



SHDTU-08-i – Ethernetmodem

Product- Highlights



- G.SHDSL.bis / TC-PAM 32 Multirate Modemtransport based on ATM
- Ethernet 10/100BaseTx Router (static or dynamic) / Bridge incl. 4 Port Switch
- WAN Multirate transmission from 192kbit/s up to 5,7Mbit/s via 2 copper wire and up to 11,4 Mbit/s via 2 x 2 copper wire.
- Configuration via Terminal CLI, Browser and/or Telnet
- SNMP management and alarm contacts for WAN- and power outage
- Transmission via 2 or 2 x 2 copper wire (adjustable), on Multi-Link-, Auto-Fall-Back- or Standby-Mode
- Supports the latest broadband-technology, downwardly compatible to G.SHDSL
- VLAN

With SHDTU-08i it is possible to attain high transmission rates via existing shielded, twisted 2- or 4-copper wire for direct Ethernet-network-coupling.

The devices adapt their transmission rate automatically or manually via the quality of the line and in this way ensure an undisturbed operation.

The SHDTU is a G.SHDSL.bis-Router/Bridge, which is conform to the G.991.2 & G.994.1 standards and includes a 4-Port 10/100BaseTx switch with auto negotiation and Auto-MDIX.

The SHDTU-product-line supports transmission rates from 192kbit up to 5.7Mbps (2 copper wire) or 11,4Mbps (2 x 2 copper wire) over already existing telephone cables. The distance for transmission is depending on the wire cross section and the quantity of parallel connected G.SHDSL-transmissions. On 20 km distances without repeaters it is possible to attain transmission rates of 320 kbps. There are repeater-solutions available for longer solutions.

These Ethernet modems not only optimize the transmission rates, they also include High-End-Bridging/Routering with additional functions like ring connection, Multi-DMZ, Virtual Server Mapping and VPN pass-through.

In Bridge-Mode it is possible to use the four 10BaseT-/100BaseTx- Ports for IEEE 802.1q, VLAN or port-based VLAN- applications.

19"-Racks for central control stations are available. The device supports other ATM based G.SHDSL Router- / Bridgesystems.

SHDTU-08i-1 Stand: 03.03.2009



SHDTU-08-i – Ethernetmodem

Features

- Standard G.SHDSL ITU-T G.991.2 & ITU-T G.994.1 (G.hs)
- Use existing copper infrastructures
- Symmetrical transmission rates up to 5,7 Mbit/s or 11,4 Mbit/s (4-wire-mode / per twisted pair 5,7 Mbit/s)
- Automatic adaption of transmission rates via quality of the line or fixed transmission rates
- SHDSL Line performance monitoring
- Raw and time stamped statistics
- Complied with UL 1950, FCC part 15 ClassB, EN55022 & EN60950

Routing

- Support for TCP/ IP/ UDP/ ARP/ICMP/IGMP protocols
- IP routing with static routing and RIPv1 & RIPv2 (RFC1058/2453)
- IP multi-cast and IGMP proxy (RFC1113/2236)
- Network address translation and port address translation (NAT/PAT) (RFC1631)
- NAT/ ALG (Application Layer Gateway) for ICQ/Netmeeting/MSN/Yahoo Messenger
- DNS Relay und Caching (RFC1034/1035)
- DHCP-Server (RFC2131/2132)
- IP precedence (RFC 791) (for Firewall Router)

Bridging

- IEEE 802.1D transparent learning bridge
- Port-based VLAN

ATM

- Up to 15 PVCs
- ATM Forum UNI3.1/ UNI4.0
- UBR/CBR/VBR-rt/VBR-nrt for QoS
- OAM F5 AIS/RDI and loopback
- AAL5 (ATM adaptation layer type5)

PPP

- PPP over Ethernet (RFC2516)
- PPP over ATM (2364)
- User authentication with PAP/CHAP/MS-Chap

Transmission

- two- or four-wire-operation (adjustable)
- Multi-Link-Mode
- Auto-Fall-Back- & Standby-Mode

Specifications

- Dimensions: 16,5x4x17,8cm (WxHxD)
- Power: 12-60 VDC
- Power consumption: 9 Watt
- Temperature: -20 ... +70°C (active)
- Humidity: 0-95%
- 2MB Flash-memory, 8MB SDRAM
- 4-Port Switch
- WAN: 1x RJ-45
- LAN: 4 x RJ-45 Switch
- Console port/ RS232: DB9F

Security

- DMZ host/ Multi-DMZ/ Multi-NAT functions
- Virtual Server Mapping (RFC1631)
- VPN-Server-Pass-Through for PPTP, L2TP and IPSec Tunneling
- NAT Firewall
- Advanced Stateful packet inspection (SPI) firewall (for Firewall Router)
- Application level gateway for URL and keyword blocking (for Firewall Router)
- User access control: deny certain access of PCs to Internet

Management

- Easy-to-use Web based GUI for quick installation, configuration and management
- Menu-driven interface/ command line interface (CLI) for local console Telnet access management
- Password protected management and access control list for administration
- SNMP management with SNMPv1/ SNMPv2c (RFC1157/ 1901/1905) agent and MIBII (RFC1213/1493)
- Software Upgrade via Web Browser and TFTP-Server

AAL5 Encapsulation

- VC Multiplexing and SNAP/LLC
- Ethernet over ATM (RFC2684/1483)
- PPP over ATM (2364)
- Classic IP over ATM (RFC1577)

G.SHDSL.bis

- SHDSL: ITU-T G.991.2 (Annex A/B), ITU-T G.994 (G.hs)
- Encoding scheme: TC-PAM-32
- Data Rate: N x 64Kbit/s (N=0-36 ; 0 for adaptiv)
- Impedance: 135 Ohm

	SHRM-03	SHDTU-05	SHDTU-05i	SHDTU-08	SHDTU-08i
WAN	2 x 2-Wire ATM-TCPAM-16	2- Wire ATM-TCPAM-16	2- Wire ATM-TCPAM-16	4- Wire ATM-TCPAM-32	4- Wire ATM-TCPAM-32
Ethernet-LAN	RJ-45 10/100 BaseT	1 x RJ-45 10/100 BaseT	1 x RJ-45 10/100 BaseT	4 x RJ-45 10/100 BaseT	4 x RJ-45 10/100 BaseT
Version	19"-module	Tabletop Unit	DIN-Rail	Tabletop Unit	DIN-Rail
Max. Datenrate	2 x 2.3 Mbps	2,3 Mbps	2,3 Mbps	11,4 Mbps	11,4 Mbps
Min. Datenrate	64 Kbps	128 Kbps	128 Kbps	128 Kbps	128 Kbps

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