QNAP

QHora-301W

Next-Generation Wi-Fi 6 Dual 10GbE SD-WAN Router

10GbE 2x10GbE

SD-WAN Ready

WI-FI 6 Wifi 6 Ready

First Step Towards Next-Generation Networking

The QHora-301W is a fast, easy-to-use and class-leading router that provides small/medium branches and home offices with flexible WAN and LAN configuration, advanced security options, and multiple data, voice and high-resolution video streams. It can connect to a large number of devices such as computers, IP telephony, Internet appliances and smart devices with fast and reliable connections.

Dual 10GbE High Speed Routing

Supports high-performance layer-3 routing, delivering up to 9.7Gb/s over 10GbE. Users can choose the option of two WAN interfaces for Internet fail-over and load balancing. With two 10GbE ports, it is ready for multi-Gb/s Internet connectivity and high-speed LAN applications by connecting to a 10GbE NAS.

Wi-Fi 6 AX3600

Supports up to 3600Mb/s with 160MHz channels, and provides a wide coverage range with a fine-tuned broadcast pattern using internal Wi-Fi antennas. The VAP (Virtual Access Point) feature enables up to 6 virtual access points with different SSIDs, serving different groups of users and bridging multiple separated VLAN. With a wall-mountable design, the QHora-301W can be universally deployed (via VESA mount).

Includes QuWAN
Subscription - Free SD-WAN service

QuWAN is a free SD-WAN service that enables IT staff to provide fast, easy VPN tunneling and policy-based routing. QHora-301W local networks can be quickly connected to a central VPN without configuring VPN settings on each device. Every QHora-301W network can be managed using the centralized cloud management (QuWAN Orchestrator) and network policies can be deployed whenever a new branch is added or a rule change is required. The WAN of each remote site can be centrally managed, configured and monitored without involving onsite IT staff. ***

Ultimate Powerful Performance & Use

High Performance
• Powerful processor - Quad-core processor boosts wireless, wired and WAN-to-LAN performance.
• 1GB RAM - Reliably support more concurrent users.
• 8 internal antennas - High-power amplifiers and antennas provide wide Wi-Fi coverage.
• Fanless and Silent - Maintains consistent system performance within 0-40C operating temperatures.

Wi-Fi 6
• More devices - OFDMA and MU-MIMO allow efficient data transmission at the same time.
• Gigabit speeds - Provides up to 3.6Gbps for boosting bandwidth-demanding applications and services.

Dual 10GbE High Speed Routing
• Dual 10GbE ports - WAN/LAN configurable.
• Connect more devices with up to 9.7Gb/s over 10GbE for fast large file transfers
• Ideal for HD gaming and video.

2 x 10GBASE-T

Powerful QuRouter OS
• Easily set up and monitor your network, including remote access.
• Advanced and flexible network settings.
• Protocol-based firewalls to secure your intranet devices.
• Parental controls to lock out inappropriate usage.
• The QVPN service (including QBelt and L2TP VPN) keeps your remote connection safe.

QuWAN - QNAP's Subscription - Free SD-WAN service
• Network optimization - Internet bandwidth aggregation, failover and load balancing for fast and uninterrupted connections.
• Cloud Managed network - A single portal for multiple device monitoring and organization level policy routing.
• Optimized application performance - Application layer firewalls and Quality of Service (QoS).

QuRouter OS: User-Friendly Router Management

The QHora-301W uses the QuRouter OS, providing a user-friendly web-based GUI, at-a-glance dashboard and port indicators to assist in everyday network management tasks. With the QuRouter OS, not only can users efficiently manage all connected wired and wireless devices in real-time, but they can also configure the firewall, VPN, security and QuWAN advanced functions.
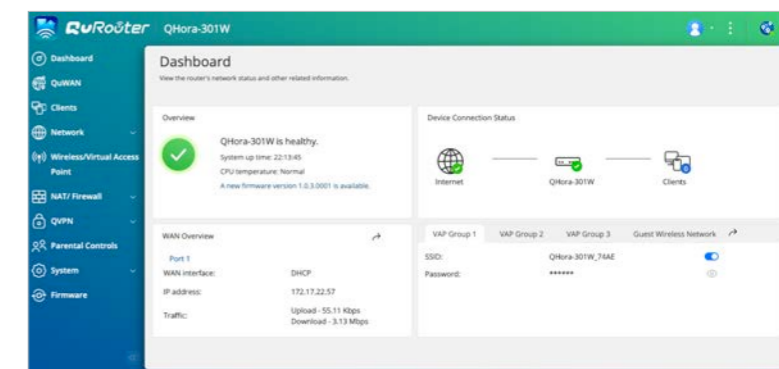
QuWAN – QNAP's Subscription-Free SD-WAN Service

Key to Extend Enterprise Private Network to Business & Home Office Private Network

QNAP's QuWAN SD-WAN solution consists of a cloud-based management platform (QuWAN Orchestrator) and a virtual router which can be setup via the installation app QuWAN vRouter. QuWAN Orchestrator provides a single portal for enabling IT staff to monitor, configure and troubleshoot organization-wide network devices, greatly boosting network management efficiency.
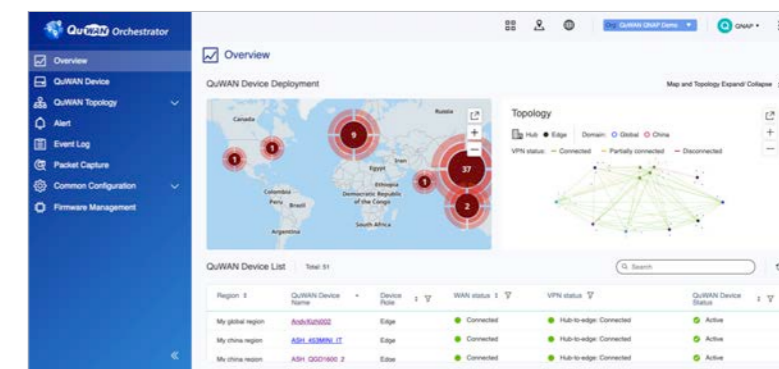
QuWAN can be easily set up on various QNAP devices, including the QHora-301W, NAS, QGD switches and QuCPE servers. QuWAN provides flexible network topology, multi-site auto VPN tunneling, WAN optimization and application-based firewalls and QoS. QuWAN enables business and home users to create a dependable network to facilitate digital transformation, multi-site expansion, and remote working. When used with QVPN, remote workers can be easily connected to the QuWAN private network on their PC or mobile device via using the QVPN client. Devices in different locations are flexibly segmented to be connected with each other in a micro-segmented network.

*** 160MHz Wi-Fi channels will be supported from Q4 2020.
*** QuWAN QoS, Inter-domain link, network configuration and segmentation will be supported from Q1 2021.

QuWAN Highlights

Network Optimization
· Flexible Network Topology
  - Mesh VPN
  - Hub & Spoke VPN
· WAN Optimization
  - Aggregate bandwidth using multiple WAN.
  - Provides WAN load balancing using Multi-path TCP technology to intelligently monitor network latency, jitter and packet loss for selecting the best path for each packet.
  - WAN failover ensures uninterrupted business conferencing and streaming services.

· Inter-Domain Link
  To comply with networking regulations in China, users can apply for MPLS from their ISP. This can be added to the configuration in the QuWAN Inter-Domain link for Chinese and Global domains to have VPN connections.

### Cloud managed service via QuWAN Orchestrator
· IT staff can centrally monitor, fine-tune and configure organization-wide networks.
· Easily apply policy and rule changes.
· Supports single sign-on for each branch site.
· Complete logging and reporting to assist future growth planning and purchasing strategies.

Optimized application performance
· Realtime link performance monitoring.
· Application based routing: Bind specific applications to a service class based on required bandwidth or business priorities.
· Layer-7 Firewall.
· QoS and traffic shaping.
· DPI-based application packet detection.

Connection Diagram

DC IN WPS 10GbE (RJ45) 1GbE (RJ45)
USB 3.0
Power
Reset Button WAN Configurable
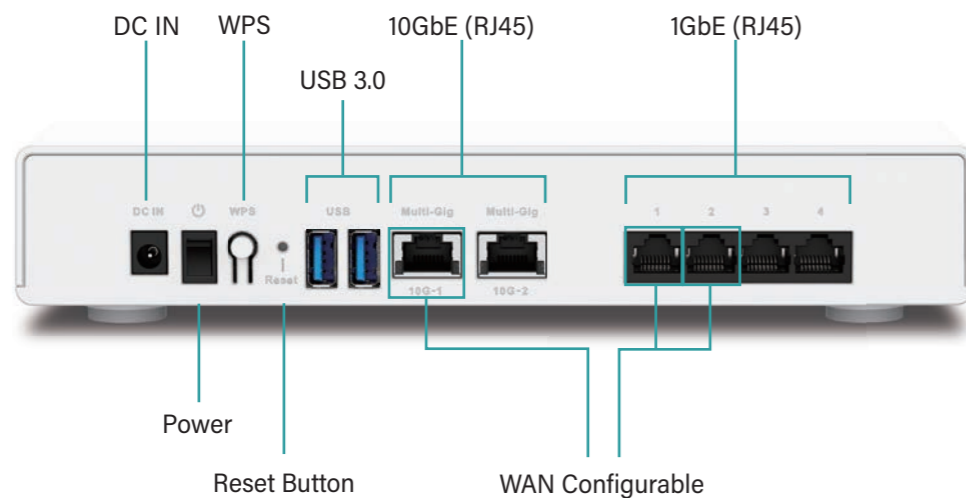
Security

Identity Trust Boundary
· QuWAN Orchestrator access controls use the QNAP Account Center for QNAP ID authentication and organization member authentication.
· The QHora-301 has a local account for access controls.
· QVPN remote access authentication.

Access Trust Boundary
· IP-segmented Layer 3 firewall.
· Application-based layer 7 firewall.

Hardware Specifications

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Interface (RJ45)	4 x RJ-45 1 Gigabit (10/100/1000 Mbps) Ethernet (WAN/LAN) 2 x RJ-45 10 Gigabit (10G/5G/2.5G/1G/100Mbps) Ethernet (WAN/LAN)
Internal Antenna	8 internal 5dBi Antennas
CPU	Qualcomm 8072A Hawkeye2 Quad-core, A53, 2.2GHz
Memory	1GB RAM
Switch IC	QCA8075 5-port + AQR115C
Flash NAND Storage	4GB eMMC
USB	USB 3.0 x 2 (supports storage devices for FTP)
Operating Conditions	Temperature: 0°C to 40°C (32°F to 104°F) Humidity: 10% to 90% (Non-condensing)
Cooling	Fanless
Mount support	75mm x 75mm VESA mount
Operating Conditions	Temperature: 0°C to 40°C (32°F to 104°F) Humidity: 10% to 90% (Non-condensing)
Safety Regulations	FCC, CE RED, RCM, NCC, BSMI, VCCI, IC, JATE, CCC, SRRC

Software Specifications

System Status and Management	・ Device connection status ・ Device health status ・ WAN status ・ Wireless status ・ Firmware schedule management
Operation Modes	・ Wireless router mode ・ Access point (AP) mode
Wired Network Management	・ Recommended WAN port configurations and usage scenarios: 　　- 1GbE-1 port 　　- 10GbE-1 port 　　- 1GbE-1 and 1GbE-2 ports ・ WAN/LAN port configuration ・ Network port connection status ・ IEEE 802.3Q Virtual LAN (Supports wired and wireless connections) ・ IPv4 routing management
Security	・ Protocol-based firewall (TCP, UDP, ICMP, TCP+UDP) ・ Firewall rules based on IP addresses ・ Port forwarding and Network Address Translation (NAT) ・ UPnP
VPN	・ Secure remote access via OpenVPN, L2TP and QBelt (QNAP proprietary) protocols ・ Client IP pool configuration ・ VPN client management ・ Connection logs
Access Control	・ Parental controls ・ Domain Name System (DNS) filtering and content filtering
System Settings	・ Restart, Reset, Backup, Audio Alert ・ Local account, QNAP ID, Remote management ・ USB Settings: FTP Server, Device User, USB usage
QuWAN SD-WAN Service	・ Select organization, region, site, device name and device role ・ Maximum Tunnel Scale 30

Wi-Fi Specifications

Wi-Fi AP (Wi-Fi 6)	Dual-Band 5G (2475Mbps): 4x4 (80MHz), 2x2 (160MHz) 2.4G (1182Mbps): 4x4 (40MHz) AX3600 (2475+1182Mbps)
Wireless Network Management	・ Supports IEEE 802.11ax (Wi-Fi 6) ・ Supports MU-MIMO ・ Supports band steering for dual-band (2.4GHz and 5GHz) access points ・ Transmission power (high, middle, and low) ・ 20/40/80/160 MHz bandwidth ・ Dynamic Frequency Selection (DFS) channels (Auto, custom) ・ RTS/CTS (Request to Send/Clear to Send) function ・ Dual-band 2.4G and 5G settings ・ Guest wireless ・ IEEE 802.3Q Virtual LAN (Supports wired and wireless connections) ・ Smart connect ・ SSID and password configuration ・ Wireless Protected Access (WPA2-PSK, WPA-PSK + WPA2-PSK, WPA-Enterprise, WPA2-Enterprise, WPA3, OWE) ・ Supports IEEE 802.11r fast roaming ・ Wireless scheduling ・ Wireless (Protected Setup (WPS) ・ Wireless client connection status and block lists
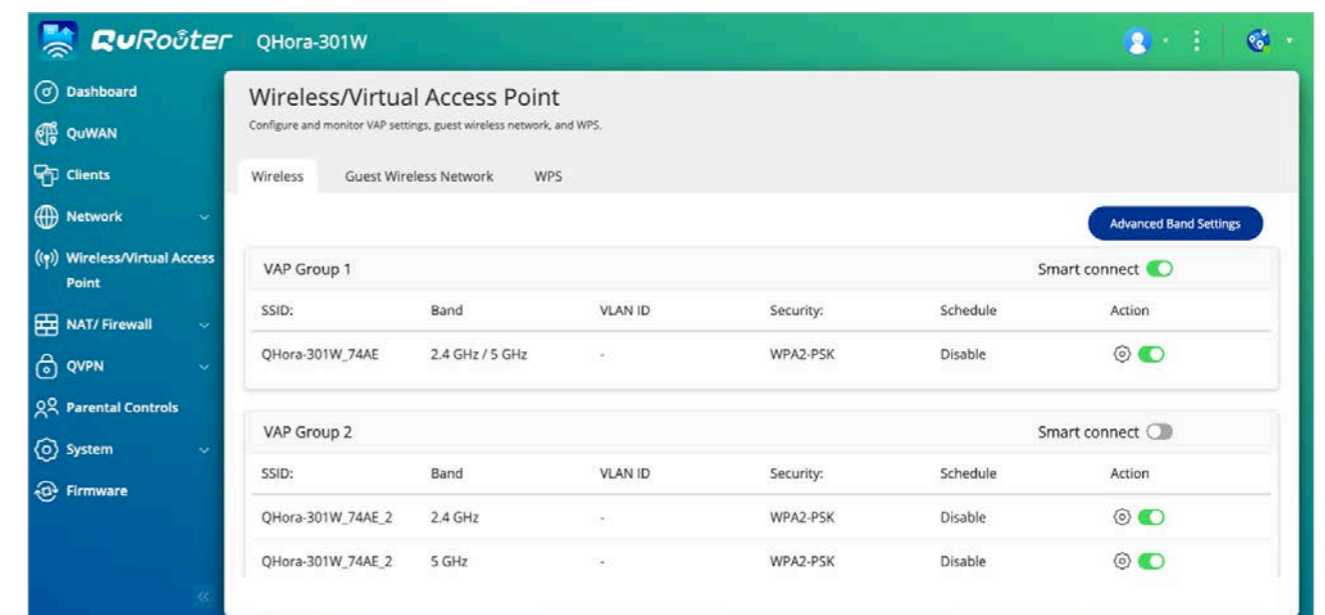
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QuWAN
Subscription-Free

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202009 (EN) A

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