iMG1400 Series

Gigabit FTTH Multiservice Gateways

Allied Telesis iMG1400 Series intelligent Multiservice Gateways (iMGs), part of the Allied Telesis iMG family, provide IPTV and broadband services with optional voice and fiber to RF transceivers.

Overview

Allied Telesis iMG1400 Series intelligent Multiservice Gateways are flexible customer premise offerings that deliver IP-based services including carrier-class telephony, high-speed Internet, IP television and interactive two-way video-based services over a Gigabit active optical distribution network. Advanced services such as Gigabit Internet, VoIP, IPTV and Video on Demand can be quickly delivered in a scalable way with complete remote management. A single device interconnects all peripherals, computers, analog and VoIP telephones to a single broadband uplink.

Voice over IP

Allied Telesis AT-iMG1425 models offer two FXS ports, supporting analog POTS, FAX and dial-up modem services. They leverage the existing Allied Telesis SIP and/or MGCP protocols and established interoperability with major softswitch vendors to support analog-based voice, FAX and modem services for residential and SoHo environments. VoIP Quality of Service (QoS) is maintained through Type of Service (ToS) bits and IEEE 802.1p priority tagging. In addition, silence suppression and local generation of comfort noise results in excellent voice quality.

IPTV

The iMG1400 Series supports IP TV multicasting along with IGMP snooping, proxy and fast leaves and join, enabling multiple high-quality, high bit-rate video streams without impacting data traffic or IP telephony. Combined, this delivers the fast channel change that users expect from video services.

Wireless

The iMG1400 Series supports IEEE 802.11bgn wireless transmission frequencies, for wireless transmission within the premise and support services without additional wiring.

Data Delivery and Security

The iMG1400 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 rate-limiting in the iMG1400 Series enables service providers to deliver tiered data services for any end customer profile, and provides maximum flexibility in service differentiation. Further, the hardware fully supports Q-in-Q. Security is assured by an integral Stateful Inspection Firewall with NAT to protect end-user networks.

Management and Deployment

The iMG1400 Series is designed to be easy to deploy and manage. With the AlliedView NMS software platform, these iMGs can be remotely provisioned and managed. The iMG1400 Series supports TR-069 and can be managed via an Auto Configuration Server (ACS).

Optical WAN Interfaces

The iMG1400 Series can accept up to two single-strand optical fiber links for FTTH applications — one for CATV RF video and the other to provide IP-based voice, video and data. The iMG may be operated without a fiber interface and perform as an Ethernet-only gateway.

Key Features

- ▶ 1 x SFP optical WAN port
- ▶ 3 x 10/100/1000T LAN ports
- ▶ 2 x 10/100TX LAN ports
- ▶ 1 x Coax TV-out (RF option)
- ▶ IEEE 802.11bgn
- ▶ Two FXS ports (AT-iMG1425 models)
- ▶ USB host (future)
- ▶ USB slave for console
- ▶ 100M / Gigabit auto sense WAN
- ▶ Plug-and-Play fiber outlet
- ▶ SIP and MGCP VoIP protocol support
- ▶ Major softswitch manufacturer compatibility
- ▶ Class 5 services
- ▶ Support for analog and VoIP phones
- ▶ IP Triple Play ready
- ▶ Stateful Inspection Firewall / NAT
- ▶ DMZ support
- ▶ Access Control List
- ▶ AlliedView™ NMS support
- ▶ TR-069

Specifications

Hardware
3 x 10/100/1000T (RJ-45)
2 x 10/100TX (RJ-45)
2 x VoIP FXS ports (RJ-11) (AT-iMG1425 models)
1 x 100M/1000M SFP WAN
1 x USB slave for console
1 x USB host (future)
IEEE 802.11bgn (wireless models)

Ethernet
IEEE 802.3ah - Physical Link Layer
Layer 3 routing performance: 960Mbps
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
Jumbo frame support
Q-in-Q support
Multi-dwelling support (protected switching)
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
IGMP V1, V2, V3
IGMP snooping
IGMP proxy
IGMP fast leaves
IGMP joins
IPv6 transparency
IPv6 dual stack

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

QoS
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 (AT-iMG1425 Models)
G.711 a-law and μ-law 64kbps
G.729 8kbps
G.726 32kbps
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
Call forwarding (unconditional, on busy, or no answer)
Call waiting
Call hold
Message waiting
3-way call
DTMF relay
RFC 2833

Management
AlliedView NMS (14.1 or higher)
Whole home networking
Telnet
Remote software upgrade
Web GUI
CLI
SNMP v1, v2
TR-069

Status LEDs
SYST	Power/System
WAN	Link/Activity
VoIP	Use/Activity
WLAN	Link/Activity
LAN	Link/Activity

Power Characteristics
Typical power consumption 10 to 16.6 watts
(depending on model)
External power supply
Input	100-240V AC, 50-60 Hz
Output	12vDC, 1.5A

Environmental Specifications
Operating temperature	0°C to 40°C (32°F to 104°F)
Operating humidity	5 to 95% relative humidity (non-condensing)
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Max storage humidity	95% relative humidity (non-condensing)

Physical Characteristics
Dimensions (W x D x H)	26 cm x 15 cm x 4.5 cm (10.2 in x 5.9 in x 1.8 in)
Weight	450 g / 16.1 oz

Approvals
CE and UL marking
Safety	IEC/EN60950-1
	UL 60950-1
	EN60825-1
	CAN/CSA-C22.2
	GR1089 Intra-building
Emission	FCC Part 15 Class B
	EMC Directive 2004/108/EC
	EN 55022 Class B
Immunity	EN 55024

Ordering Information

AT-iMG1405-xx
FTTH multiservice gateway
1 x SFP WAN socket, 3 x 10/100/1000T,
2 x 10/100TX, 1 x USB host, 1 x USB slave

AT-iMG1405W-xx
FTTH multiservice gateway with wireless
1GE SFP WAN; 3 x 10/100/1000 LAN; 2 x 10/100 LAN;
IEEE 802.11bgn wireless, AC adapter

AT-iMG1425-xx
FTTH multiservice gateway with POTS
1 x SFP WAN socket, 3 x 10/100/1000T, 2 x 10/100TX,
2 x FXS, 1 x USB host, 1 x USB slave

AT-iMG1425W-xx
FTTH multiservice gateway with POTS and wireless
1GE SFP WAN; 3 x 10/100/1000 LAN; 2 x 10/100 LAN;
2 x FXS POTS, IEEE 802.11bgn wireless, AC adapter

Note: SFP optic not included in above models.

Bundles
The following bundles are available in -10, -11 and -50 AC
power adapter models only

AT-iMG1405W-B01-xx
Bundle includes AT-iMG1405W and SFP P015, AC adapter

AT-iMG1405-B01-xx
Bundle includes AT-iMG1405, SFP P015, and AC adapter

AT-iMG1425W-B01-xx
Bundle includes AT-iMG1425W, SFP P015, and U.S. AC
adapter

AT-iMG1425-B01-xx
Bundle includes AT-iMG1425, SFP P015, and U.S. AC
adapter

Related Products
AT-iMG008NB-xx
Battery backup

AT-iMG016
Battery backup cable

Where xx =   10 for non 'W' models U.S. power supply*
11 for 'W' models U.S. power supply*
30 for U.K. power supply
40 for Australian power supply
50 for European power supply

* Due to FCC regulations in the NA market

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