Mbps to a single subscriber, when using a Net to Net SHDSL CPE with loop bonding support, such as the SNE2020G-S or SNE2040G-S or using the 6 and 12 port MicroDSLAMs configured as CPEs, enabling anything from 2 to 12 lines to be bonded together resulting delivering 2.3 Mbps per line.

Supporting a choice of 10/100 Ethernet, T1/E1, dual T1/E1, and DS3/E3 backhaul technologies, the SMD2000-24 can be deployed in a variety of network designs and can cost-effectively deliver high-speed SHDSL in locations where subscriber counts do not justify a chassis-based solution.

There are several management options for the SMD2000-24, including Net to Net's web-based NMS, standard SNMP, as well as support through CLI and Telnet. The SMD2000-24 has one RJ-45 10/100 management port that also provides bridging uplink capability, and one RJ-45 RS-232 COM port for local connections to the CLI. In-band and out-of-band management are both supported.

Features

- Utilizes Net to Net's DSL The Easy Way™ Ethernet-based Architecture for optimum throughput and plug-and-play operation
- 24 fixed SHDSL ports supporting up to 2.3Mbps per port (symmetrical)
- Supports distances up to 24,000 feet/7,315 meters
- Supports Loop Bonding from 2 to 24 ports providing up to 27 Mbps over 12 bonded copper pairs.
- Can be set to 'subscriber' mode, providing a 24 port loop-bonded CPE
- Works with Net to Net's SNE2000G-S (1 pair), SNE2020G-S (Loop Bonding, 2 pairs), and SNE2040G-S (Loop Bonding, 4 pairs), and the 6 and 12 port MicroDSLAMs configured as CPEs, enabling anything from 2 to 12 lines to be bonded together
- Two fixed T1 (SMD2000-24T) or E1 (SMD2000-24E) Loop Bonding capable ports provide up to 3.0 or 4.0 Mbps data backhaul
- Full 802.1Q VLAN/802.1p Priority support for easy to provision VLANs and QoS
- Optional Redundant 10/100, T1/E1, or DS3/E3 Uplink Interface Modules (UIMs)
- Fixed 10/100 management port which can also provide a bridging uplink
- Redundant -48V DC Power; external power supplies required for AC power applications (EPC-AC-2.5A)
- Extremely compact chassis (1.75" high) is environmentally hardened for use in Remote Terminals/Street Cabinets
- Embedded web-based management system for easy, platform-independent remote management and SNMP for remote monitoring

Specifications

Dimensions

1.75" (4.4cm) (1 Rack Unit) High x 17" (43.2) Wide x 14" (35.6) Deep

Weight

DC — 12.6 lbs (5.73 kg)

Power

DC — -48V DC; 2.5A Max

Actually power draw depends on configuration

AC- Requires external power converter (EPC-AC-2.5A recommended)

Interfaces

24 SHDSL Ports (1 RJ21 50-pin Telco)

2 Uplink Interface Module (UIM) slots supporting:

- 10/100 Ethernet (UIM-10/100)
- T1 (UIM-T1), E1 (UIM-E1)
- 2xT1 (UIM-2T1), 2xE1 (UIM-2E1)
- DS3 (UIM-DS3), E3 (UIM-E3)
- E1 (UIM-E1), E3 (UIM-E3)

10/100 RJ-45 Ethernet Management Interface (also provides bridging uplink)

RJ-45 RS-232 COM port

Two fixed RJ-45 T1/E1 uplink ports

Protocol Support

ITU G.992.1 (Layer One only)

802.1Q

802.1p

Bandwidth/Distance

Selectable to 144Kbps, 272Kbps, 400Kbps, 528Kbps, 784Kbps, 1040Kbps, 1552Kbps, 2064Kbps, 2320Kbps

Distances up to 24,000ft/7,315m @ 144Kbps

Loop Bonded ports provide the same distance/bandwidth support

Regulatory Compliance

NEBS: GR-63-CORE, GR-1089-CORE

EMC: FCC Part 15; CSA/C108.8; EN55022; EN55024

Safety: UL1950, CSA C22.2 No. 950; EN60950

CE Marking

Operating Requirements

Temperature: -40°F to 149°F (-40°C to 65°C)

Non operating temperature: -40°F to 158°F (-40°C to 70°C)

Humidity: 5% to 95%, non-condensing

Altitude: -200ft to 16,500ft (-60m to 5,000m)

Ordering Information

SMD2000-24T-DC	24-port SHDSL MiniDSLAM, G.SHDSL (TC-PAM) Encoding, Includes (2) T1 Uplinks and Supports (2) Uplink Interface Modules (UIMs); DC power
SMD2000-24E-DC	24-port SHDSL MiniDSLAM, G.SHDSL (TC-PAM) Encoding, Includes (2) E1 Uplinks and Supports (2) Uplink Interface Modules (UIMs); DC power

