iMG2500 Series

OUTDOOR GIGABIT LAYER 2/3 MULTISERVICE GATEWAYS

2002/95/EC ROHS COMPLIANT

The Allied Telesis iMG2500 Series gateways, new members of the Company's iMG outdoor active Ethernet ONT family, provide Gigabit capacity with enhanced performance for routing and NAT traffic management as well as an option for HPNA v3.1 Ethernet over coaxial interface.

The Multiservice Gateway

The iMG2500 Series of intelligent Multiservice Gateways provides the ideal Fiber-to-the-Home (FTTH) customer premise device for the delivery of communications and entertainment services, including carrier-class telephony, High-Speed Internet Access (HSIA), IP television, and interactive, two-way video-based services. All of these services are provided over an active optical distribution network via a single optical fiber to the home. The combined delivery of IP Triple Play services — voice, video, and data — benefits both service providers and their customers. Service providers can quickly deliver advanced services such as fast Internet, VoIP, IPTV, and Video on Demand in a scalable way with complete remote management. End users benefit by having a single device inter-connecting all peripherals, computers, wireless devices, analog, and VoIP telephones to a single broadband uplink.

Voice over IP

The iMG2500 Series offers two FXS ports, leveraging existing Allied Telesis SIP and MGCP Voice over IP (VoIP) implementation and established interoperability with major softswitch vendors. The iMG2500 Series supports the connection of modems and faxes to voice interfaces for business applications in SoHo environments. VoIP Quality of Service (QoS) is assured through Type of Service (ToS) bits, and IEEE 802.1p priority tagging. The addition of silence suppression and local generation of comfort noise result in excellent voice quality.

IP Television

The iMG2500 Series is optimized for IP video streaming. Snooping IGMP packets in-transit enables delivery of multiple multicast transmissions such as movie or TV channels. This enables multiple high-quality, high bitrate video streams without impacting data traffic or IP telephony, while delivering fast channel changes that users expect from a video service. MPEG video service management and diagnosis is possible through dedicated commands.

Key Features

- » High-speed Gigabit service delivery
- » Single bi-directional fiber WAN interface
- » Environmentally hardened unit for outdoor deployments
- » Separate enclosure and electronics for increased installation flexibility
- » Internal fiber management for fiber optic drop cable termination
- » Eight hour battery back-up option for lifeline POTS support
- » IP Triple Play ready
- » SIP and MGCP VoIP protocol support
- » Major softswitch manufacturer compatibility
- » Class 5 services
- » Support for analog and VoIP phones
- » Stateful Inspection Firewall / NAT
- » DMZ support
- » Access Control Lists
- » AlliedView NMS support
- » TR-069 management
- » RoHS compliant

Data Delivery and Security

The iMG2500 Series supports industry-leading QoS through ISO Layer 2 and 3 prioritization techniques including priority tagging with IEEE 802.1p, ToS and DSCP fields. Extensive support for per port and per VLAN rate-limiting in the iMG2500 Series enables service providers to deliver tiered data services for the wide spectrum of end customer profiles, providing maximum flexibility in service differentiation. The electronics module is Q-in-Q capable. Security is assured by an integral Stateful Inspection Firewall with NAT to protect end-users' networks.

Management and Deployment

The iMG2500 Series is designed to be easy to deploy and manage. With the AlliedView™ NMS software platform, the iMG2500 Series can be remotely provisioned and managed. The iMG2500 supports TR-069 and may be managed via an ACS.

Optical WAN Interfaces

The iMG2500 offers single-strand (bi-directional) optical fiber link capable of 20km operation for FTTx applications. The separate enclosure (AT-EN-SFR-ONT), where the optical cable is terminated, allows easy installation, maintenance, and replacement thanks to a plug-and-play optical connection. It also provides a locking mechanism to secure the active unit.

Specifications

External Interfaces
1 x 100/1000BX single-strand single-mode (AT-iMG2524F and AT-iMG2524H)
1 x 1000BX (AT-iMG2524)
4 x 10/100/1000T (RJ-45)
2 x VoIP FXS POTS ports (RJ-11)
1 x USB slave for management
1 x HPNA v3.1 (optional) (AT-iMG2524H)

Optical Interface
IEEE 802.3ah 1000BX, single-mode single-fiber, SC connector, approximate range 20 km
TX 1310 nm; RX 1480-1600 nm nominal
Max sensitivity: -23dBm
Output power: -2dBm (max) to -7dBm (min)

Ethernet
Layer 2 wirespeed packet switching
Tag-based IEEE 802.1Q VLANs (max 32)
IEEE 802.1Q tag insertion and stripping
Port mirroring of ingress/egress traffic (future)
DHCP client and server
4K MAC address FDB

WAN Protocols
PPPoE (future)
Global IP address pool
DNS proxy
Static and dynamic IP address assignment

Routing and Multicast
PPP and IP routing
RIP v1, v2 (future)
IGMP v2, v3
IGMP snooping
IGMP proxy

Security
NAT
Stateful Inspection Firewall
Dynamic port opening
Access Control List
IPSec/VPN pass through
PAP/CHAP authentication (future)

Quality of Service
IEEE 802.1p prioritization
Programmable ingress/egress rate limiting
Four QoS queues per port
DSCP/ToS

VoIP Protocols
SIP 2.0
MGCP/NCS 1.0

VoIP Features
G.711 a-law and μ-law 64kbps
G.729 8kbps (future)
G.726 32kbps
G.168 ECAN
T.38 fax relay (future)
RTP voice packet encapsulation
Automatic fax/modem detection
Voice Activity Detection (VAD)
Comfort Noise Generation (CNG)
Packet loss concealment
Adaptive jitter buffer
5 REN
Caller ID
Call transfer
Call forwarding (unconditional, on busy, no answer)
Call waiting
Call hold
Message waiting
3-way call local (future)
DTMF relay
RFC 2833

Management
AlliedView NMS
Telnet
Remote software upgrade
Web GUI
CLI
SNMP v1, v2
TR-069

Status LEDs
Power
Link: Link/Activity
VoIP: Use/Activity
LAN: Link/Activity
WAN: Link/Activity

Power Characteristics
Typ. power consumption: 15W
External power supply
Input: 100-240V AC, 50-60 Hz
Output: 12vDC, 3A

Environmental Specifications

Operating temperature	-40°C to 65°C (-40°F to 149°F)
Max operating humidity	90% relative humidity (non-condensing)
Storage temperature	-40°C to 70°C (-40°F to 158°F)
Max storage humidity	95% relative humidity (non-condensing)

Physical Characteristics
AT-EN-SFR-ONT enclosure

Dimensions (W x D x H)	25.1 cm x 9.7 cm x 32.3 cm 9.9 in x 3.8 in x 12.7 in
Weight	1.1 kg (2.5 lbs)

AT-iMG2524/AT-iMG2524H electronics module

Dimensions (W x D x H)	20.2 cm x 4.2 cm x 23 cm 8.0 in x 1.7 in x 9.1 in
Weight	590 g (1.3 lbs)

Approvals and Certifications
CE and UL marking

Safety	EC/EN60950-1 UL 60950-1 EN60825-1 CAN/CSA-C22.2 No 60950-1-03
Emission	FCC Part 15 Class B EMC Directive 2004/108/EC EN 55022 Class B EN 300 386
Immunity	EN 55024
RUS listed	(pending)

Ordering Information

AT-iMG2524-xx
1 x 1GB WAN
4 x 10/100/1000T LAN
2 x analog POTS
1 x USB slave for management

AT-iMG2524H-xx
1 x 1G / 100Mb WAN
4 x 10/100/1000T LAN
2 x analog POTS
1 x USB slave for management
1 x HPNA v3.1

AT-iMG2524F-xx
1 x 1G / 100Mb WAN
4 x 10/100/1000T LAN
2 x analog POTS

Related Products
AT-EN-SFR-ONT
Enclosure

AT-iMG008
Battery backup

AT-iMG008NB
Battery backup, without battery

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