

## RP-IP622F | RP-IP624F | RP-IP628

### G.SHDSL.bis EFM/ATM VPN Router

The G.SHDSL.bis EFM/ATM VPN Router provides secure and symmetrical high-speed connectivity over existing copper-line infrastructure that is ideal for SOHO and SME users. It features the latest G.Shdsl.bis technology supporting symmetrical upstream and downstream data rates up to 15.3Mbps/Pair (TC-PAM 128). Four pairs can be bonded together for aggregated bandwidth over 61Mbps. G.SHDSL.bis EFM/ATM VPN Router operates the SHDSL link in either EFM mode or ATM mode. It is designed to deliver business class Ethernet Service under EFM mode while providing the flexibility to be compatible with the existing DSLAM infrastructure under ATM mode.



G.SHDSL.bis EFM/ATM VPN Router supports flexible VPN applications including VPN pass-through, client-to-VPN gateway and VPN LAN-to-LAN connection. It features IPsec VPN up to 12 encrypted tunnels for secure data communications between remote sites, home offices, and mobile users across public IP networks like the Internet. It also supports up-to-date 3DES and AES for data encryptions as well as MD5/SHA-1 and manual/IKE key for authentication.

The Quality of Service (QoS) features allow users to allocate network resources effectively. By classifying the priority of services, the powerful bandwidth management functions increase efficiency on latency-sensitive applications such as VoIP, video streaming, video conferencing and interactive game.

G.SHDSL.bis EFM/ATM VPN Router enables service providers to offer symmetrical high-speed Ethernet service or point-to-point connectivity to their enterprise customers. It is the ideal copper-based Ethernet solution for quick deployment of standardized, reliable and secure services with carrier-class OAM and comprehensive management options.

## Features

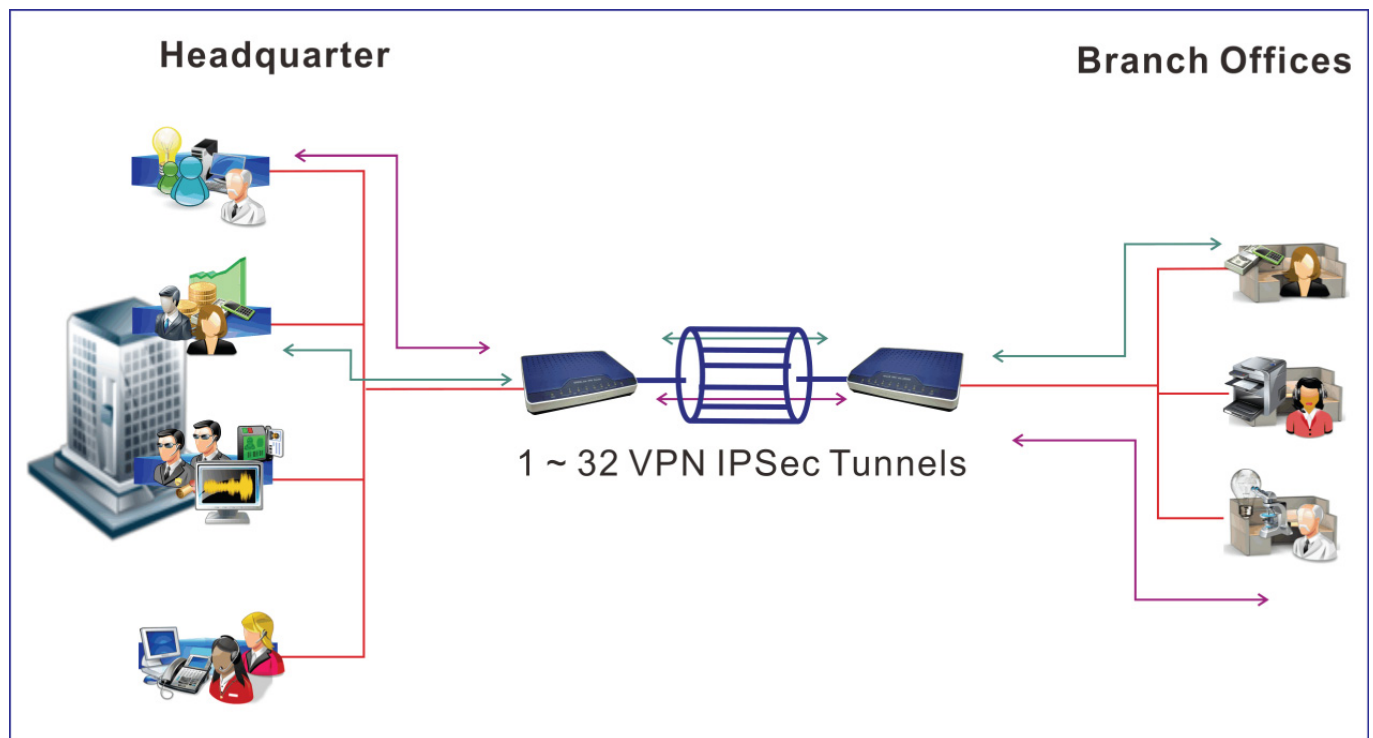
- Extending Ethernet Services to sites with existing copper infrastructure
- Business-class Ethernet services with flexibility of mapping user traffic into Ethernet flows
- EFM Bonding (Max.: TC-PAM 128, 4 pairs)
- Support ATM mode, EFM mode and auto detect mode
- IPsec VPN for safeguarded connections.
- Flexible and Rapid Service Deployment
- Support EFM OAM complying IEEE 802.3ah
- Low Delay, Jitter and Packet Loss for delay sensitive applications

## Specifications

<b>Standards</b>	<ul style="list-style-type: none"> <li>• G.991.2, G.994.1</li> <li>• IEEE 802.3 10/100Base-T</li> <li>• IEEE 802.1D Transparent Bridging</li> <li>• IEEE 802.1q VLAN</li> <li>• Port-based VLAN</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>• 1* WAN (RJ-45)</li> <li>• 4* LAN (RJ-45) 10/100M Switch, Auto-negotiation for 10/100Base-TX and Half/Full Duplex, Auto-MDIX Supported.</li> <li>• Console port: RJ-45 Connector</li> <li>• RST: Reset button for factory default</li> <li>• Support USB2.0 (Optional)</li> <li>• Support 3.5G (Optional)</li> <li>• Support USB printer</li> </ul>
<b>WAN feature</b>	<ul style="list-style-type: none"> <li>• SHDSL.bis: (ITU-T G.991.2 (2004) Annex A/B/F/G supported</li> <li>• Support EFM Bonding and SHDSL M-Pair mode</li> <li>• Line Code: TC-PAM 16/32/64/128</li> <li>• Data Rate: <ul style="list-style-type: none"> <li>N x 64 Kpbs (N=3~89) using TC-PAM 16/32</li> <li>Max. 5.696Mbps (1-Pair)</li> <li>Max. 11.392Mbps (2-Pair)</li> <li>Max. 22.784Mbps (4-Pair)</li> <li>N x 64 Kbps (N=3~239) using TC-PAM 64/128</li> <li>Max. 15.296 Mbps (1-Pair)</li> <li>Max. 30.592 Mbps (2-Pair)</li> <li>Max. 61.184 Mbps(4-Pair)</li> </ul> </li> <li>• Impedance: 135 ohms</li> </ul>
<b>LAN feature</b>	<ul style="list-style-type: none"> <li>• 10/100M Switch, Auto-negotiation for 10/100Base-TX and Half/Full Duplex, Auto-MDIX Supported.</li> <li>• IEEE 802.1D Transparent Learning Bridge.</li> <li>• IEEE 802.1Q and Port Based VLAN.</li> <li>• Up to 2K MAC Addresses</li> <li>• Spanning Tree Protocol (STP)</li> </ul>
<b>LED Indicators</b>	<ul style="list-style-type: none"> <li>• Power (Green)</li> <li>• WAN: LINK/ACT (Green), one LED per pair</li> <li>• LAN (Port 1 ~ Port 4): LINK/ACT (Green)</li> <li>• ALARM (Red)</li> </ul>
<b>Bridging and VLAN</b>	<ul style="list-style-type: none"> <li>• IEEE 802.1D Transparent Learning Bridge</li> <li>• IEEE 802.1Q and Port Based VLAN</li> <li>• Spanning Tree Protocol (STP)</li> <li>• Up to 2K Mac Address</li> </ul>
<b>Routing</b>	<ul style="list-style-type: none"> <li>• Static routing and RIP v1/v2(RFC 1058/2453)</li> <li>• NAT/PAT (RFC1631)</li> <li>• NAT Application Level Gateways</li> <li>• Skype/MSN/Yahoo Messenger (RFC2933)</li> <li>• VoIP(SIP) pass through and VPN PPTP/L2TP pass through</li> </ul>

	<ul style="list-style-type: none"> <li>• Virtual Server</li> </ul>
<b>Network Protocol</b>	<ul style="list-style-type: none"> <li>• IPv4 (ARP/RARP, TCP/UDP,ICMP)</li> <li>• DHCP Client/Server, Relay</li> <li>• DNS Relay/Proxy, Dynamic DNS(DDNS)</li> <li>• IGMP v1/v2/v3, IGMP Proxy, IGMP Snooping</li> <li>• SNTP and UPnP</li> </ul>
<b>ATM</b>	<ul style="list-style-type: none"> <li>• 8 PVC</li> <li>• OAM F4/F5 Loopback</li> <li>• AAL5</li> <li>• VC Multiplexing and SNAP/LLC</li> <li>• EoA (RFC 2684/RFC1483), PPPoA (RFC 2364) and IPoA(RFC 1577)</li> <li>• Multiple protocol over ATM AAL5(MPOA, REF1483/2684)</li> <li>• QoS(UBR/CBR/VBR/VBR-RT)</li> </ul>
<b>PPP</b>	<ul style="list-style-type: none"> <li>• PPPoE</li> <li>• PAP/CHAP/MS-CHAP/MS-CHAPv2</li> <li>• Configurable timer to auto-reconnect and idle times for timeout</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>• 802.1P Tag</li> <li>• IPv4 TOS/DiffServ</li> <li>• Class-based Prioritization and Class-based Traffic Shaping</li> <li>• Class-based DSCP Mark</li> <li>• Up to 8 priority queues</li> </ul>
<b>VPN</b>	<ul style="list-style-type: none"> <li>• IPsec (RFC2411) up to 12 Tunnels</li> <li>• DES/3DES/AES</li> <li>• MD5/SHA-1 and IKE/Manual Key</li> <li>• ISAKMP (RFC 2407/2408/4306) and IKE v1 (RFC 2409/4109)</li> <li>• PSK</li> <li>• L2TP/PPTP</li> </ul>
<b>Firewall</b>	<ul style="list-style-type: none"> <li>• SPI (Stateful Packet Inspection) and DoS (Denial of Service)</li> <li>• DMZ</li> <li>• Content Filtering, URL Blocking and Packet Filtering/Access Control List (ACL)</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Management via Web, Telnet and CLI</li> <li>• Support SSH (RFC4250/4251/4252/4253/4254/4255/4256)</li> <li>• SNMP v1/v2c/v3 (RFC 1157/1901//1905) and MIB II (RFC 1213/1493)</li> <li>• Syslog with Remote Logging support</li> <li>• Firmware Upgrade via TFTP</li> <li>• EFM (IEEE 802.3ah) OAM</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• External power adapter 100~240VAC</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• 9W</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Operating Temperature: 0°C ~ 50°C</li> <li>• Operating Humidity: 20%~95% (Non-Condensing)</li> </ul>
<b>Dimension</b>	<ul style="list-style-type: none"> <li>• L187 * W145 * H33 mm</li> </ul>
<b>Certifications</b>	<ul style="list-style-type: none"> <li>• FCC, CE</li> </ul>

## Application



## Ordering information

<b>RP-IP622F</b>	4-P 2-wire G.SHDSL.bis EFM/ATM VPN Router
<b>RP-IP624F</b>	4-P 4-wire G.SHDSL.bis EFM/ATM VPN Router
<b>RP-IP628F</b>	4-P 8-wire G.SHDSL.bis EFM/ATM VPN Router