AH505R

5.7Mbps G.SHDSL.bis/EFM Router

AH505R, a SHDSL (Single-pair High-bit-rate Digital Subscriber Line) Router, provides a broadband transmission with bandwidth up to 15 Mbps/ Pair (TC-PAM I28) over a single pair of copper wires for LAN connection between two local area networks. 2 pairs (option) can be bonded together for aggregated bandwidth over 30 Mbps. AH505R Router operates in either EFM mode or ATM mode. It is designed to extend business class Ethernet Service under EFM mode while providing the flexibility to be compatible with the DSLAM.

AH505R provides a console port for users to configure the settings and to monitor the DSL connection status. Each AH505R can be configured as either STU-C for the central side or STU-R for the remote side. 1 / 2 pair of AH505R offers a cost effective symmetrical broadband solution for bandwidth-hungry applications such as LAN-to-LAN connection, Internet.

Features

- ITU G.991.2 Annex A/B/F/G and Annex A+B/F+G (RT Mode)
- Symmetrical downstream and upstream data rates from 192Kbps to 15Mbps
- EFM Bonding up to 30 Mbps (2 pairs option, TC-PAM 128)
- Auto or Fixed DSL rate operation
- Auto-Negotiation for 10/100 Base-T
- Auto-MDIX for Auto Ethernet Tx/Rx Swap

Specifications

G.SHDSL. bis Transmission

- Support ITU-T G991.2 Annex A/B/F/G and Annex A+B/F+G (RT Mode)
- Support ITU-T G.994.1 (G.hs) standards
- Support ITU g.998.2 (g.BOND) standards
- IEEE 802.3ah-2004 (IEEE EFM) compliant
- ETSI SDSL / ETSI SDSL. bis
- TC-PAM line modulation (TC-PAM 16 / 32 / 64 / 128)
- Line Probing according to ITU-T G.991.2 (2004)
- M-pair mode for 1 / 2 pairs
- DSL Mode: EFM/ATM
- Selectable as either STU-C or STU-R mode
- Rate negotiating/manually rate adaptation configuration
- Impedance: 135 ohm
- SNR /Attenuation Value calculation

ATM Protocol

- ATM adaptation layer type 5 (AAL5)
- VC multiplexing and LLC encapsulation
- Multi-protocol over AAL5 (RFC 1483 bridged PDU)
- Support 5 PVCs

Bridging

- IEEE 802.1D transparent learning bridge
- Up to 1K MAC learning addresses
- Support 802.1Q or port base VLAN

Routing Capability

- Support IP/TCP/UDP/ARP/ICMP protocols
- IP routing with static routing and RIPv1/RIPv2 (RFC1058/2453)
- Support DHCP server
- Support PPPoE
- Support NAT

Configuration

- Local console

- Telnet access
- Web-based GUI (HTTP)

Network Management

- Web-based GUI for Quick setup, Configuration and Management
- Menu-driven interface for local console and Telnet access
- Password protected management and access control list for administration
- SNMP management with SNMPv1/SNMPv2c/SNMPv3
- Software upgrade via TFTP server/HTTP

LED Indicators

- POWER
- SYS
- LAN
- DSL

Hardware Specification

- 1 x RJ-45 interface for G.SHDSL WAN port (DSL)
- 4 x RJ-45 auto-sensing 10M/100M Ethernet LAN ports (LAN)
- 1 x RJ-45 Console Port (CID)
- Power jack
- Power on/off switch
- Reset button (RST)

Physical Specification

- Item dimensions (WxDxH): 160 x 120 x 35 mm

Power

- External power adapter 12V DC, 1000mA

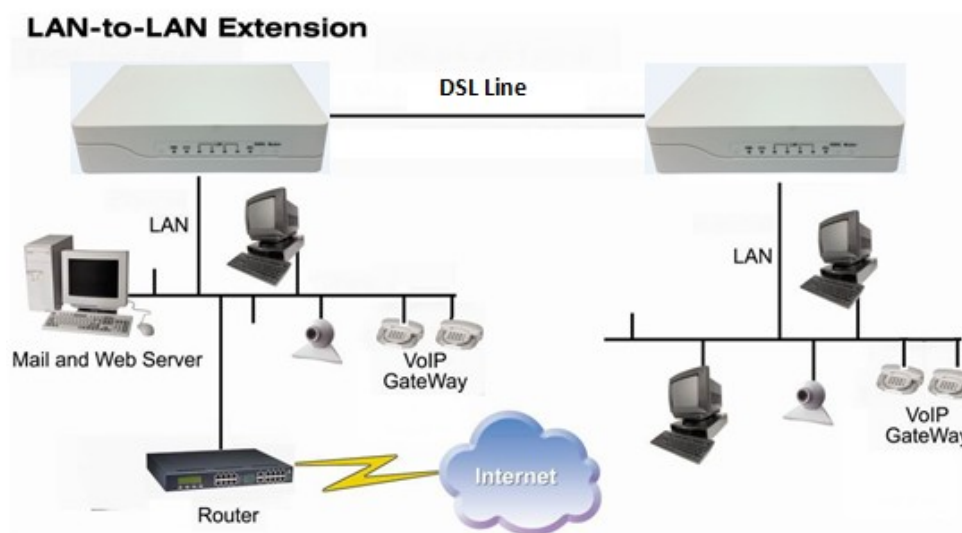## Certification

- FCC
- CE

Operating Environment

- Operating temperature: 0 – 40°C
- Storage temperature: -20 – 70°C
- Humidity: 20 – 95% non-condensing

Other Information (Reachable Distance @ data rate)

Single Pair /Two Pairs data rate corresponds to loop transmission distance, **0.4** mm diameter (26AWG)

Extended : disable PAM 16/32										Enable PAM 64/128		
Single Pair data rate, K bits	64	192	384	768	1024	2304	3648	4288	5696	7168	12920	14968
Distance, Km	6	6	5.2	5.2	4.2	3.5	3.3	3	2.4	3	1	0.3
Distance, Kft	20	20	17	17	14	12	10	9	8	10	3	1

Application Diagram

Order information

AH505– G.SHDSL Bridge/Router

AH505N-1p	1-pair DSL connection, 5.696Mbps, Bridge mode
AH505N-2p	2-pair DSL connection, 11Mbps, Bridge mode
AH505R-1p	1-pair DSL connection, 5.696Mbps, Routing mode
AH505R-2p	2-pair DSL connection, 11Mbps, Routing mode

Product Photos