



AT-iMG646BD

Ethernet intelligent Multiservice Gateway

AT-iMG646BD

6 x 10/100TX LAN ports, 4 x FXS ports,
1 x 100BX, SC/UPC fiber WAN port

Efficient Delivery of IP Triple Play Services is Possible with the High Capacity VoIP, Video and Data Platform for Single Fiber FTTx Deployments

Allied Telesis' AT-iMG646BD intelligent Multiservice Gateway is the ideal CPE element of a CPE solution for the delivery of new revenue-generating IP Triple Play services over bi-directional FTTx presenting the greatest number of user connectivity ports of our range.

Applications

Capitalizing on Existing Infrastructure

The AT-iMG646BD offers a bi-directional optical interface over a single fiber allowing efficient use of fiber for new infrastructures and doubling of capacity for existing dual-fiber installations. The increase in density of fibers at aggregation points delivers economies of scale in cabinet space and cost of deployment. The simple termination of a single fiber at the customer premise with the AT-RG002 faceplate and associated splicing kit saves time in deployment of new fiber estates and upgrading existing ones to accept the feature benefits of the AT-iMG646BD.

Software Real-time Applications Optimization

Quality of Service

This is provided within the AT-iMG646BD through ISO Layer 2 and 3 prioritization techniques including priority tagging with IEEE 802.1p as well as Type of Service (ToS).

Optimization for IP Video Streaming

The AT-iMG646BD 'snoops' IGMP packets in-transit allowing simultaneous delivery of different multicast transmissions such as different movies or TV channels. This results in high quality, high-bandwidth multiple video streaming without impacting Internet browsing or IP telephony while 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 can be monitored using the unique MPEG stream monitoring tool.

IP Telephony

The AT-iMG646BD offers 4 FXS interfaces leveraging the Voice over IP (VoIP) protocols such as: H.323, SIP and MGCP and offering the greatest number of FXS ports of Allied Telesis' entire iMG range to date. VoIP interoperability has been established with major softswitch vendors. The AT-iMG646BD allows the connection of modems and faxes to voice interfaces for other business applications in SoHo environments.

Data Delivery and Security Differentiated Bandwidth Internet Services

The AT-iMG646BD 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-iMG646BD 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.

Key Features

- Up to 100Mbps bandwidth delivery
- Small footprint at customer site
- Innovative two-part case - easy to deploy
- IP Triple Play ready
- Stateful Inspection Firewall / NAT for security of customer and provider
- Single bi-directional fiber presentation drives resource efficiencies and reduces deployment cost (CAPEX and OPEX savings)
- 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



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Management

Easy to Deploy and Manage

Fiber-To-The-Home (FTTH) with the AT-iMG646BD 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-iMG646BD is designed to be easy to deploy and manage. With the Zero Touch Configurator (ZTC) software platform, the AT-iMG646BD can be provisioned and managed remotely. 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

6 x 10/100TX (RJ45)
4 x VoIP FXS ports (RJ-11)

WAN Ports

100FX single-fiber (BX, SC/UPC)
TX 1310 nm, RX 1550 nm
Range 15 Km
Power budget 17 dB

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 8-32m/sec
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
RTP voice packet encapsulation

VoIP Protocols

H.323 3.0
SIP 2.0
MGCP/NCS 1.0

Layer 2 Operation

Layer 2 wirespeed 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

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

Technical Specifications

Power Characteristics

External power supply
Input 12VDC, 1.5A
Power consumption 10W (typical), 18W (max)

Environmental Specifications

Operating temperature 0°C to 40°C
Storage temperature -20°C to 40°C
Operating humidity 5% to 80% RH

Physical Characteristics

Dimensions 24cm x 15cm x 6cm
(W x D x H) (9.4" x 5.7" x 2.4")
Weight (Gateway only) 0.91b (0.4kg)
Weight (Gateway & Base) 1.41bs (0.64kg)

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
v1,v2,v3
SNMP
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 UL60950-1,
CAN/CSA-C22.2 No. 60950-1-03,
EN60950-1, EN60825-1
Emission FCC Part 15 Class B, EN 55022 Class B
Immunity EN 55024

Warranty

Two years

Ordering Information

AT-iMG646BD-xx (990-001152-xx)
6 x 10/100TX LAN ports, 4 x FXS, 1 x 100BX,
SC/UPC fiber WAN port, 1 x Console port
Include fiber outlet with locking mechanism

Where xx = 00 for no power cord
10 for U.S. power cord
30 for U.K. power cord
50 for European power cord

Options

AT-iMG006G-xx (990-002154-xx)
Battery backup

AT-RG008-00 (990-000396-00)
Battery backup cable

AT-RGCONSOLECABLE (990-011748-00)
Console cable

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