



# ISDN Emulation with the Service Managed Gateway

**The Virtual Access Service Managed Gateways in combination with Activator uniquely empower service providers to deliver end-to-end business class services at lowest life cycle cost. Service Managed Gateways support value-added applications such as legacy migration, VPN, firewall, Quality of Service, and high availability.**

The GW6120 Service Managed Gateway (SMG) provides a highly reliable platform that enables service providers to build value-added infrastructures both rapidly and cost-effectively. The GW6120 SMG successfully migrates both ISDN packet-switched data services and circuit-switched data services onto next-generation networks. Migration with the GW6120 SMG allows service providers to profitably maintain traditional TDM-based services.

## Clock synchronisation

Circuit-switched ISDN data calls are difficult to route over NGN networks because the clocks must be synchronised between the two ends of a data call without synchronisation. Clock slips degrade quality and are unacceptable to users.

The GW6120 resolves the difficulty by recovering the clock from the network. The GW6120 has a tuneable phase-locked loop clockcircuit that allows the SMG to analyse the rate

at which RTP packets are received from the NGN and to regenerate an accurate clock. The recovered clock determines the rate at which the local S-bus is clocked and consequently avoids any clock slips.

In addition, the GW6120 features an anti-jitter buffer that negates the effect of jitter in the packet network.

## Packet-switched X.25 data services

In conjunction with the Virtual Access Always-On Server™, the GW6120 provides ISDN data services and supports both X.25 and Frame Relay access to NGN.

### X.25 support

The GW6120 supports X.25 on the ISDN D-channel.

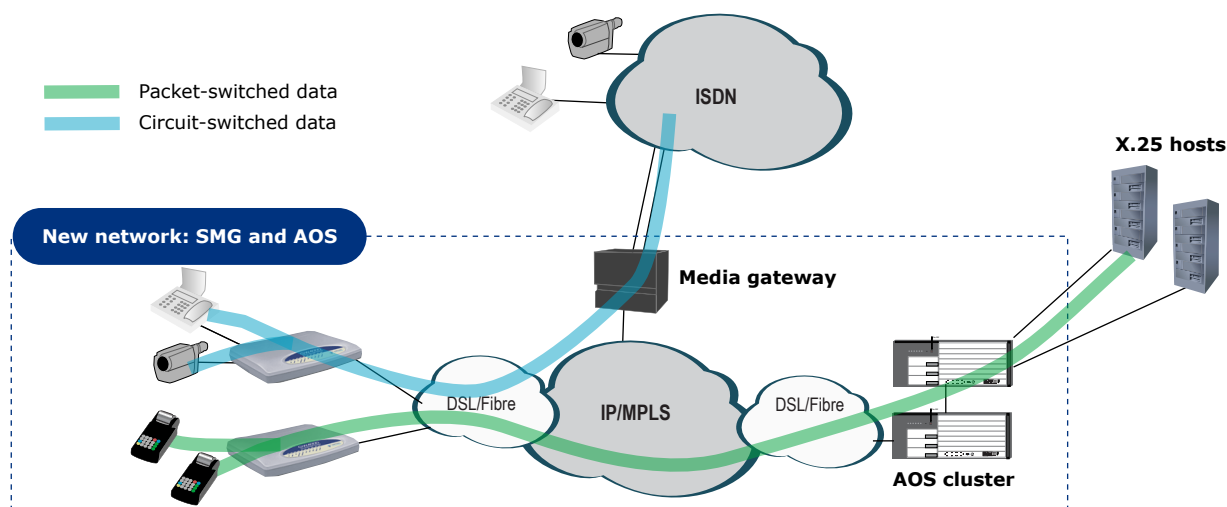
### Frame Relay support

The GW6120 supports Frame Relay services on the ISDN port. Services can be configured as 64kbps or 128kps permanent connections.

## Zero Touch™ service delivery

The GW6120 allows the innovative service provider to differentiate its offerings and support a wide range of revenue-generating services on a single, centrally-managed platform.

The GW6120 addresses the challenges of cost and risk that are associated with new managed broadband services. The centrally-managed solution built around Activator takes responsibility for service delivery without the need for site visits. Automated Zero Touch provisioning through Activator gives the service provider a fast track to market without the costs and risks normally associated with the introduction of new services.



## Features

### Hardware features

#### ISDN and ISDL Interface

- ISDN basic rate S/T-interface presented on RJ45

#### ISDN switch support

- CCITT I.430, Q.921, Q.931
- All European ISDN carriers (ETSI Euro ISDN-NET3)
- National ISDN-1 and ISDN-2 (North America)
- ISDN NT mode

#### LAN interface

- 10/100Base-T Ethernet ports with a link status LED
- Auto detects full- or half-duplex operation
- Auto detects a regular or crossover cable for easy connection to a switch or hub

#### Power

- 100V–240V AC
- External 5V DC PSU

#### Operating temperature

- Operating Temperature: 0° to +40°

### Software features

#### Quality of Service

- QoS support of classification and marking services

#### Management

- Telnet server
- Fast.Start for ease of configuration
- Local and remote advanced configuration through embedded web server and Java applets
- Customisable embedded web interface
- Compatible with Microsoft Internet Explorer and Mozilla browsers
- TFTP client download and upload
- Smart file server
- Configuration change log
- SNMP agent

#### Fault investigation and reporting

- Event logging
- Full web-based protocol level trace and debug
- Syslog support
- Email event alerting
- Trace route
- Ping (single/continuous)

#### Service features

- Configurable host traffic monitoring applet
- DHCP server/client
- DHCP relay
- DHCP proxy
- BOOTP client
- Packet filtering and firewalling
- Proactive pre-processed statistics gathering through the Performance Monitor

### IP features

- Support for IP, TCP, UDP, ICMP, ESP, AH, GRE
- Static and dynamic IP routing algorithms
- Van Jacobson header compression
- PPP, PPPoE
- PAP/CHAP security
- RIP and RIP2
- Network time protocol
- X.25 over TCP/IP (XoT)
- XL3oT (X.25 migration protocol) over IP: generic migration protocol also used for Frame Relay migration
- SNMP MIB II

#### IPSec

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

#### Ike-related VPN specifications

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

## Benefits

### Legacy migration

- Reduce operational costs
- Maintain legacy revenues
- Eliminate legacy networks
- Support IP core and DSL/fibre
- Maintain end-customer applications without disruption
- Defend your business against competitors

### Zero Touch

- Customer installable
- Centrally managed
- No truck roll
- Remote diagnostics
- OSS integration
- Rapid service prototyping
- Service customisation