

iMG2400 Series

Outdoor Gigabit FTTx Multiservice Gateways

Allied Telesis iMG2400 Series intelligent Multiservice Gateways are part of the Allied Telesis iMG outdoor active Ethernet ONT family, providing Gigabit capacity with enhanced WAN flexibility and higher port density, and supporting wirespeed bridged or routed traffic.

Overview

The iMG2400 Series of intelligent Multiservice Gateways provides the ideal 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 an optical fiber connection 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, Voice over IP (VoIP), IPTV and Video on Demand, in a scalable way with complete remote management. End users benefit by having a single device interconnecting all peripherals, computers, wireless devices, analog and VoIP telephones to a single broadband uplink.

Voice over IP

The iMG2400 Series offers two FXS ports, leveraging Allied Telesis SIP and MGCP VoIP protocol implementation and established interoperability with major softswitch vendors. The iMG2400 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 bits (ToS), and IEEE 802.1p priority tagging. The addition of silence suppression and local generation of comfort noise results in excellent voice quality.

IP television

The iMG2400 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 also delivering the fast channel changes that users expect from a video service. MPEG video service diagnosis is possible with dedicated commands.

Data delivery and security

The iMG2400 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 enables service providers to deliver tiered data services for the wide spectrum of end customer profiles, providing maximum flexibility in service differentiation. The iMG2400 Series also supports Q-in-Q. Security is assured by an integral Stateful Inspection Firewall with NAT to protect end-users' networks.

Management and deployment

The iMG2400 Series is designed to be easy to deploy and manage. With the AlliedView™ NMS software platform, the iMG2400 Series can be remotely provisioned and managed. The iMG2400 supports TR-069 and may be managed via an ACS.

Optical WAN interfaces

The iMG2400 Series features an SFP WAN socket that accepts numerous SFP options for the speed, distance and type of the optical fiber link. 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.



Key Features

- ▶ High-speed Gigabit service delivery
- ▶ SFP fiber WAN socket supporting Gigabit, 100 Megabit, and EPON operation
- ▶ Environmentally hardened 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

Specifications

External Interfaces

1 x 1G / 100Mbps WAN socket SC/UPC
 1 x 1G/100M/EPON WAN socket SC/UPC
 6 x 10/100/1000T (RJ-45)
 2 x VoIP FXS POTS ports (RJ-11)
 1 x USB slave for management

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
 DHCP client and server
 4K MAC address FDB

WAN Protocols

PPPoE
 Global IP address pool
 DNS proxy
 Static and dynamic IP address assignment

Routing and Multicast

PPP and IP routing
 RIP v1, v2 (future)
 IGMP v1, v2, v3
 IGMP snooping
 IGMP proxy
 IGMP fast leaves
 IGMP joins

Security

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

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.726 32kbps
 G.729 8kbps
 G.168 ECAN
 T.38 fax relay
 RTP voice packet encapsulation
 Automatic fax/modem detection
 Voice Activity Detection (VAD)
 Comfort Noise Generation (CNG)
 Error mitigation/bad frame interpolation
 Adaptive jitter buffer
 5 REN
 Caller ID / call waiting with caller ID
 Call transfer (blind and attendant)

Call forwarding (all, on busy, no answer)
 Call waiting
 Call hold
 Message waiting
 3-way call local
 DTMF relay
 RFC 2833

Management

AlliedView NMS
 Whole home networking
 Dual boot
 Telnet
 Remote software upgrade Web GUI
 CLI
 SNMP v1, v2
 TR-069
 Web GUI

Status LEDs

Power
 Link Link/Activity
 VoIP Use/Activity
 LAN Link/Activity
 WAN Link/Activity

Power Characteristics

Typical power consumption 15W
 External power supply
 Input 100-240VAC, 50-60 Hz
 Output 12VDC, 2A

Environmental Specifications

Operating temperature -40°C to 60°C (-40°F to 140°F)
 GEAPON operation -40°C to 55°C (-40°F to 131°F)
 Operating humidity 5 to 95% 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 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 55032 Class B
 EN 300 386
 Immunity EN 55024

Ordering Information

AT-IMG2426F-xx

1 x 1G/100Mbps WAN, 6 x 10/100/1000T LAN,
 2 x analog POTS, 1 x USB slave for management

Related Products

AT-IMG024-00

Indoor wall mounting bracket including fiber management

AT-EN-SFR-ONT

Enclosure

AT-IMG008-xx

Battery backup

AT-IMG008NB-xx

Battery backup (without battery)

AT-IMG017

Battery backup cable

Where xx = 10 for U.S. power supply
 30 for U.K. power supply
 40 for Australian power supply
 50 for European power supply

SFP Modules

AT-SPFXBD-LC-13

100BX Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 10 km

AT-SPTX

1000T 100 m copper

AT-SPBD10-13

1000LX GbE Bi-Di (1310 nm Tx, 1490 nm Rx) fiber up to 10 km

AT-SPBD20-13/1

1000BX GbE Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 20 km, Industrial Temp (-40 to 85°C)

AT-TN-P015-A

20 km, 100 MB/1 Gigabit SFP, 9 micron (Tx = 1310 nm, Rx = 1550 nm)

AT-SPBD20EPON-13

SFP/SC 1G Bidi 20km (1310Tx/1490Rx). GEAPON, Industrial Temp (-40 to 85°C)

AT-SPFX/2

100FX multi-mode 1310 nm fiber up to 2 km

AT-SPFX/15

100FX single-mode 1310 nm fiber up to 15 km

AT-SPBD40-13/1

SFP/LC 1G Bidi 40 km (1310Tx/1490Rx), Industrial Temp (-40 to 85°C)