

# 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

## iMG1400 Series | Gigabit FTTH Multiservice Gateways

### 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  $\mu$ -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<br>(non-condensing) |
| Storage temperature   | -20°C to 70°C (-4°F to 158°F)                  |
| Max storage humidity  | 95% relative humidity<br>(non-condensing)      |

#### Physical Characteristics

|                        |                                                       |
|------------------------|-------------------------------------------------------|
| Dimensions (W x D x H) | 26 cm x 15 cm x 4.5 cm<br>(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<br>UL 60950-1<br>EN60825-1<br>CAN/CSA-C22.2<br>GR1089 Intra-building |
| Emission          | FCC Part 15 Class B<br>EMC Directive 2004/108/EC<br>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



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](http://alliedtelesis.com)

© 2016 Allied Telesis, Inc. All rights reserved. Information in this document is subject to change without notice. All company names, logos, and product designs that are trademarks or registered trademarks are the property of their respective owners.  
617-000462 Rev C