



## SHDTU04bF-ET10RS

G.SHDSL.bis ATM EFM Router (2/4/8wires)

The G.SHDSL.bis ATM EFM Router is 2/4/8wires Ethernet Bridge/Router that complies with G.991.2 standards and has a built-in four port 10Base-T /100Base-TX auto-negotiation and auto-MDIX switch. The G.SHDSL.bis ATM EFM Router provides multi-rate 2-wire / 5.7Mbps or 4-wire / 11.4Mbps and 8-wire / 22.78Mbps payload rates over existing single or two pair copper wire. The G.SHDSL.bis ATM EFM Router is designed not only to optimize the service bit rate from central office to customer premises but also integrates high-end Bridging/ Routing EFM bonding capabilities with advanced functions such as virtual server mapping and VPN pass through. The G.SHDSL.bis ATM EFM Router allows customers to leverage the latest in broadband technologies to meet their growing data communication needs. In bridge mode, the four switching ports may be configured for IEEE802.1Q VLAN or port based VLAN applications. The modem can be configured in either central or client mode providing a point-to-point solution.

### Features

- Supports Ethernet over ATM over SHDSL
- Full ATM protocol stack implementation over G.SHDSL.bis
- Adaptive rate installation maximizes data rate based on loop conditions
- Standard ITU G.991.2 (2004) supports improved reach, speed and interoperability compared to conventional G.SHDSL
- Supports point-to-point configurations
- Local management interface via console port
- Intuitive Web based management
- SNMP management with SNMPv1/v2 and MIB II
- Build-in advanced SPI firewall (Firewall routers)
- Efficient IP routing and transparent learning bridge to support broadband Internet services
- VPN pass-through for safeguarded connections
- DMZ host/Multi-DMZ/Multi-NAT; multiple PCs on a LAN with only one IP address
- PPPoA and PPPoE support user authentication with PAP/CHAP/MSCHAP
- Raw and time stamped statistics
- Supports firmware upgrade via web interface
- EFM (Ethernet in the First Mile) bonding per IEEE 802.3-2005;2/4-wire bonding for HDLC per G991.2

### Specifications

<b>Interface</b>	WAN SHDSL.bis: ITU-T G.991.2 (2004) Annex A/B/F/G Support EFM Bonding and SHDSL M-Pair mode Line Code: TC-PAM 16/32/64/128 Data Rate: N × 64 Kbps (N=3~89) using TC-PAM 16/32 Max. 5.696Mbps (1-Pair) Max. 11.392Mbps (2-Pair) Max. 22.78Mbps (4-Pair) N × 64 Kbps (N=3~239) using TC-PAM 64/128 Max. 15.296 Mbps (1-Pair) Max. 30.592 Mbps (2-Pair) Max. 61.184Mbps (4-Pair) Impedance: 135 ohms
	LAN RJ-45 × 4-Ports 10/100 Base-T Ethernet ports
<b>Serial Console</b>	RS-232(Female) Connector
<b>Factory Default Reset</b>	Push Button
<b>LED</b>	Power: (Green) WAN: LINK/ACT (Green), one LED per pair LAN (Port 1 ~ Port 4): LINK/ACT (Green:100M, Orange:10M) ALARM: (Red)
<b>G.SHDSL</b>	Support G.991.2 / G994.1 standards TC-PAM line modulation Configurable as either server or client mode OAM IEEE 802.3 chapter 57 compliant IEEE 802.3 2BASE-TL (aka 802.3ah) compliant Rate negotiating / Manually rate adaptation configuration Connection Loops: 1 pair (2 wires) Support IPoE Support PPPoE
<b>Routing/Bridge Support</b>	IP (RFC 791) routing is supported TCP, UDP, ICMP, IGMP v1 and v2, ARP, RIP v1, RIP v2, OSPF, BGP-4 Transparent bridging (IEEE 802.1D) PPP BCP (RFC 3185) support IGMP snooping
<b>ATM Support</b>	Multiple protocols over AAL5 (RFC1483) (Not support IPoA/PPPoA) Only 1 PVC
<b>EFM Support</b>	EFM mode compliant to IEEE 802.3 PPP over Ethernet (RFC2516) Support of OAM PDU information and functionality (ITU-TY.1731)
<b>EFM Support</b>	OAM PDU Event Notification, Variable Request, Variable Response, Loopback Control VLAN base QoS (802.1P/Q), Priority Queue
<b>Internet Access Sharing</b>	NAT (includes multi-to-multi NAT) / SUA, 8192 NAT sessions Port restricted cone NAT SIP ALG pass-through NAT server (Port forwarding) Multi-NAT Dynamic DNS DHCP server/client/relay
<b>Security</b>	User Authentication (PAP, CHAP) with PPP (RFC 1334, RFC 1994) Microsoft CHAP Stateful packet inspection firewall Content filter Prevent Denial of service Access control of service Real-time attack alert and log
<b>Network Management</b>	Web-based Configuration, Command-line interface Password-protected Telnet support SNMP MIB I /MIB II support TFTP & FTP firmware upgrade and configuration backup Dying Gasp
<b>VPN</b>	IPSec VPN support, 10 VPN tunnels IKE/ Manual Key, DES/ 3DES/ AES Encryption MD5/ SHA1 Authentication, FQDN NETBIOS pass-through for IPSec, IPSec VPN keep-alive IPSec NAT Traversal

<b>Diagnostics Capabilities</b>	The router can perform self-diagnostic tests. These tests check the integrity of the following circuitry: <ul style="list-style-type: none"><li>–FLASH memory</li><li>–SDSL circuitry</li><li>–RAM</li><li>–LAN port</li></ul>
<b>Dimensions</b>	145 x 187 x 33mm (DxWxH)
<b>Power</b>	100~240VAC (via power adapter)
<b>Power Consumption</b>	9 watts Max
<b>Operating Temperature</b>	0~45°C

<b>Storage Temperature</b>	-20°C~70°C
<b>Humidity</b>	0%~95%RH (non-condensing)
<b>Certification</b>	CE, FCC RoHS
<b>MTBF</b>	57,000 hours
<b>Others</b>	DNS Proxy
	UNIX syslog
	Each Ethernet port can be only tagged or only untagged
	Application QoS
	IPv6

## Ordering Information

Model Name	Description
SHDTU04bF-ET10RS	4-Port 10/100Base-TX ATM Bridge / Router w/Firewall (2-wire 5.7Mbps)
SHDTU04bAF-ET10RS	4-Port 10/100Base-TX ATM Bridge / Router w/Firewall (4-wire 11.4Mbps)
SHDTU04bCF-ET10RS	4-Port 10/100Base-TX ATM Bridge / Router w/Firewall (8-wire 22.78Mbps)