Allied Telesis

AT-iMG616BD-R2
FTTH MULTISERVICE GATEWAY WITH ANALOG VOIP

The Allied Telesis AT-iMG616BD-R2 gateway is a new member of the iMG600 Series, providing enhanced performance for routing and NAT traffic management.

2002/95/EC
RoHS COMPLIANT

The Multiservice Gateway

The AT-iMG616BD-R2 intelligent Multiservice Gateway is the ideal FTTH customer premise equipment for the delivery of communications and entertainment services, including carrier-class telephony, high-speed Internet access, IP television, and interactive, two-way video-based services. All of these services are provided over an active optical distribution network via a single optical fiber 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, VoIP, IPTV and Video on Demand in a scalable way with complete remote management. End-users benefit by having a unique device interconnecting all peripherals, computers, wireless devices, analog and VoIP telephones to a single broadband uplink.

Voice over IP

The AT-iMG616BD-R2 offers two FXS ports, leveraging SIP and MGCP VoIP protocols, with interoperability established with major softswitch vendors. The iMG600 Series supports the connection of modems and faxes to voice interfaces for business applications in SoHo environments. VoIP QoS is assured through Type of Service bits (ToS), and IEEE 802.1p priority tagging. The addition of silence suppression and

Key Features

» Bi-directional fiber WAN interface
» 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
» Intrusion Detection System: DoS, port scanning and Web spoofing protection
» AlliedView NMS support
» RoHS compliant

local generation of comfort noise results in excellent voice quality.

IP Television

The iMG600 Series is optimized for IP video streaming. The iMG "snoops" IGMP packets in transit allowing simultaneous delivery of different multicast transmissions such as different movies or TV channels. This enables multiple high-quality, high bit-rate video streams without impacting data traffic or IP telephony while delivering the fast channel change that users expect from video services. MPEG video service management and diagnosis is possible through dedicated commands and video quality can be monitored using a unique Allied Telesis MPEG stream monitoring tool.

Data Delivery and Security

The iMG600 Series supports industry-leading Quality of Service (QoS) through ISO Layer 2 and 3 prioritization techniques including priority tagging with IEEE 802.1p, Type of Service and DSCP fields. The extensive support for per-port rate-limiting in the iMG600

Series enables service providers to deliver tiered data services for the wide spectrum of end customer profiles, providing maximum flexibility in service differentiation. Security is assured by an integral Stateful Inspection Firewall with NAT and an Intrusion Detection System (IDS) to protect end-user networks from Denial of Service (DoS), port scanning and Web spoofing.

Management and Deployment

The iMG600 Series is designed to be easy to deploy and manage. With the AlliedView™ NMS software platform, the iMG600 Series can be remotely provisioned and managed.

Optical WAN Interfaces

The AT-iMG616BD-R2 offers single-strand (bi-directional) optical fiber links for FTTH application. The independent passive unit (AT-iMG001), 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.

Specifications

Hardware
6 x 10/100TX ports (RJ-45)
2 x VoIP FXS ports (RJ-11)
1 x console port
1 x 100BX single-strand single-mode (simplex-SC)

Optical Interfaces
IEEE 802.3ah 100BX-U single-strand single-mode
   (simplex SC): TX 1310 nm ; RX 1550 nm

Max sensitivity	-32 dBm
Max input power	-3 dBm
Max output power	-5 dBm

Ethernet
Layer 2 wirespeed packet switching
Tag-based IEEE 802.1Q VLANs (max 16)
IEEE 802.1Q tag insertion and stripping
Port mirroring of ingress/egress traffic
DHCP client, server and relay
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
RIPv1 and v2
IGMPv2
IGMP snooping
IGMP proxy

Security
NAT
Stateful Inspection Firewall
Dynamic port opening
Intrusion detection and blocking system
Access Control List
IPSec/VPN passthrough
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.729 8kbps
G.726 32
G.168 echo canceller
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 transfer
Call forwarding (unconditional, on busy, on no answer)
Call waiting
Call hold
Message waiting
3-way call (local RTP MUX)
DTMF relay
RFC 2833

Management
AlliedView NMS
Telnet
Remote software upgrade
Web GUI
CLI
SNMPv1, v2 and v3

Status LEDs
Power

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

Memory

RAM	32MB
Flash	8MB

Power Characteristics
External power supply

Input	100-240V AC, 50-60 Hz
Output	12vDC, 1.5A
Typ. power consumption	13W

Environmental Specifications

Operating temperature	0ºC to 40ºC (32°F to 104°F)
Max operating humidity	80% relative humidity (non-condensing)
Storage temperature	-20ºC to 70ºC (-4°F to 158°F)
Max storage humidity	95% relative humidity (non-condensing)

Physical Characteristics

Dimensions (W x D x H)	24 cm x 15 cm x 4.5 cm (9.4 in x 5.9 in x 1.8 in)
Weight	400 g (14.1 oz)

Approvals and Certifications
CE and UL marking

Safety	IEC/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-iMG616BD-R2-xx
Active Ethernet intelligent Multiservice Gateway
» WAN 100BX (100M single BiDi fiber)
» LAN 6 x 10/100TX
» VoIP 2 x FXS

AT-iMG616BD-R2-BN-xx
Active Ethernet intelligent Multiservice Gateway
» WAN 100BX (100M single BiDi fiber)
» LAN 6 x 10/100TX
» VoIP 2 x FXS
» Includes passive wall outlet (AT-iMG001)

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

Options
AT-iMG001
Fiber outlet with locking mechanism (10 pieces)

AT-iMG008-xx
Battery backup

AT-iMG009
Battery backup cable

AT-RGCONSOLECABLE
Console cable