

TDM SHDSL Modem

2-wire G.SHDSL TDM

SHDTU03-E1, SHDTU03-ET100, SHDTU03-V35

4-wire G.SHDSL.bis TDM

SHDTU03bA-31



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TDM SHDSL modem

SHDSL TDM modem Series 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. SHDSL TDM modem series features E1/T1, Data and Ethernet interfaces, allowing connection to different DTE types. When equipped with multiple interfaces, the standalone SHDSL modem combines user traffic over the SHDSL link. Available DTE combinations include E1+Ethernet, T1+Ethernet that can work simultaneously to share the DSL bandwidth. The SHDSL modem 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 modem offers balanced 100Ω RJ45 Jack to carry bit rates from 64Kbps to 1.544Mbps. For Ethernet interface application, the SHDSL modem 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 2.3Mbps (SHDSL) for one pair of copper wires and 11.4Mbps (SHDSL.bis) for two pairs of copper wires. The SHDSL modem can be configured and managed via EOC, or menu-driven Asynchronous Terminal Interface, either locally or remotely.

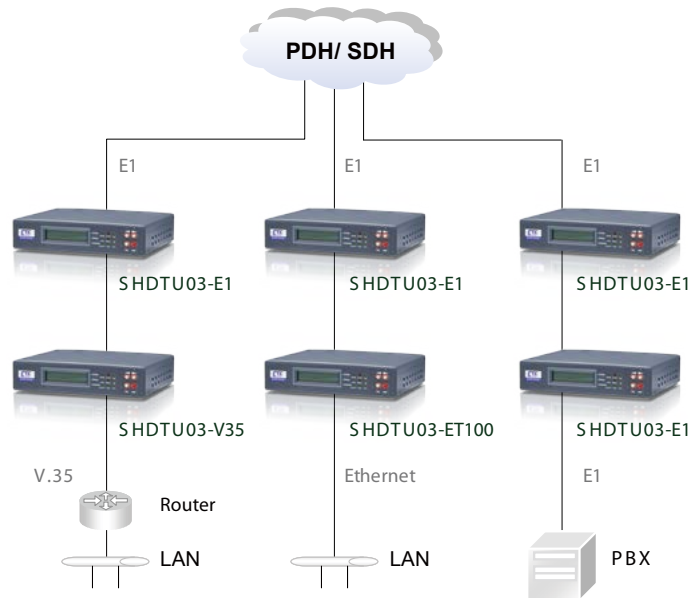
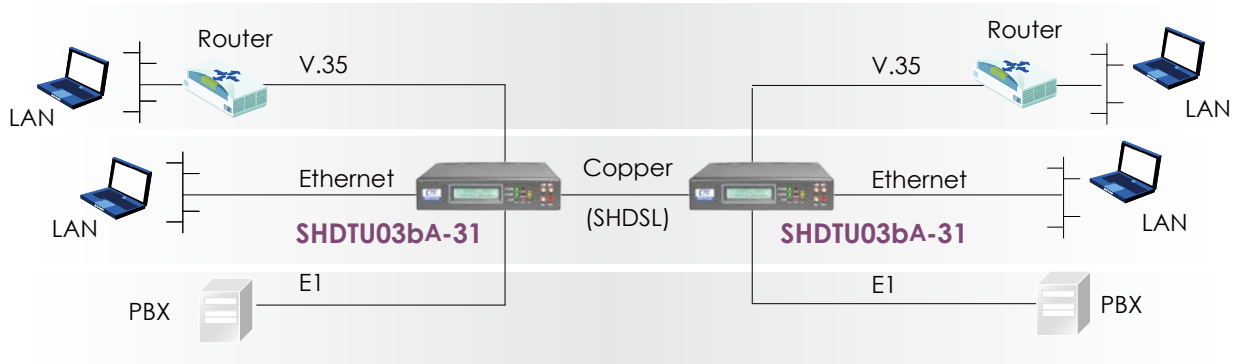
Features

- Standard ITU-T G.991.2 supports improvement on reach, speed and interoperability in contrast to conventional 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
- Bandwidth guaranteed transmission equipment
- Supports multiple DTE interfaces working simultaneously on back-to back connection
- Auto rate installation maximizes data rate based on loop conditions
- Local management interface with LCD display
- Remote line loopback
- SHDSL Line performance monitoring (data rate and SNR)
- Raw and per time interval statistics

Specifications

Network Interface	Line Rate : ITU-T G.991.2 (2004), ITU-T G.994.1	LAN Interface (Ethernet)	Single Ethernet Interface
	Connection : RJ-45		Payload rates : Up to 5.696Mbps (for 2-wire model) or Up to 8.192Mbps (for 4-wire model)
	Impedance : 135 ohms		10/100Mbps Half/Full Duplex, Auto-sensing, Auto-MDI/MDIX
	SHDSL.bis Coding : trellis coded pulse amplitude modulation (TC-PAM16 and TC-PAM32)		Up to 1024 MAC address learning
	Supports : Annex A, B, F and G	Jitter and Wander	Meets G.823 and G.824 jitter and wander requirements
	Payload Rates	DSL Timing	Internal
	• 64Kbps to 5.696Mbps (N=1 to 89) for 2-wire model		From E1/T1 Recovery (E1/T1)
	• 128Kbps to 11.392Mbps (N=2 to 178) for 4-wire model	Performance Monitoring	ES, SES, UAS, LOWS for SHDSL
	SHDSL Coding : trellis coded pulse amplitude modulation (TCPAM-16)		ES, SES, UAS for E1/T1
	Supports : Annex A (ANSI) and Annex B (ETSI)		Alarms and Errors for SHDSL or interface
	Payload Rates: 64kbps to 2.304Mbps (N x 64kbps, N=1 to 36)	Loopback Tests (for E1, T1 only)	Local Digital Loopback
	Connection : RJ-45 jack (2-wire or 4-wire)		Local Loopback
	Impedance : 135 ohms		Remote Line Loopback
G.703 Interface (E1)	Connection : RJ-45 for balanced 120Ω E1 cable and BNC for unbalanced 75Ω E1 cable		Remote Payload Loopback
	Line Rate : 2048KHz +/- 50ppm		Far-end Line Loopback
	Line coding : HDB3/AMI		Far-end Payload Loopback
	Framing : PCM30/PCM30C/PCM31/PCM31C and Unframed	Management	Build-in 2047 (2 ¹¹ -1) Bit Error Rate Tester
	Data Rate : 64kbps to 2.048Mbps (Nx64Kbps, N=1 to 32)		Configuration with keypads and LCD display
	Operation : Full E1 and Fractional E1		Console port (RJ45, RS232C)
			Support firmware upgradeable
G.703 Interface (T1)	Connection : RJ-45C for balanced 100Ω T1 cable	Certification	CE Approval & EN60950 Certificate
	Line Rate : 1544KHz +/- 50ppm	Dimensions	195 x 48 x 168 mm (D x W x H)
	Line coding : B8ZS	Power	AC Input : 90~240V with 50~60Hz
	Framing : SF/ESF/Unframed		DC Input : -36V~-72V
	Data Rate : 64kbps to 1.544Mbps (N=1 to 24)	Power Consumption	10W Max
	Operation : Clear Channel and Fractional T1	Environment	Operation temperature : 0 to 50°C
			Humidity : Up to 95% (non-condensing)

Application



Ordering Information

2-wire G.SHDSL TDM

Model Name	Description
SHDTU03-E1-AD	E1 NTU, AC+DC Power (2-wire 2.3Mbps)
SHDTU03-ET100-AD	Ethernet 10/100Base-TX Ethernet Bridge NTU, AC+DC Power (2-wire 2.3Mbps)
SHDTU03-V35-AD	V35 TDM NTU, AC+DC Power w/V35 Cable (2-wire 2.3Mbps)

SHDTU03 – –
 Example: SHDTU03 – E1 – AD

4-wire G.SHDSL.bis TDM

Model Name	Description
SHDTU03bA-31-AD	E1/V35/LAN multi-interface NTU with AC+DC Power (4-wire 11.4Mbps)

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.