



ISO 9001:2000 Certified Company

## Description

**AT-5210E 2/4/8-Wire SHDSL.bis EFM Bridge Modems** comply with the latest G.SHDSL.bis technology standards and supports symmetric data rate up to 15.3Mbps/Pair under TC-PAM 128. Up to four pairs can be bonded together for aggregated bandwidth over 61 Mbps. It provides a secure and symmetrical high-speed connectivity over existing copper-line infrastructure that is ideal for service providers as well as SOHO and SME users.

**5210E** supports back to back connectivity for long reach Ethernet extension. Users can make a direct connection between two SHDSL.bis routers by using a standard telephone cable, and configure one as CO and the other as CPE. The connection offers a cost effective solution for service providers and SME users who need high-speed dedicated network applications. It offers a good alternative in place where fiber is not economical to deploy.

The SHDSL.bis EFM Bridge Modems are integrated with high-end Bridging capabilities that support flexible traffic management policies and Quality of Service, enabling business-class Ethernet services with flexibility of mapping user traffic into Ethernet flows. The unit can be managed by different ports and applications including comprehensive command-line interface (CLI), Telnet, user-friendly GUI-based Web Browser Interface and SNMP.

**5210E** SHDSL.bis EFM Modems help customers to meet their growing data communication needs by the latest broadband technologies. Through the power of SHDSL.bis products, you can access superior manageability and reliability.

## Features

- ◇ Symmetrical high-speed Ethernet service with SHDSL.bis, backward compatible with SHDSL
- ◇ EFM bonding up to 61 Mbps (8-Wires, TC-PAM 128)
- ◇ Support both EFM mode and ATM mode(1 PVC)
- ◇ Support point to point connectivity
- ◇ Support dying gasp
- ◇ Support TR-069
- ◇ Support IPv6



## Order Information

AT5210E	2-Wire G.Shdsl.bis EFM Bridge with 4 LAN Port
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## Specification

### WAN Interface

- SHDSL.bis: ITU-T G.991.2 (2004) Annex A/B/F/G supported
- Support EFM Bonding and SHDSL M-Pair mode
- Encoding scheme: TC-PAM 16/32/64/128
- Data Rate:
  - N x 64 Kbps (N=3~89) using TC-PAM 16/32
    - Max. 5.696Mbps (1-Pair)
    - Max. 11.392Mbps (2-Pair)
    - Max. 22.784Mbps (4-Pair)
  - N x 64 Kbps (N=3~239) using TC-PAM 64/128
    - Max. 15.296 Mbps (1-Pair)
    - Max. 30.592 Mbps (2-Pair)
    - Max. 61.184 Mbps(4-Pair)
- Impedance: 135 ohms.
- Compliant with IEEE 802.3ah

### LAN Interface

- 4-Ports 10/100M Switch, Auto-negotiation for 10/100Base-TX and Half/Full Duplex, Auto-MDIX Supported.

### Bridging

- Up to 1024 MAC address learning bridge
- IEEE 802.1D transparent learning bridge
- IEEE 802.1Q/1P VLAN Port-based/Tagging
- QoS Class-based (Prioritization/Traffic/DSCP Mark), Rate limiting, Up to 8 priority queues

### ATM

- Multiple Protocols over AAL5
- Ethernet over ATM (RFC 2684/1483)
- 1 PVC

### EFM

- EFM mode compliant to IEEE 802.3,
- PPP over Ethernet (RFC2516)
- Support of OAMPDU information and functionality ( ITU-T Y.1731)
- OAMPDU Event Notification, Variable Request, Variable Response, Loopback Control
- VLAN base QOS (802.1P/Q), Priority Queue

### Network Protocol

- IPv4 (ARP/RARP, TCP/UDCP, ICMP)
- \*IPv6 (Stateless/Stateful, Router Advertisement/DHCP Server, DNS Query, MLD Snooping)
- \*SNTP (Time Zone/ Daylight Savings)

### Management

- Web-based GUI for quick setup, configuration and management
- Menu-driven interface/Command-line interface (CLI) for local console and Telnet/SSH access
- Password protected management and access control list for administration
- Remote management via WWW/SSH/Telnet local/remote
- Real-time system log logging
- SNMPv1/SNMPv2 (RFC 1157/1901/1905) and MIB-II (RFC 1213/1493)
- TR-069(CWMP)
- Software upgrade via Web-browser/CLI, supported TFTP/FTP
- Dying Gasp

### Diagnostics/Monitoring

- SHDSL.bis Circuit Healthy
- Packet Statistics

### Hardware Interface

- WAN: RJ-45 x 1
- LAN: RJ-45 x 4
- Console Port: RS232 female
- Reset Button: Load factory default
- Power Jack

### Indicators

- System: PWR, ALM
- WAN 1~4: LNK/ACT
- LAN 1~4: LINK/ACT

### Physical / Electrical

- Dimensions: 18.7 x 3.3 x 14.5cm (WxHxD)
- Power: 100~240VAC (via power adapter)
- Power Consumption: 9 watts Max
- Operating Temperature: 0~45°C
- Storage Temperature: -20°C~70°C
- Humidity: 0%~95%RH (non-condensing)

### Memory

- 128MB Flash Memory, 64MB DDR2 DRAM

### Regulatory

- CE
- FCC Part 15 Class A
- EN60950