

# NVG578LX GPON Gateway

Onboard GPON optics up to 2.5Gbps with Wi-Fi 6



## FEATURES

- High-quality, cost-effective GPON gateway in an all-in-one design.
- GPON interface up to 2.5Gbps downstream, 1.25Gbps upstream
- High-speed home network connectivity: Wi-Fi 6 and 4-port Ethernet switch with 1 x 2.5GigE (WAN/LAN) ports and 3 x 1 GigE (LAN) ports.
- Supports triple-play services: data, VoIP and IPTV video optimization
- USB3.0
- HomeAssure® Wi-Fi Management capable for smart whole-home Wi-Fi optimization
- Docker® container support for simplified services deployment
- IPTV video optimization

## PRODUCT OVERVIEW

The ARRIS NVG578LX home gateway enables a cost-effective way for Service Providers to move consumers to higher service tiers, using 2.5Gbps GPON, with WAN and LAN technology in a single device. It is designed to deliver the full 2.5Gbps broadband speed around the home, with 2.5Gbps Ethernet LAN and high-performance Wi-Fi 6. The gateway enables reliable, single-platform delivery of voice-over-IP (VoIP), data, and broadcast-quality streaming video.

The gateway delivers high speed broadband services via on-board GPON optics (up to 2.5/1.25Gbps) or a 2.5Gbps Ethernet WAN interface. These are supported with a non-blocking core routing capability powered by ARRIS 9.x Firmware.

This connectivity is complemented by equally high-speed local area networking:

1 x 2.5Gbps (WAN/LAN) and 3 x 1Gbps (LAN) Ethernet ports.

Dual-band Wi-Fi 6, 3x3 2.4GHz and 4x4 5GHz.

It is capable of being part of a HomeAssure Wi-Fi Management solution for optimized, whole-home Wi-Fi delivery.

ARRIS 9.x Firmware includes advanced Quality of Service (QoS) features, security firewall, extensive remote management features, Deep Packet Inspection (DPI), and Docker® support for 3rd party applications.



**HomeAssure WI-FI Management capable**

HomeAssure delivers optimized, high-performance Wi-Fi to every corner of the home while providing ease of use for the consumer and reduced OPEX costs for the service provider. An NVG578LX enabled with the HomeAssure client may be managed from the HomeAssure Cloud for intelligent analytics and support for the operations team and help-desk. The HomeAssure client may control multiple Wi-Fi Extenders to deliver improved coverage and automated network optimization. A consumer app simplifies installation and enables the customer to manage and diagnose their own network.

**Service Assurance**

The ARRIS 9x Gateway software is a mature, stable and secure platform the delivery of advanced services, it is widely deployed in tier-1 service providers. ARRIS designs its gateways to be remotely manageable for reduced support costs. The NVG578LX Gateway is interoperable with any ACS solution that follows the Broadband Forum’s TR-069 specification, with extensive data model extensions added for increased control and status visibility.

**A platform for advanced services**

The 9x software supports Docker® containerization for accelerated application development and deployment.

**GENERAL SPECIFICATIONS**

**Interfaces**

WAN	GPON 2.5/1.25Gbps optics Compliant ITI-T G.984.2, Class B+ GPON interoperability with all main OLT vendors 2.5Gbps Ethernet WAN/LAN port, RJ-45
LAN	Concurrent Wi-Fi support for 802.11b/g/n/ac/ax Three x 10/100/1000 Ethernet ports, RJ-45 USB3.1 interface Type A Two FXS voice ports, RJ-11

**Embedded Firmware, Encoding and Access Protocols**

IP Addressing and Routing	IPv4, IPv6 / 6rd DHCP server DNS proxy, dynamic DNS support Multiple subnet support
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**Embedded Firmware, Encoding and Access Protocols (continued)**

Traffic Management (Quality of Service)	Network Address Port Translation (NAPT) Application Level Gateway (ALG) support IP maps (pinholes) Diffserv QoS with Weighted Fair Queuing IGMPv2, IGMPv3 with Fast Leave IEEE 802.1P/Q VLANs DSCP setting for SIP/RTP Speed Test Deep Packet Inspection (DPI)
Security	Stateful packet inspection firewall Virtual DMZ/IP pass-through Denial of service (DoS) protection VPN pass-through (PPTP, L2TP, IPSec)
Device Management	Password protected access, statistics, and log reporting
Remote Management	TR-069/TR-098/TR-181, TR-104, TR-111, TR-143, TR-157, WebUI, SSH
Local Management	TR-064, UPnP, WebUI, SSH, captive portal
Utilities	Ping, traceroute, reverse DNS, NTP, diagnostics Docker® container support

**Wi-Fi Features**

Concurrent Wi-Fi	802.11 b/g/n/ac/ax
Wi-Fi Characteristics	2.4 GHz 3x3 support, 5 GHz 4x4 support, 5 GHz UNII bands (5.15-5.35GHz, 5.470-5.725GHz and 5.725 – 5.850 GHz bands) 20 MHz, 40 MHz, 80 MHz bandwidths supported
Wi-Fi Features	Multiple BSSID (unique authentication per SSID) Wi-Fi Protected Setup (WPS) Wi-Fi Multimedia (WMM), WMM-PS (power save) Transmit power control HomeAssure and Wi-Fi EasyMesh™ Ready
Wi-Fi Security	WPA, WPA-PSK, 802.11i/WPA2, WPA2-PSK, WPA3, EAP-TTLS MAC address filtering

**Voice Features (optional)**

General Voice Features	SIP v2 call, SIPv2 call control DNS SRV, A records re-registration with primary SIP proxy server Geo-Redundancy—DNS SRV, A records Flexible dial plan support Hook flash event signaling RTP audio transport RFC2833 RTP payload, SIP INFO and InBand DTMF mode
Voice Audio Codecs	G.711 (a-law and u-law), G.729a and G.726 (16, 24, 32, 40 kbps) AMR (narrowband) Adaptive jitter buffer PLC—(G.711 Appendix I and Frame repeat) VAD (voice activity detection) with silence suppression and comfort noise generation G.168 network echo cancellation G.167 acoustic echo cancellation

**Voice Features (continued)**

FAX Relay Protocols Compliance	T.38 pass-through and over IP Fax/modem detection control, T.38 (IP) compliant Group 3 and SG3 fallback to Transport T.30, V.34 fax and modem bypass (automatic fallback to G.711) support
CLASS Calling Features	Call Waiting; Call Hold; Call Resume; Call Forward Unconditional; Call Forward on Busy; Caller ID; 3-Way Conference; Call Consultant; Call Transfer and network-initiated class services—MWI messaging, VMWI via FSK

**Regulatory Compliance**

General	K.21 Basic
Europe	IEC 62368-1 (Safety) 2014/53/EU (RED) 93/68/EEC (CE Marking Directive) 2014/35/EU (Low Voltage Directive) 2014/30/EU (EMC Directive) EN55032 (Emissions) EN55024 (Immunity) EN300328 (Electromagnetic compatibility and Radio spectrum Matters, 2.4 GHz) EN300386 (Electromagnetic compatibility and Radio spectrum Matters, Telecommunication Network Equipment, EMC) EN301489-1 (Electromagnetic compatibility and Radio spectrum Matters, EMC, Part 1) EN301489-17 (Electromagnetic compatibility and Radio spectrum Matters, EMC, Part 17) EN301893 (Broadband Radio Access Networks, 5 GHz)
North America	UL 60950, CUL, CSA FCC Part 15 Class B Subparts B, C and E, ICES-003 FCC Part 68, CS-03 CEC compliant

**Environmental Specifications**

Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-40°C to 60°C (-40°F to 140°F)



## CUSTOMER CARE

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