Proscend® 5099B Series SHDSL.bis NTU

Descriptions

Proscend 5099B series 2-Wire/4-Wire SHDSL.bis NTU is a telecommunication product designed for carriers and SME users. The standalone modems offer a variety of choices for data interfaces to meet different connection needs. **Proscend 5099B** series features E1/T1, Serial and Ethernet interfaces, allowing connection to different DTE types. When equipped with multiple interfaces, the standalone SHDSL.bis NTU combines user traffic over the SHDSL link. Available DTE combinations include E1+V.35/X.21, T1+V.35/X.21, E1+Ethernet, T1+Ethernet and V.35/X.21+Ethernet that can work simultaneously to share the DSL bandwidth.

The SHDSL.bis NTU supports two different connectors for G.703 E1 application that link to TDM service either by balanced 120Ω RJ45 jack or unbalanced 75Ω dual BNCs with bit rates from 64kbps to 2.048Mbps. For T1 connection, the SHDSL.bis NTU offers balanced 100Ω RJ45 Jack to carry bit rates from 64Kbps to 1.544Mbps.

As a V.35 interface application, it links to high-speed TDM services by a DB25 interface, which can work as V.35/RS-530 or V.36/X.21 (factory setting) connection. The data rate of DB25 interface is up to 5.696Mbps for one pair of copper wires and 8.192Mbps for two pairs of copper wires.

For Ethernet interface application, the SHDSL.bis NTU supports 10/100Mbps auto-detected Fast Ethernet with a RJ45 connector, and provides customer premise with LAN to high-speed TDM services. The data rate of LAN interface is up to 5.696Mbps for one pair of copper wires and 8.192Mbps for two pairs of copper wires.

The SHDSL.bis NTU can be configured and managed via EOC, or menu-driven VT100 compatible Asynchronous Terminal Interface, either locally or remotely. The SHDSL.bis NTU provides the capability that identifies the maximum line rate supported by the copper loop. This powerful automatic configuration capability makes installation and service provisioning simple and painless. Furthermore it provides flexible manually setting of the maximum NTU speed at different levels for different customer-tailored service offerings.
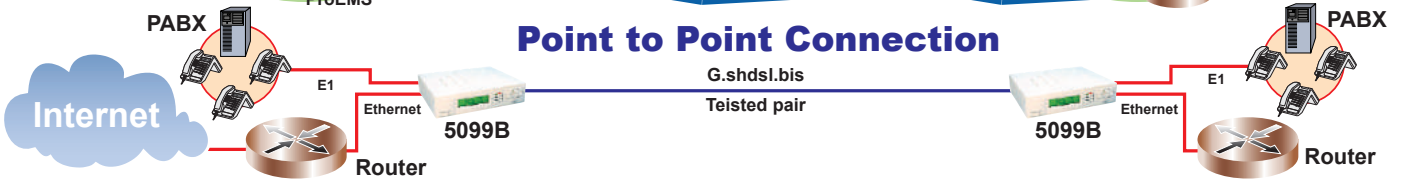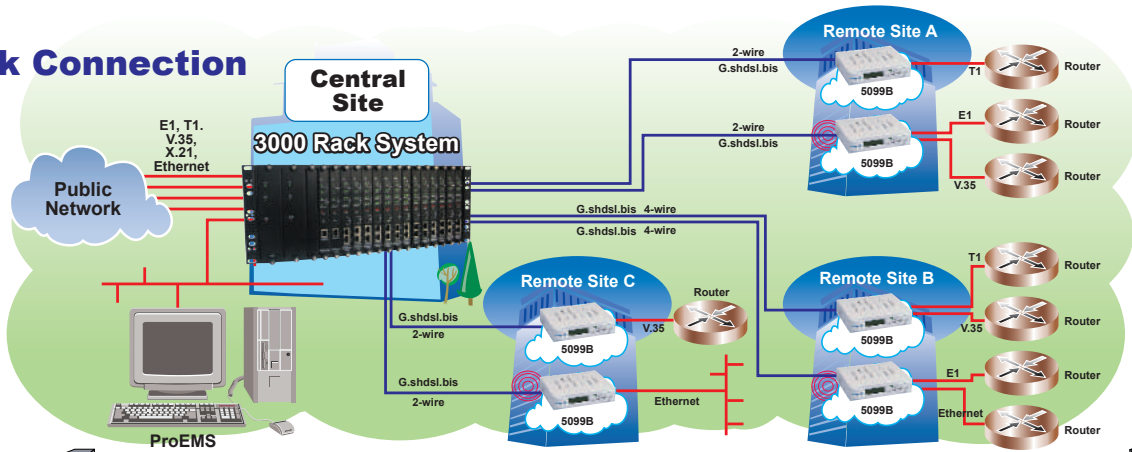
Features

- Standard ITU G.991.2 (2004) supports improvement on reach, speed and interoperability in contrast to conventional G.shdsl devices
- Fast and cost-effective services as voices or TDM leased line services or LAN
- Efficient usage of single wire pair on existing copper loop infrastructures
- Support multiple DTE interfaces working simultaneously on back-to-back connection.
- Auto rate installation maximizes data rate based on loop conditions
- Wetting current sink to protect SHDSL.bis line
- Local management interface with LCD display
- Remote line loopback
- SHDSL.bis Line performance monitoring (data rate and SNR)
- Raw and per time interval statistics
- Bandwidth guaranteed transmission equipment

PROSCEND®

Network Connection

Central Site — 3000 Rack System

E1, T1. V.35, X.21, Ethernet

Public Network

Remote Site A — 2-wire G.shdsl.bis — T1 Router; E1 Router; V.35 Router — 5099B

G.shdsl.bis 4-wire

ProEMS

Remote Site C — G.shdsl.bis 2-wire — 5099B; V.35 Router; G.shdsl.bis 2-wire — 5099B

Remote Site B — T1 Router; V.35 Router; E1 Router; Ethernet Router — 5099B

Point to Point Connection

PABX — E1 — Router — Ethernet — 5099B — G.shdsl.bis / Teisted pair — 5099B — Ethernet — E1 — PABX — Router

Internet

Specification

Proscend 5099B series SHDSL.bis NTU

WAN Interface
- Line Rate: ITU G.991.2 (2004)
- Coding: trellis coded pulse amplitude modulation (TC-PAM16 and TC-PAM32)
- Support: Annex A, B, F and G
- Payload rates: 64kbps to 5.696Mbps (N=1 to 89) for 2-wire model
- 128Kbps to11.392Mbps (N=2 to 178) for 4-wire model
- Connection: RJ-45 jack (2-wire or 4-wire)
- Impedance: 135 ohms

G.703 Interface (as E1)
- Connection: RJ-48C for balanced 120Ω E1 cable and BNC for unbalanced 75Ω E1 cable
- Line Rate : 2048KHz +/- 50ppm
- Line coding: HDB3/AMI
- Framing : PCM30 / PCM30C / PCM31 / PCM31C and Unframed
- Data Rate : 64Kbps to 2.048Mbps (Nx64Kbps , N=1 to 32)
- Operation : Full E1 and Fractional E1

G.703 Interface (as T1)
- Connection: RJ-48C for balanced 100Ω T1 cable
- Line Rate : 1544KHz +/- 50ppm
- Line coding: B8ZS

- Framing: SF / ESF / Unframed
- Data Rate : 64kbps to 1.544Mbps (N=1 to 24)
- Operation : Clear Channel and Factional T1

Serial Interface (as V.35/RS-530 or V.36/X.21)
- Payload rates: Up to 5.696Mbps (for 2-wire model) or Up to 8.192Mbps (for 4-wire model)
- Support V.35/RS-530 or V.36/X.21

LAN Interface (as Ethernet)
- Single Ethernet Interface
- Payload rates: Up to 5.696Mbps (for 2-wire model) or Up to 8.192Mbps (for 4-wire model)
- 10/100Mpbs Half/Full Duplex, Auto-sensing, Auto-MDI/MDIX
- Up to 1024 MAC address learning

DSL Timing
- Internal
- From E1/T1 Recovery (as E1/T1)
- From DTE (as V.35)

Performance Monitoring
- ES, SES, UAS, LOWS for SHDSL
- ES, SES, UAS for E1/T1
- Alarms and Errors for SHDSL or interface

Loopback Tests
(for E1, T1 and V.35 interface only)
- Local Digital Loopback
- Local Loopback
- Remote Line Loopback
- Remote Payload Loopback
- Far-end Line Loopback
- Far-end Payload Loopback
- V.54 Loopback (for V.35 interface)
- Build-in 2047(2^{11}-1) Bit Error Rate Tester

Management
- Configuration with keypads and LCD display
- Console port (RJ45 , RS232C)
- Support firmware upgradeable
- SNMP management via Ethernet port (Optional)

Regulatory
- ISO 9001 Quality Management
- CE Approval & EN60950 Certificate

Physical/Electrical
- Dimensions: 19.8 x 4.6 x 16.8 cm
- AC Input: 90~240V with 50~60Hz
- DC Input: -36V~-72V
- Power Consumption: 10W Max
- Operation temperature: 0 to 50˚C
- Humidity: Up to 95% (non-condensing)
- External screw for frame grounding

Ordering Information

Single Interface models

Interface	2-wire	4-wire
E1	5099B-AC/2W/E1 5099B-DC/2W/E1 5099B-DA/2W/E1	5099B-AC/4W/E1 5099B-DC/4W/E1 5099B-DA/4W/E1
Serial	5099B-AC/2W/SER 5099B-DC/2W/SER 5099B-DA/2W/SER	5099B-AC/4W/SER 5099B-DC/4W/SER 5099B-DA/4W/SER
Ethernet	5099B-AC/2W/ETH 5099B-DC/2W/ETH 5099B-DA/2W/ETH	5099B-AC/4W/ETH 5099B-DC/4W/ETH 5099B-DA/4W/ETH

Multi Interface models

Interface	2-wire	4-wire
E1+T1	5099B-AC/2W/E1/T1 5099B-DC/2W/E1/T1 5099B-DA/2W/E1/T1	5099B-AC/4W/E1/T1 5099B-DC/4W/E1/T1 5099B-DA/4W/E1/T1
E1+Serial+Ethernet	5099B-AC/2W/E1/SER/ETH 5099B-DC/2W/E1/SER/ETH 5099B-DA/2W/E1/SER/ETH	5099B-AC/4W/E1/SER/ETH 5099B-DC/4W/E1/SER/ETH 5099B-DA/4W/E1/SER/ETH
E1+T1+Serial+Ethernet	5099B-AC/2W/E1/T1/SER/ETH 5099B-DC/2W/E1/T1/SER/ETH 5099B-DA/2W/E1/T1/SER/ETH	5099B-AC/4W/E1/T1/SER/ETH 5099B-DC/4W/E1/T1/SER/ETH 5099B-DA/4W/E1/T1/SER/ETH

5099B-**Power**/**Line**/**Interface**   Example: **5099B-AC**/**4W**/**E1/SER/ETH**

Power – Specify power supply type   **Line** – Specify line interface   **Interface** – Specify DTE interface types

AC for 90 ~ 240 VAC
DC for −36 ~ −72 VDC
DA for DC + AC

2W for 2-wire interface
4W for 4-wire interface

E1 for E1 interface only
SER for V.35/X.21 interface only

E1/T1 for E1/T1 dual interface
E1/SER/ETH for E1 + V.35/X.21 + Ethernet multi-interface
E1T1/SER/ETH for E1/T1 + V.35/X.21 + Ethernet multi-interface

*Features and specifications are subject to change without notice

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