NVG558 Fixed Wireless Broadband Gateways

LTE or CBRS with 802.11ac/ax Wi-Fi options

FEATURES

- Fast indoor Fixed Wireless Broadband alternative to wireline broadband solutions
- Supports licensed and unlicensed Wireless WAN options including 3.5GHz CBRS and private LTE applications
- Flexible architecture supports dual-band or tri-band 802.11ac or 802.11ax Wi-Fi options
- HomeAssure® capable for smart whole-home Wi-Fi
- Optional IoT service capability
- Docker container support for simplified application deployment
- Optimized for IPTV video triple-play deployments

PRODUCT OVERVIEW

The ARRIS NVG558 series FWB Gateways deliver high speed broadband services over wireless access, with variants that support 4G LTE / LTE-A / LTE-A Pro and 3.5GHz. These multiservice gateways supports HomeAssure® for optimal in-home Wi-Fi performance as well as managed voice, video, data and IoT services.

These devices provide Service Providers with a cost-effective alternative to wireline networks, for example to move consumers to higher service tiers in rural areas or where new cable installation to the premises is required. Wireless access offers lower cost and faster installation time than wired access.

The NVG558 family offers an option for 3.5 GHz Citizen Broadband Radio Services (CBRS) applications for Service Providers. Enterprises may also use these devices on a private CBRS LTE network benefitting from the flexibility, performance and security of their own network.

The WAN connectivity is complemented by high-specification local networking: 1Gbps Ethernet and Wi-Fi, with the option of dual-band or tri-band concurrent Wi-Fi with either 4x4 802.11ac or 4x4 802.11ax. All supported via a 5 gigabit non-blocking core routing capability.

ARRIS 9.x Firmware includes advanced Quality of Service (QoS) features, security firewall, extensive remote management features and Docker support for 3rd party applications. The NVG55x-Series Gateways enable reliable, single-platform delivery of voice-over-IP (VoIP/VoLTE (IR.92)), data, and streaming broadcast-quality video.

ARRIS HomeAssure Capable

The HomeAssure solution delivers high-performance Wi-Fi to every corner of the home via additional Wi-Fi extenders while offering ease of use for the consumer and reduced OPEX costs for the service provider. The NVG558 gateways provides automated network optimization, interworking with the self-configuring extenders, a consumer App and a cloud-management platform for remote management, analytics and help-desk tools.

Service Assurance

The ARRIS 9x gateway software is a widely deployed, mature, secure platform for advanced services. ARRIS designs its gateways to be remotely manageable for reduce support costs. The NVG558 Gateway is interoperable with any ACS solution that follows the Broadband Forum's TR-069/TR-098 specification.

A platform for advanced services

The 9x software supports Docker containerization for accelerated application development and deployment. Hardware and software options are available to support IoT services including ZigBee®, Z-Wave®, and Bluetooth® LE.

Product Variants

The following variants are differentiated by their ability to support LTE or CBRS WAN service:

- NVG558: LTE with either Dual-band or Tri-band Wi-Fi
- NVG558C: CBRS with either Dual-band or Tri-band Wi-Fi

GENERAL SPECIFICATIONS	
Interfaces	
WAN	4G LTE / LTE-A / LTE-A pro / CBRS Internal and external antennas options 1G Ethernet RJ-45 (can be used as LAN)
LAN	Concurrent 2.4GHz and 5GHz Wi-Fi support for 802.11ac or 802.11ax Four-port 10/100/1000 Ethernet switch, RJ-45 Single USB 3.0 network interface Dual-port, dual-line voice FXS, RJ-11 ports Optional IoT radios: ZigBee®, Z-Wave®, Bluetooth® LE or DECT ULE
Embedded Firmware, Encoding and Access Protocols	
IP Addressing and Routing	IPv4, IPv6 / 6rd DHCP server DNS proxy, dynamic DNS support Multiple subnet support

Embedded Firmware, Encoding and Access Protocols (continued)	
Traffic Management and QoS (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-104, TR-111, WebUI, CLI (Telnet), SSH
Local Management	TR-064, UPnP, WebUI, CLI (Telnet), captive portal
Utilities	Ping, traceroute, reverse DNS, NTP, diagnostics. Docker container support

Wi-Fi Features

Concurrent Wi-Fi	802.11 b/g/n/ac or 802.11ax (OFDMA)
Wi-Fi Characteristics	2.4 GHz 4x4, 5 GHz 4x4 High-power design for multi-radio co-location 5 GHz UNII bands (5.15-5.35 GHz, 5.470-5.725 GHz and 5.725 – 5.850 GHz bands) 20MHZ, 40MHz, 80MHz, 160MHz (802.11ax only)
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 capable
Wi-Fi Security	WEP (64-bit, 128-bit, 256-bit) encryption WPA, WPA-PSK, 802.11i/WPA2, WPA2-PSK, EAP-TTLS MAC address filtering

Voice Features

General Voice Features	VoIP/VoLTE (IR92), 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 and Conformance

Europe	2014/35/EU (Low Voltage Directive) 2014/30/EU (EMC Directive) 2014/53/EU (RED Directive) EN62368-1 (Safety) • EN 62368-1 (LVD - Safety) • EN55032 (EMC, Emissions) • EN55024 (EMC, Immunity) • EN 300 386 (EMC) • EN 301 489-1 (EMC, Part 1) • EN 300 328 (RED, 2.4 GHz) • EN 301 893 (RED, 5 GHz) • EN 301 489-17 (RED, pending)
North America	UL/cUL 62368 FCC Part 15 Class B Subparts B, C, and E ISED RSS-GEN / RSS-247, ICES-003
Conformance	ITU-T K.21 Basic (optional K.21 Enhanced)

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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