



AT-iMG613RF

Ethernet and HFC intelligent Multiservice Gateway

AT-iMG613RF

3 x 10/100TX LAN ports, 1 x CaTV RF port,
2 x FXS ports, 1 x Fiber SC (HFC) port,
1 x 100BXS port

Fast-Forward Your IP Triple Play offering over FTTH using Cable TV

Allied Telesis' AT-iMG613RF intelligent Multiservice Gateway is the platform of choice for HFC Cable TV operators and FTTH ISPs looking to collaborate to offer IP Triple Play services over Fiber-To-The-Home FTTH deployments.

The AT-iMG613RF is the ideal platform for operators and service providers who can access native broadcast TV service from Cable TV plants for deployment of IP Triple Play services over FTTH networks.

Analog Cable TV Video Delivery

The AT-iMG613RF connects to the service provider FTTH network via a single-mode fiber optical interface. One fiber strand is dedicated to delivering IP-based multimedia services using industry standard bi-directional connection. These services are presented to end-customers on Ethernet and POTS interfaces. The second fiber strand delivers the Cable TV broadcast channels and the service is presented to end-customers on coax interface which connects directly to TV sets.

Real Time Applications Optimization Quality of Service

This is provided within the AT-iMG613RF through ISO Layer 2 and 3 prioritization techniques including Type of Service (ToS) as well as priority tagging with IEEE 802.1p.

Optimization for IP Video Streaming

When delivering video over IP, the AT-iMG613RF 'snoops' IGMP packets in-transit allowing simultaneous delivery of different multicast transmissions e.g. different movies or TV channels. This results in high quality, high-bandwidth, multiple video streaming without impacting Internet browsing or IP telephony whilst delivering the fast channel change that users expect from video services. MPEG video service management and diagnosis is possible using troubleshooting techniques. Furthermore, video quality 'as seen by subscriber' can be remotely monitored using the unique MPEG stream monitoring tool embedded in the AT-iMG613RF.

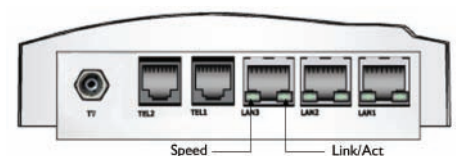
IP Telephony

The AT-iMG613RF offers 2 FXS interfaces leveraging the Voice over IP (VoIP) protocols such as: H.323, SIP and MGCP. VoIP interoperability has been established with major softswitch vendors. The AT-iMG613RF allows the connection of modems and faxes to voice interfaces for other business applications in SoHo environments.

Key Features

- Up to 100Mbps bandwidth delivery
- Dual fiber WAN port for both Analog Cable TV and ISP Connectivity
- Fiber-to-Coax RF connector for direct-to-TV connection
- No need for additional STB† to access Cable TV
- Plug in existing analog telephones for VoIP access
- Small footprint at customer site
- Innovative two-part case - easy to deploy
- IP Triple Play ready
- Stateful Inspection Firewall
- Zero Touch Configurator Software removes need for truck-roll deployment
- Major Softswitch Manufacturer Compatibility established
- Service Specific Management and Monitoring – ensures Quality of Service to customers

† Providing a subscription for the service is available and taken up



Port Schematic AT-iMG613RF

Data Delivery and Security

Differentiated Bandwidth Internet Services

The AT-iMG613RF provides extensive support for per-port rate-limiting that enables service providers to deliver tiered data services catering for the wide spectrum of end-customer profiles.

Firewall Capability

The AT-iMG613RF has an integral Stateful Inspection Firewall with NAT, Denial of Service (DoS) and an Intrusion Detection System (IDS) with blocking for protecting end-customer networks.

Management

Easy to Deploy and Manage

Fiber-To-The-Home with the AT-iMG613RF has never been easier. For installers and builders, a complete Fiber splicing kit with a passive faceplate for hiding the fiber termination is available to allow for easy installation, maintenance and replacement using Plug & Play optical connections. User intervention is limited to simply sliding-in the gateway in the already installed slot containing the terminated fiber.

Zero Touch Configuration with the ZTC

The AT-iMG613RF is designed to be easy to deploy and manage. With the Zero Touch Configurator (ZTC) software platform, the AT-iMG613RF can be provisioned and managed remotely eliminating need for truck rolls and man-in-a-van operations. The Zero Touch Configurator is a distributed configuration system based on the industry's standard Lightweight Directory Access Protocol (LDAP) database architecture. This provides secure authentication and registration plus intelligent, automatic configuration of remote iMG units. Its XML-based structure enables seamless integration with service providers' existing OSS platforms.

Specifications

User's Ports

- 3 x 10/100TX (RJ45)
- 2 x VoIP FXS ports (RJ-11)
- 1 x F-Type coaxial connector

WAN Ports

- 1 x HFC Single-Fiber (SC)
- 1 x 100BX Single-Fiber (SC)
- TX 1310 nm, RX 1550 nm
- Range 15 Km
- Power Budget 17dB

Fiber to RF Subsystem

- 1 x HFC Single-Fiber (SC)
- Center Wavelength 1550 Nm typical (Rx)
- Input Power -3 dB max
- Frequency Range 47-870 MHz
- Frequency Response Flatness -1 to +1 dB
- CNR w/o loading modulation 46 dB min
- CNR with loading modulation 43 dB min
- CSO 65 dB
- CTB 65 dB
- RF output level 18 dBmV typical
- RF Output Impedance 75 Ohm typical

Layer 2 Operation

- Layer 2 wire-speed packet switching
- IGMP v1/v2 Multicast Support
- Tag-based IEEE 802.1Q VLANs (16 max.)
- IEEE 802.1p prioritization
- IEEE 802.1Q tag insertion and stripping
- Programmable Rate limiting ingress/egress (32,000 steps)
- Port Mirroring ingress/egress traffic
- Double QoS queue on each port
- Port speed selection 10, 100 or 10/100
- 1,000 MAC addresses

Layer 3 Operation

- NAT
- PPPoE
- Stateful Inspection Firewall
- Intrusion Detection and Blocking System
- IPSec/VPN passthrough
- Virtual Server
- Global IP address pool
- Dynamic port opening
- DHCP client, server and relay
- DNS proxy
- PAP/CHAP authentication
- Static and Dynamic IP address assignment
- RIPv1/v2

VoIP Protocols

H.323	3.0
SIP	2.0
MGCP/NCS	1.0

VoIP Ports

- G.711 a-law and μ -law 64kbps
- G. 723 (optional)
- G.726 16/24/32/40kbps
- G.729 8kbps
- G.168 LEC 8-32 msec
- T.38 Fax Relay
- Automatic Fax/Modem Detection
- Voice Activity Detection (VAD)
- Comfort Noise Generation (CNG)
- Error Mitigation/Bad Frame Interpolation
- Adaptive jitter buffer
- REN: 5 per FXS port
- ISDN BRI Power feed: 100mA, 4W
- RTP voice packet encapsulation

Class 5 Services

- Call transfer
- Call waiting
- Call hold
- Message waiting
- Caller ID

Network Management

- Zero Touch Configurator
- Local console port
- Telnet
- Remote software upgrade
- DHCP
- Web GUI (optional)

LED Status Indicators

- Power
- System
- POTS Use/Ready/Ringing
- WAN Link/Activity
- LAN Link/Activity

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Technical Specifications

Power Characteristics

External power supply	
Input	12vDC, 1.5A
Power Consumption	10W (typical)

Environmental Specifications

Operating Temperature	0°C to 50°C
Storage Temperature	-10°C to 70°C
Operating Humidity	5% to 85% RH

Physical Characteristics

Dimensions	23.5 x 5 x 14.4cm (W x D x H)
Weight	0.45kg

Protocols and Standards

IPv4	RFC 791
TCP, UDP	RFC 1144
IGMP (v1/v2)	RFC 1112, 2236
PPPoE	RFC 2516
PAP	RFC 1334
CHAP	RFC 1994
NAT	RFC 1631
DHCP	RFC 2131
VLAN	IEEE 802.1p/Q, IEEE 802.1d, IEEE 802.2, IEEE 802.3x
SNMP	v1,v2,v3
RTP/RTCP	
TFTP	RFC 1350
Telnet	RFC 318
ARP	RFC 826
H.323	4.0
SIP 2.0	RFC 3261
MGCP/NCS	1.0
Codecs	G.711, G.726, G.729

Approvals

CE Marking	
Safety	EN 60950 CSA 950/US UL 1950
Emission	FCC Part 15 Class B EN 55022 Class B
Immunity	EN 55024

Softswitch Interoperability

Cirpack, Net Centrex, Sonus Networks, Marconi, Siemens, Alcatel, Audiocodes, Mediatrix, Arelnet, HotSIP, Iptel, Italtel, Lucent, Netmeeting, Nuera, OKI, Open H.323

Warranty

Two years

Ordering Information

AT-iMG613RF intelligent Multiservice Gateway
3 x 10/100TX ports, 1 x F-Type, 2 x VoIP FXS ports,
1 x 100BX SC port, 1 x HFC SC port

Fiber Termination Accessories

Faceplate
AT-RG001 (10 pieces)
Dual Fiber Passive Wall Outlet

Fiber Splice Kit (1 kit per installation required)

AT-RG010
Fiber Outlet kit SM fusion splice
AT-RG020
Fiber Outlet kit SM mechanical splice

Zero Touch Configurator Software

AT-ZTC500-NA
ZTC Package 1 - License for up to 500 users/nodes
AT-ZTC5000-NA
ZTC Package 2 - License for up to 5000 users/nodes
AT-ZTCUNLIMITED-NA
ZTC Package 3 - unlimited users/nodes
AT-ZTCUPGRADE-NA
Upgrade from AT-ZTC5000 to AT-ZTCUNLIMITED
AT-ZTCLIC250-NA
Per node license fee to be added over initial licenses,
extra licenses available in packages of 250

Battery Backup Units

AT-RG005 Battery Backup
AT-RG005G Grounded Battery Backup
AT-RG008 Battery Backup Cable

Configuration Cable

AT-RGCONSOLECABLE-00
Configuration cable

Power Supply Information

All AT-iMG or AT-RG products ship with an external power transformer. For country specific ordering please use the following suffixes:

Where xx =
00 for no power supply
10 for US power supply
20 for European power supply
(excluding UK)
30 for UK power supply

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