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 inter-connecting 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 existing 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 delivering fast channel changes that users expect from a video service. MPEG video service diagnosis is possible through 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 offers 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)
GEPON 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 55022 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-SPBD20-13/I
20 km bidirectional 1G SFP

AT-iMG024-00
Indoor wall mounting bracket including fiber management

AT-SPBD20EPON-13/I
20 km bidirectional EPON SFP

AT-SPBD40-13/I
40 Km bidirectional 1G SFP

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

Allied Telesis NETWORK SMARTER

North America Headquarters | 19800 North Creek Parkway | Suite 100 | Bothell | WA 98011 | USA | T: +1 800 424 4284 | F: +1 425 481 3895
Asia-Pacific Headquarters | 11 Tai Seng Link | Singapore | 534182 | T: +65 6383 3832 | F: +65 6383 3830
EMEA & CSA Operations | Incheonweg 7 | 1437 EK Rozenburg | The Netherlands | T: +31 20 7950020 | F: +31 20 7950021

alliedtelesis.com

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