

GW7000 Series for Leased Line to IP Gateway

Multiple WAN Business Grade Routers for Business-Critical Applications



- Dual ADSL option
- Serial to IP conversion
- Leased line to IP gateway
- 3G wireless interface option
- E1/T1 or X.21 interface options
- Effective resilience for VoIP and mission-critical data applications
- Discrete I/O and analogue inputs

The Virtual Access GW7000 Service Managed Gateway (SMG) is a versatile cost-effective platform for secure delivery of legacy services over IP, VoIP, and data over a selection of WAN interfaces.

With broadband access at the core of business operations, the loss of connectivity, for even short periods of time, can stop businesses in their tracks. For businesses needing high availability network access, the Virtual Access GW7000 Series offers effective resilience for both voice and critical data applications.

Using ADSL backup to fixed line application services, critical business operations can continue transparently on a secondary ADSL line if the primary line is down. Optionally, a 3G wireless path can be selected as the alternate route.

All GW7000 Series models, in addition to 4 10/100 ports with CDP and VLAN segmentation, include a 100 Mbit duplex Ethernet WAN interface as a standard feature.

The GW7000 Series benefits from Virtual Access's centralised configuration management and monitoring utilities and is a versatile component of a managed network architecture.

Single and dual Annex A or Annex M ADSL2+ WAN interface variants are available on the GW7000 series. Advanced scripting, a standard feature of Virtual Access routers, enables the implementation of MLPPP bonding or WAN failover services.

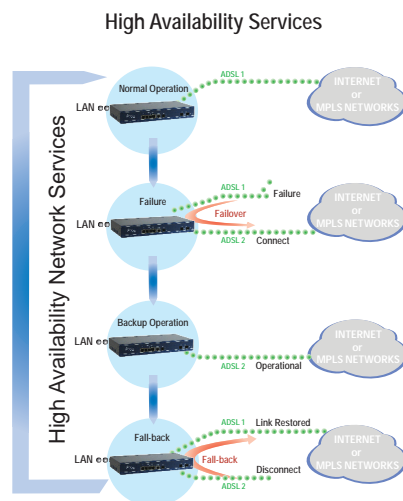
An internal PSTN dial modem option is also available for any of the GW7000 Series models. This interface is particularly useful for out-of-band management in managed service applications.

The GW7000 Series routers are rack-mountable devices and incorporate integral AC power supplies for data centre environments.

High Availability Services

The GW7000 Series delivers a fully integrated backup solution that gives end-users confidence that their corporate applications will remain online.

This is particularly important to service providers in facilitating the adoption of DSL for mission-critical services.



An embedded link monitor continually checks the status of the primary link. If it detects an error condition it automatically routes traffic via an alternative interface, such as a secondary ADSL interface, a 3G wireless interface or a dial modem.

As soon as the primary link is reinstated, the monitoring agent switches the SMG back to the primary link without any user intervention.

SNMP traps, email notification and syslog can alert network staff to link failure and re-establishment events.

Network services within the Internet access or MPLS networks are automatically re-established.

Security

The GW7000 family offers stateful inspection firewall for multi-layered security with centralised intrusion reporting and management facilities.

IPSec tunnelling with up to 50 3DES tunnels offers the necessary data privacy for Internet access applications.

A hardware security engine is employed for high performance encryption and authentication.

Quality of Service

The GW7000 Series supports DiffServ classification, including marking queuing, and policing functions. It supports a range of selection criteria for identifying and prioritising packets across local and remote interfaces.

DiffServ capabilities enable the appliance to be compatible with managed MPLS network applications providing end-to-end quality of service.

Centralised Appliance Monitoring

The GW7000 Series monitors connection speeds and produces historical service utilisation reports.

Using a range of statistical methods, the appliance locally monitors a broad range of service attributes such as data throughput, MOS and WAN utilisation.

Annex A and Annex M

Annex M support high upload speeds. The GW7000 conforms to the BT Access Network Frequency Plan for both ADSL Annex A and Annex M.

Software Features

Management

- Activator Zero Touch central management
- Monitor for Voice Mean Opinion Score reports
- Configuration change log
- V.92 dial modem for out-of-band management
- SNMP agent
- Non-volatile battery-backed RAM log storage
- Telnet server
- RADIUS authentication of management users

ADSL Encapsulation Modes

- G.992.1 & G.992.2 Annex A, B, M
- G.992.2 G.lite
- G.992.3 ADSL2
- G.992.5 ADSL2+ Annex A, B, M
- PPP over ATM routing (RFC2364)
- PPPoE over ATM routing (RFC1483)
- LLC encapsulation
- VC multiplexing
- Conforms to the BT Access Network Frequency Plan for both ADSL Annex A and Annex M

Quality of Service

- QoS support of classification and marking
- Full DiffServ support

Service Features

- Configurable host traffic monitoring applet
- DHCP server/client
- DHCP relay
- DNS proxy
- Cisco Discovery Protocol (CDP) auto-VLAN support
- Local and remote advanced configuration
- BOOTP client
- IP Address Translation
- Packet filtering and firewalling
- Performance monitor

Routing Features

- Support for IP, TCP, UDP, ICMP, ESP, AH
- Static and dynamic IP routing algorithms
- RIP and RIP2
- eBGP
- PPP
- Virtual Router Redundancy Protocol (VRRP)
- PAP/CHAP security
- Async over TCP/IP
- SNMP MIB II

IP Gateway

- Converts leased line, async, ISDN and other legacy interfaces to IP

IP Voice and Data

- SIP proxy
- Call admission control
- MOS VoIP call quality measurement
- ITU-T G.711, G.723, G.729 or transparent mode

- G.168 compatible echo cancellation (up to 128ms tail)
- Dynamic jitter buffer 10ms to 100ms
- Modem relay

IPSec

- Hardware security engine for high performance encryption and authentication
- Manual and automatic key management
- HMAC-MD5-96 and HMAC-SHA-1-96
- 3DES (168bit) and DES (56bit) with explicit IV

IKE-Related VPN Specifications

- Main mode, aggressive mode and quick mode
- Authentication using RSA signatures, DSS signatures and pre-shared keys interworking

X.25 Support

- X.75 / International X.25 over IP
- X.25 over TCP/IP (XOT)
- X.25 over X.25 Migration Protocol (XMP)
- X.3, X.28, X.29 PAD

Frame Relay Support

- Frame relay over IP (FRoIP)
- DLCI table (256 entries)
- LMI
- Frame relay QoS

Hardware Features

ADSL Interface

- Dual RJ11 sockets

LAN Interfaces

- Five 10/100 base-T Ethernet ports
- Auto detects full- or half-duplex operation
- Auto detects a regular or crossover cable for easy connection to a switch or hub

VLAN Support

- Tag-based 802.1Q VLAN or port-based VLAN on 4 ports
- Separate 5th Ethernet port with no VLAN tagging

3G Wireless Interface (Optional)

- UMTS:
- HSDPA: 7.2 Mbps
- HSUPA: 2 Mbps
- 850/1900/2100 MHz
- Power class 3 (+24 dBm)
- GSM/GPRS/EDGE:
- GPRS CS1-CS4; EDGE MCS1-MCS9
- Multislot class 12 (4 slots Rx, 4 slots Tx) 850/900/1800/1900 MHz
- GSM power class 4 (2W) for 850/900 MHz
- GSM power class 1 (1W) for 1800/1900 MHz
- EDGE power class E2
- SMA female antenna connector

Dial Modem Interface (Optional)

- V.92 support up to 56Kbps
- RJ11 socket

Synchronous Serial (Optional)

- Synchronous/asynchronous serial port(s)

- Supports RS-232E, RS-422A, RS-449, RS-485, RS-530, V.24, V.35, V.36 and X.21 using a single 44-way D-type female connector
- Supports async serial speeds up to 115.2Kbps
- Synchronous connection up to 2Mbps

Quad Asynchronous Serial Interface (Optional)

- Four asynchronous serial ports
- Supports RS232 and RS485 (full- and half-duplex)
- Speeds up to 115.2Kbps
- 4 RJ45 RS232D DCE presentation

E1/T1 Interface (Optional)

- RJ45 connector 100ohm/120ohm balanced
- ITU G.703 and G.704 compliant
- Supports full and fractional services
- Internal or external clock

Analogue Leased Line (Optional)

- Supports analogue leased line interfaces
- Supports V.21, V22, V.22bis, V23, Bell 103, and Bell 212A
- 2 wire ETSI EN 300 448, 4 wire V1.2.1, ETSI ETS 300 451, 4 wire E&M input and output ports
- 2 & 4 wire ITU-T-M. 1040 and ITU-T-M. 1020/1025
- FXS/FXO
- 4 port (4 RJ11) and 8 port (HD50 socket) versions
- Impedance: 600R or ETSI
- RJ11 socket on rear of enclosure

Digital and Analogue I/O

- 30 discrete inputs
- 4 discrete outputs
- 4 analogue inputs

Approvals and Certificates

- EN60950 safety approval
- EN55022 and EN55024 EMC
- R&TTE, GCF for WCDMA
- R&TTE, GCF, FCC, PTCRB for EDGE

AC Power

- 100V-240V AC, 10 Watts

DC Power

- IEC mains connector
- DC-power option
- DC power input screw connectors
- Dual power feed option

Physical and Environmental

- Unit size 310 W x 172 D x 43 H mm
- Unit weight 2.4 kg
- Packaging size 345 W x 215 D x 110 H mm
- -30°C to 70°C operating temperature range
- Conformal PCB coating option available
- Includes installation kit for EIA compliant 19-inch rack