

# ADSL2+/VDSL2 Residential Gateway SGA-230

| 4 Base TX Ethernet ports | ADSL2+ | 802.11n | VDSL 2 | 2 FXS | 1FXO

## ADSL2+/VDSL2/Wireless n VoIP Gateway



conditions on the local loop then offer excellent performance over noisy line. To benefit users' access to the Internet, 4- RJ-45 10/100 base-TX Fast Ethernet switch hub is equipped with this wireless VDSL2/ADSL2+ IAD.

A Fast Ethernet is available on the LAN side, supporting speeds up to 100 Mbps, the IAD can surf at very high speeds which allow you to watch online videos, download huge files and use a large amounts of data within your home network. Also the feature-rich routing functions are seamlessly integrated to VDSL2 service.

The Gateway complies with TR69 standard to ease software management capabilities and to monitor performance reducing your support costs.

**Home Networking** 

Set-top box

Smart grid

Access Gateways

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### **SGA-230**

#### | 4 LAN Fast Ethernet ports | ADSL2+ | VDSL2 | VOIP

#### **SPECIFICATIONS**

#### Hardware

- Wi-Fi 80.11 n on board and 2 x 2dbi internal antennas
- 4 ports RJ-11 (1 WAN for ADSL2+ or VDSL2, 1 FXO, 2 FXS for VolP phone calls)
- 4 ports RJ-45 10/100 base T autosensing and auto-crossover switch
- 2 USB HOST ports
- Factory default reset button
- WPS push button
- WLAN ON/OFF push button
- Power ON/OFF button
- ITU-K21 (basic)
- Dimensions : 238 x 176 x 40 mm (LxW x H)
- Operating Temperature:  $0 \sim 40^{\circ}\text{C}$  (32 105F°) Operating Humidity:  $20 \sim 90\%$  (non-condensing)
- AC voltage Input : 100V-240V± / 10% Output: DC 12VDC

#### **DSL Compliance**

Support VDSL2/ADSL and ADSL2/ADSL muli mode standards

- Full rate ANSI T1.413 issue 2
- G.dmt (ITU G.992.1) Annex A,B
- G.lite (ITU G.992.2) Annex A, B
- G.hs (ITU G.994.1)

Maximum rate: 8 Mbps for downstream / 1 Mbps for upstream

#### Compliant with ADSL2 Standard

- G.dm.bist + A196 (ITU G.992.3) Annex A,B, M(
- G.lite.bis (ITU G992.4) Annex A,B,M

Maximum rate: 12 Mbps for downstream / 1 Mbps for upstream

#### Compliant with ADSL2+ Standard

G.dmt.bisplus (ITU G992.5) Annex A,B

Maximum rate: 24 Mbps for downstream / 1,2 Mbps for upstream

#### Compliant with VDSL2 Standard

- VDSL2 (ITU G993.2) Annex A,B
- Up to 17 Mhz profile (POTS or ISDN)
- Support VDS2 profile 8a,8b,8c,8d,12a,12b,17a
- Support ATM and PTM transparent (dual-priority & dual latency) for user data
- Dying gasp

#### Management

- Web-based GUI for remote and local management
- Telnet /SSH for remote and local management
- Configuration Backup and Restoration
- Firewall loging and Syslog support
- Firmware upgrade through TFTP/FTP and HTTP
- Support RM on: TR-064 / TR-068 / TR-069 / TR-098 / TR-111
- Diagnostic features (DSL, OAM, Network, Ping Test

#### **ATM Features**

- Multi Protocols over AAL5 (RFC 1483/2684)
- VC and LLC Multiplexing
- Support up to 8 PVCs
- Traffic Shaping (ATM QoS)
- OAM F4/F5 loop-back, AIS, and RDI OAM cells
- UNI 3.1/4.0 Permanent Virtual Circuits
- VPI range  $0\sim255$  / VCI range  $1\sim65535$
- PVC statistics

#### **Security Features**

- Firewall features / Stateful Packet Inspection
- Demilitarized zone (DMZ)
- IP packet filtering (IP address/Port number/Protocol)
- Bridge packet filtering
- DoS (Deny of Services) which detect & protect a number of attacks (such as SYN/FIN/RST Flood, Smurf, WinNuke, Echo Scan, Xmas Tree Scan,...)
- Parental control supported through an external server (optional)
- Time Schedule control restriction configuration
- Vpn pass through

#### **Wireless LAN**

- Compliant wih IEEE 802.11a, 802.11b, 802.11g, and IEEE 802.11n standards
- Operating frequency: 2.4 GHz or 5 GHz
- Up to 300 Mbls wireless operation rate
- RF Output Power: 15 ± 1.5 dBm in 2.4 GHz
- 64/128 bits WEP supports for encryption
- Wireless security with WPA/WPA-PSK, PA2/WPA2-PSK, Mixed WPA/WPA2 support
- 802.1x radius supported
- WPS (WiFi Protected Setup) for easy setup
- Access Control function
- Multiple SSIDs up to four
- Wireless QoS (WMM)
- WMM U-APSD power saving mode

#### Networking

- Network Address Translation (NAT) with ALGs and Port Address Translation (PAT)
- Port Forwarding
- Universal Plug and Play (UPnP) IGD with nat Traversal capability
- Domain Name System Relay (DNS)
- Dynamic Domain Name System (DDNS)
- 802.1D MAC address learning
- RIP V1 / V2 (optional)
- DHCP Client/Relay/Server
- **IGMP Proxy**
- IPSEC-NATt (NAT Traversal) supported
- IP/Bridge QoS
- 802.1Q VLAN Tagging
- IPv4 / IPv6 ready / Dua stack (IPv4-IPv6)
- IPTV application supported : IGMP Snooping v1,v2 (layer 2), IPTV bridge and routing mode accepting

#### **Quality of Service (QoS)**

- ATM QoS: UBR, CBR, VBR-rt, VBR-nrt. Shapping queuing & scheduling. CLP tagging
- Ethernet QoS : 802.1p. Priority or C-VLAN/S-VLAN + tagging. Support queuing &
- IP QoS: ToS, DSCP. Flexible classification. IP rate .DSCP marking. TCP/ACK optimization
- Wireless QoS: WMM. BEBK, VO access queing & Scheduling.

#### **Voice over IP Features**

- Telephony Features: outgoing, incoming, silence suppression, Voice Activity, Detection (VAD), Comfort Noise Generation (CNG), G.168 echo cancellation, packet loss concealment, Call Waiting, Call Transfer, Call Hold, Call Forward, Speed Dial, Do Not Disturb (DND), Caller ID, Call blocking, 3-way conference\*
- Call Control: support SIP (RFC3261)
- Voice Transport: compliance to RTP (RFC1889)
- Voice Codec: G.711 A/µ law,G722, G722.2, ,and G.729A/B T38 (optional)
- Tone/Ring Signal: North America, ETSI (General Europe), UK, Netherlands, Japan, China, Sweden, Belgium, France, Germany, Switzerland
- Tone Generation: support dial tone, ring back tone, busy tone, ring tone
- Tone Detection: DTMF
- FAX Transmission: G.711 passthrough RFC2833 RTP Payload
- Configurable Dial Plan
- **Echo Cancellation** FXO failover



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