

Residential Gateway

RG600 Series Residential Gateway

AT-RG613

Broadband Residential Gateway

AT-RG623

Broadband Residential Gateway

The residential gateway

The RG600 series is a new family of residential gateways from Allied Telesyn, an evolution of the successful RG200 series. It adds powerful Layer 3 capabilities as well as enhances VoIP features set.

VLAN operation with integral 4 x 10/100Mbps switch (1 x WAN, 3 x LAN)

The RG600 series supports up to 16 IEEE 802.1Q tagged VLAN operation across its 4 x 10/100Mbps switch ports. Hence, it offers a potent combination of wirespeed Layer 2 switching between VLANs as well as high performance Layer 3 routing between VLANs in one highly cost effective unit.

Firewall

The RG600 series has an integral Stateful Inspection Firewall with NAT and Denial of Service intrusion detection and blocking for protecting customer networks. Each VLAN can be configured to be external, internal or DMZ. With the Virtual Server features, a web or e-mail server can sit beyond the NAT and appear like being on the public interface. The RG600 series NAT supports the most popular protocols and applications including NetMeeting (H.323 and SIP), IPSec and PPPtp.

Port rate limiting

The RG600 series offers the possibility to limit the egress and ingress bandwidth on each port and queue with a granularity of 32kbps. This feature allows the Service Operator to offer differentiated services to each customer and protect its network from malicious packet flooding.

Voice over IP (VoIP)

The RG600 series offers a choice of Voice over IP signaling methods, namely H.323, SIP and optional MGCP including NCS 1.0 profile. H.323 provides compatibility with existing H.323 services (e.g. Microsoft NetMeeting) while SIP and MGCP are newer protocols, optimized for operation over IP networks. This multiple protocol support provides maximum flexibility for service providers, allowing them to provide an IP telephony service based on cost and feature set, rather than being limited by the protocol used.

Similarly, a choice of different voice and data encoding algorithms is also available comprising G.711 A-law, μ -law (64kbps), G.729 (8kbps) and T.38, so that maximum VoIP interworking is assured with carrier class IP Gateways and network switches. Quality of Service is provided through mechanisms such as the Type of Service (ToS) field in the IP packet, priority tagging of voice traffic using IEEE 802.1p, as well as silence suppression and local generation of comfort noise – the result is excellent voice quality. The RG600 series allows the connecting of two standard analogue phones, modems or faxes.



Key features

- Tagged based VLAN (IEEE 802.1Q)
- Layer 2 and Layer 3 QoS
- IGMP Snooping and Proxying
- PPPoE protocol support
- UPnP IGD profile support and NAT traversal
- DHCP client, server and relay support
- Stateful Inspection Firewall
- Network Address Translations (NAT)
- H.323, SIP or MGCP
- VoIP protocol support
- G.711, G.726, G.729
- T.38 fax operation
- External Power Supply
- External Battery Backup support
- ZTC, Web GUI, SNMP, serial and telnet CLI for management and configuration

RG600 Series Residential Gateway

Video streaming

Video Streaming offers unique features to optimize the delivery of Video contents to customers, namely VLAN, IGMP snooping and proxying. The RG600 series supports full IGMP snooping capability (v1/v2) and individual LAN ports can receive different multicast transmissions e.g. different movies or TV channels. The RG600 series 'snoops' IGMP packets in-transit, so it knows which port to forward the particular multicast data to. This results in high-quality, high bandwidth video streaming without affecting Internet surfing or IP telephony on adjacent ports. The RG600 series supports IGMP proxying to allow forwarding of multicast packets at Layer 3 with or without NAT.

Management & configuration

The RG600 series is designed for high volume deployment, this is reflected in the Zero Touch Configurator (ZTC), whereby no user intervention is required when installing a unit. ZTC is a distributed configuration system based on the industry standard Lightweight Directory Access Protocol - LDAP. ZTC provides intelligent and automatic configuration of remote RG units. It analyses incoming status information from each RG unit and dynamically creates the appropriate configuration file or operating system download as required, it then selects the appropriate download mechanism (e.g. TFTP, HTTP, HTTPS etc.) to complete the process. The ZTC client in the RG initiates the download process on power up, or on expiry of its DHCP lease timer. ZTC provides secure authentication of client devices, resilience through distributed server operation and in-built scalability for very large networks.

The RG600 series also offers the following conventional management and configuration interfaces:

- Local console port (using Command Line Interface)
- Telnet (using Command Line Interface)
- SNMP v1/v2

About Allied Telesyn

Allied Telesyn leads the world in network technologies for the access edge. Since the company's inception in 1987, Allied Telesyn has been developing IP-based network products for use in video, voice and data networks at the metro edge, in education, government agencies and across the enterprise. Allied Telesyn's access, aggregation and core transport technologies range from simple Ethernet adapters, hubs and media converters to robust multi-layer Gigabit Ethernet switches and routers, wireless systems, DTM and WDM transport solutions for delivering real-time video, voice and data. Allied Telesyn's comprehensive support and professional service programs are suited to meet the growing demands of today's switched broadband infrastructures.

Service & Support

Allied Telesyn provides value-added support services for its customers under its Net.Cover® programs. For more information on Net.Cover® support programs available in your area, contact your Allied Telesyn sales representative or visit our website.

www.alliedtelesyn.com



Only nature can do better

RG600 Series, Residential Gateway

SPECIFICATIONS

USER'S PORTS

3 10/100TX (RJ45)	RG613TX/SH/LH/BD RG623TX/SH/LH/BD2
VoIP FXS ports (RJ-11)	RG613TX/SH/LH/BD1
VoIP EuroISDN LT-S BRI	RG623TX/SH/LH/BD

WAN

10/100TX (RJ45)	RG613TX / RG623TX
100FX Multi-Mode (SC)	RG613SH / RG623SH
100FX Single-Mode (SC)	RG613LH / RG623LH
100FX Single-Fiber (SC)	RG613BD / RG623BD

VoIP PROTOCOLS

H.323 3.0
SIP 2.0
MGCP/NCS 1.0

VoIP PORTS

G.711 a-law and _-law 64kbps
G.729 8kbps
G.726 16/24/32/40kbps
G.168 LEC 8-32 msec
T.38 Fax Relay
Automatic Fax/Modem Detection
Voice Activity Detection (VAD)
Comfort Noise Generation (CNG)
Caller ID
Error Mitigation/Bad Frame Interpolation
Adaptive jitter buffer
2 REN
RTP voice packet encapsulation

LAYER 2 OPERATION

Layer 2 wirespeed packet switching
IGMP v1/v2 Multicast Support
Tag based IEEE 802.1Q VLANs (16 max.)
IEEE 802.1p prioritisation
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 & 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
RIPv2

MANAGEMENT

Zero Touch Configurator
Local console port
Telnet
Remote Software Upgrade
DHCP
Web GUI

STATUS LEDS

Power
System
POTs Use/Ready/Ringing
WAN Link/Activity
LAN Link/Activity

POWER CHARACTERISTICS

External Power Supply
Input 12VDC, 1.5A
Power Consumption 10W

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature 0 °C to 40 °C
Storage Temperature -10 °C to 70 °C
Operating Humidity 5% to 85% RH

PHYSICAL CHARACTERISTICS

AT-RG613SH/LH / AT-RG623SH/LH
Height 14.4cm
Depth 5cm
Width 23.5cm
Weight 0.45kg

AT-RG613TX / AT-RG623TX
Height 14.4cm
Depth 5cm
Width 23.5cm
Weight 0.45kg

PROTOCOL & STANDARDS

IPv4 RFC791
TCP,UDP RFC1144
IGMP (v1/v2) RFC1112, 2236
PPPoE RFC2516
PAP RFC1334
CHAP RFC1994
NAT RFC1631
DHCP RFC2131
H.323 4.0
SIP 2.0 RFC3261
MGCP/NCS 1.0
IEEE 802.1p/Q, IEEE 802.1d
IEEE 802.2, IEEE 802.3x
SNMP v1
G.711, G.726, G.729
RTP/RTCP
TFTP RFC1350
Telnet RFC318
ARP RFC826

APPROVALS

CE Marking
Safety EN 60950
CSA 950/US
UL 1950
Emission FCC Part 15
Class B Part 68
EN55022 Class B
EN55024
Immunity EN55024

WARRANTY

2 years

Ordering Information

AT-RG613TX-XX

Residential Gateway 100TX WAN Port, 2 x FXS

AT-RG613SH-XX

Residential Gateway 100FX WAN Port, 2 x FXS

AT-RG613LH-XX

Residential Gateway 100LX WAN Port, 2 x FXS

AT-RG613BD-XX

Residential Gateway 100BD WAN Port, 2 x FXS

AT-RG623TX-XX

Residential Gateway 100TX WAN Port,
1 x ISDN LT-S BRI

AT-RG623SH-XX

Residential Gateway 100FX WAN Port,
1 x ISDN LT-S BRI

AT-RG623LH-XX

Residential Gateway 100LX WAN Port,
1 x ISDN LT-S BRI

AT-RG623BD-XX

Residential Gateway 100BD WAN Port,
1 x ISDN LT-S BRI

Where xx = 10 for U.S. power cord
20 for no power cord
30 for U.K. power cord
40 for Australian power cord
50 for European power cord

AT-RG001 (10 PIECES)

Fibre Outlet

AT-RG005

Battery Backup

AT-RG006

Battery Backup Cable

AT-RGCONSOLECABLE-00

AT-RG010

Fibre Outlet kit
SM fusion splice

AT-RG011

Fibre Outlet kit
MM fusion splice

AT-RG012

Fibre Outlet kit
MM single-fiber fusion splice

AT-RG020

Fibre Outlet kit
SM mechanical splice

AT-RG021

Fibre Outlet kit
MM mechanical splice

AT-RG022

Fibre Outlet kit
single-fiber fusion splice



Only nature can do better

European Headquarters | Via Motta 24 | 6830 Chiasso | Switzerland | T: +41 91 69769.00 | F: +41 91 69769.11

www.alliedtelesyn.com

© 2004 Allied Telesyn International Corp. 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.

Part Number 617-001TU-05 Rev. C

 Allied Telesyn