QNAP®

QMiroPlus-201W

The Tri-Band Mesh Wi-Fi Router with QNAP home
cloud 2.0 solution

Specialized for Home Cloud 2.0

Cloud services are gaining increasing importance and popularity, especially as people demand universal access to files and as file sizes and quantities increase. Using multiple cloud services is now everyday behavior for many people and organizations, including private cloud for personal photos, and public cloud for company data.

Public, personal & family clouds managed with one single device

You can save files to different cloud services for different purposes, but this may lead to another problem. For example: I want to share photos taken with my friend when we were travelling, but where did I save these pictures? The basic solution is to log into different cloud portals one by one. This always works but at the cost of time and effort – especially if you need to remember login credentials. If there is a device that can centrally manage these cloud accounts - including data sync, login management and easy sharing - it would save a lot of effort.

QMiroPlus-201W is designed for this purpose. It is specialized for home cloud 2.0, can help users access various cloud services from a single platform, and features the app-driven QTS operating system.

And of course, QMiroPlus-201W also supports Wi-Fi Mesh and SD-WAN. Wi-Fi Mesh can extend your home wireless network, and SD-WAN lets you easily connect to offices for working - allowing an easy work-from-home VPN solution.

QMiroPlus-201W is a single device that can manage multiple cloud services, provides QTS apps, and supports Wi-Fi Mesh and SD-WAN, allowing you to enhance your network and fulfill home and work requirements.

Qualcomm x QNAP launched the first SD-WAN/Wi-Fi Mesh Router with QTS home cloud 2.0 service based on IPQ-4019

QNAP's QMiroPlus-201W is a Wi-Fi Mesh AP with integrated SD-WAN, and also provides an embedded home cloud 2.0 service based on QTS. Powered by a Qualcomm processor, home workers can enjoy a fast, stable network with secure connectivity to their workplace network, or to different cloud service.

The QMiroPlus-201W goes further than other Wi-Fi Mesh solutions, providing greater flexibility and affordability in deployment. Wi-Fi Mesh can also easily be set up using the companion mobile app.

High-quality smart home network solution, QTS X QuRouter

Some people like relaxing after work with some music and reminiscing with old photos. Others like to watch their pets using webcams . When friends come to visit, it's normal to send and share photos with each other using cloud and social media. These everyday interactions in our lives are all made so convenient with network connectivity, so shouldn't we have a device/platform that improves our network experience?

Home cloud 2.0 is a concept based on this type of request. It uses the QTS interface and simplified installation and terminology while retaining key services and apps. Home users will not only enjoy a better network experience, no matter from data backup, cloud services, multimedia or even surveillance, but they can also use and manage it in an easy way.

QSync

Qsync is a tool for synchronizing files between your NAS, computers, and other devices. After installing the Qsync Client on your computer and Qsync Central on NAS, your syncing tasks are ready to go. The Qfile and Qsync apps also help you to easily access files, allowing you to greatly boost your productivity.
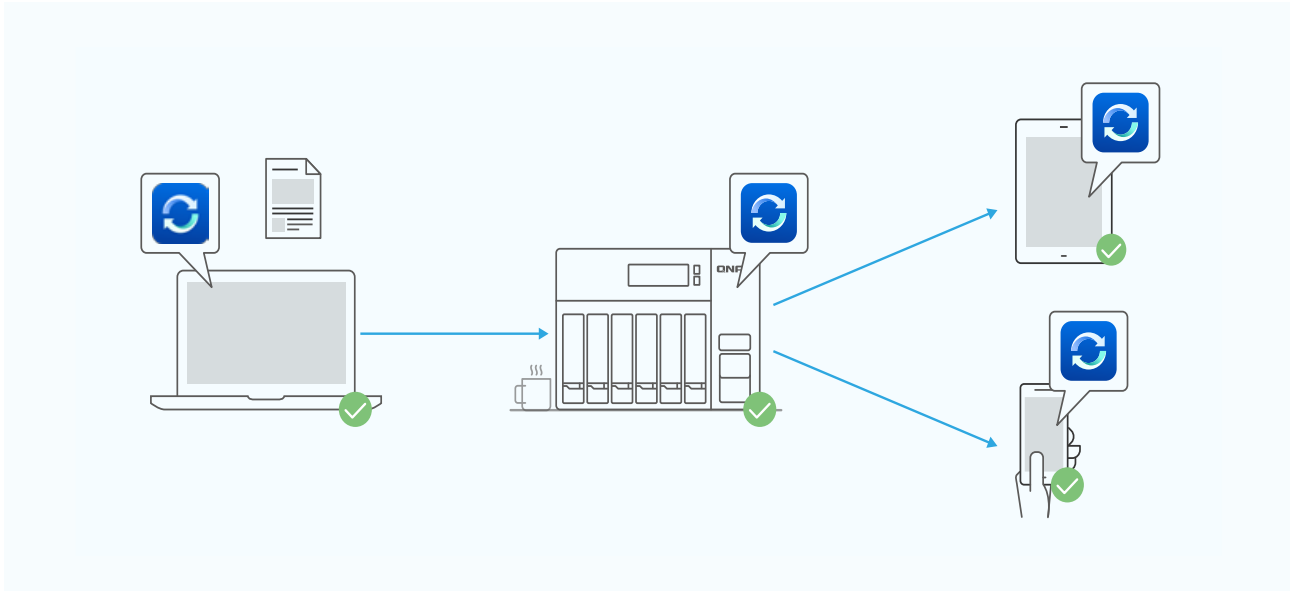
HybridMount

HybridMount lets you mount remote devices and mainstream cloud services to greatly expand the storage capacity of your QNAP device. HybridMount uses local caching to guarantee low-latency access to cached cloud data. By reducing the load time needed when accessing large amounts of cloud data, HybridMount makes it easier to use QNAP applications for file management, editing, and multimedia playback.

myQNAPcloud

myQNAPcloud Link allows you to connect to your device via the Internet using the myQNAPcloud website (https://www.myqnapcloud.com). No complicated port forwarding settings on the router are required: simply install the myQNAPcloud Link app on your device and sign in using your myQNAPcloud ID (QID). Then you can access files from the myQNAPcloud website. myQNAPcloud Link selects the best connection for you based on your network environment. In addition to the web-based connection, myQNAPcloud Link also allows you to connect to your QNAP device with QNAP Mobile apps - including Qfile, Qmanager and the PC utility Qsync.

HBS3

Hybrid Backup Sync is a comprehensive file and data backup and disaster recovery solution for QNAP NAS. It integrates backup, restoration and synchronization to provide a variety of options for data backup and synchronization including one-touch USB backup; Time Machine backup; RTRR backup and synchronization through RTRR, Rsync, FTP, CIFS/SMB and cloud services such as Google Drive™, Microsoft® OneDrive®, Dropbox®, Box®, Yandex® Disk, Amazon® Cloud Drive, Amazon® S3, Amazon® Glacier, Azure™ Storage, Google Cloud Storage™, S3/OpenStack Swift/WebDAV compatible services. Hybrid Backup Sync allows you to manage multiple storage, remote and cloud accounts to help save time in creating backup jobs. Note: You must install Cloud Backup Sync from the App Center to remotely connect to cloud services.
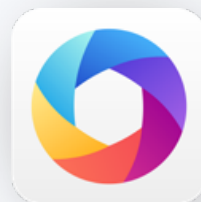
Multimedia Console

A multimedia control center that consolidates indexing, thumbnail generation, transcoding, content management and permission controls for every multimedia application on QTS.
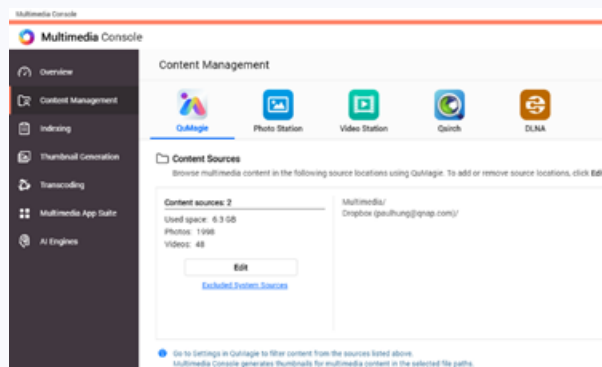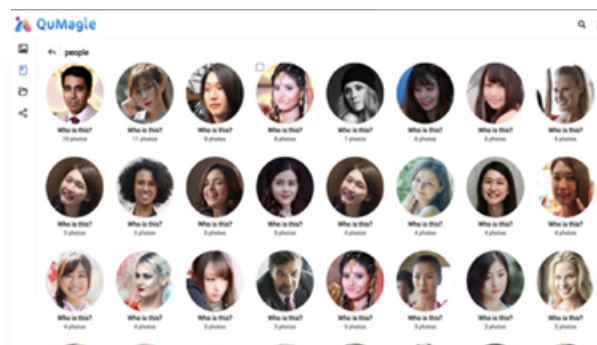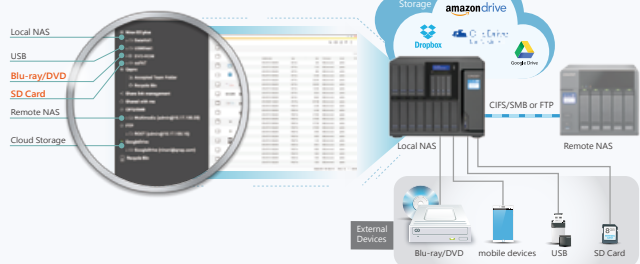

File Station HD
(Local Display)

Directly access File Station to manage the files and data on your NAS.

QuMagie

QuMagie is a QTS photo management application that uses AI to help you manage photos and videos on your QNAP NAS. QuMagie integrates facial recognition and object recognition to make browsing and organizing photos and videos easier than ever before.

Video station

Video Station is the ideal management tool for organizing NAS-stored video files. Videos can be classified as home videos, movies, TV shows, or music videos for your personal collections. You can also share these collections with your friends & family via the Internet.


Music Station

Music Station is a web-based music player for users to enjoy their NAS-stored music collection.
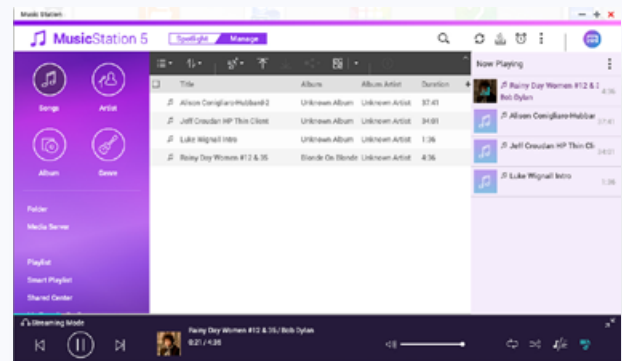
QVR Elite

QVR Elite is a compact and professional surveillance system that offers various management features to help safeguard your properties. QVR Elite is memory and processor efficient, and includes QVR Pro features and ONVIF integration. The license-based model allows you to only pay for what you need, with the option to scale up in the future or to cancel at any time. Log in with the QVR Pro Client to enjoy live view and playback on the same interface. QVR Elite saves recordings as standard MP4 files for easy backup to remote servers and cloud storage services. Supports QTS and QuTS hero on x86 and ARM CPU models.
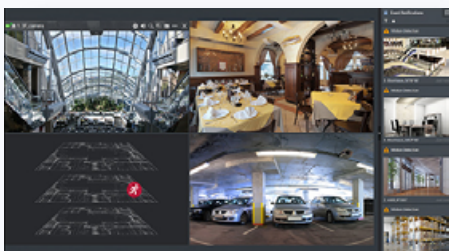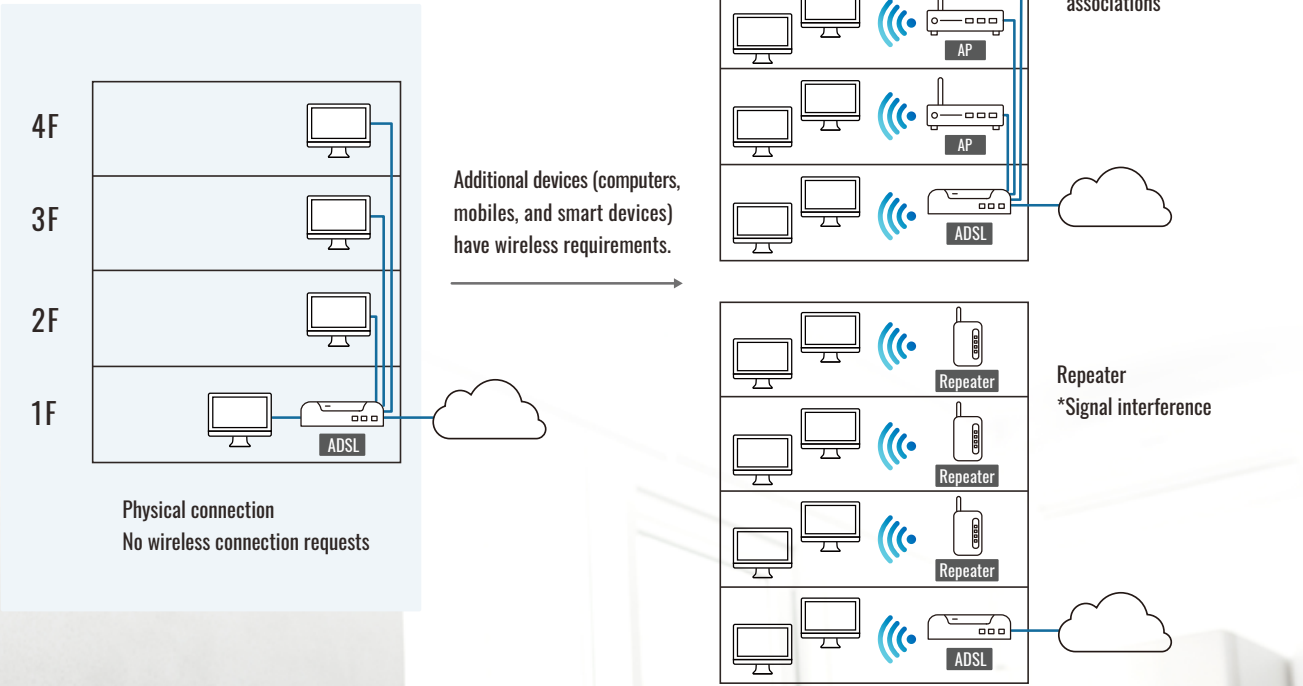

QuRouter

QuRouter is a router management application integrated into the QTS operating system that allows you to configure and manage network and storage features on a single QNAP router. You can create and manage mesh networks, manage wireless clients, and remotely configure router settings.
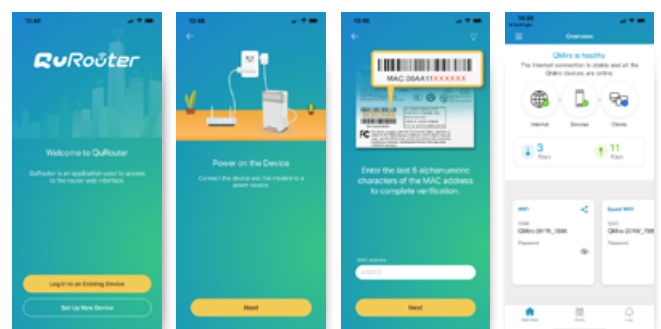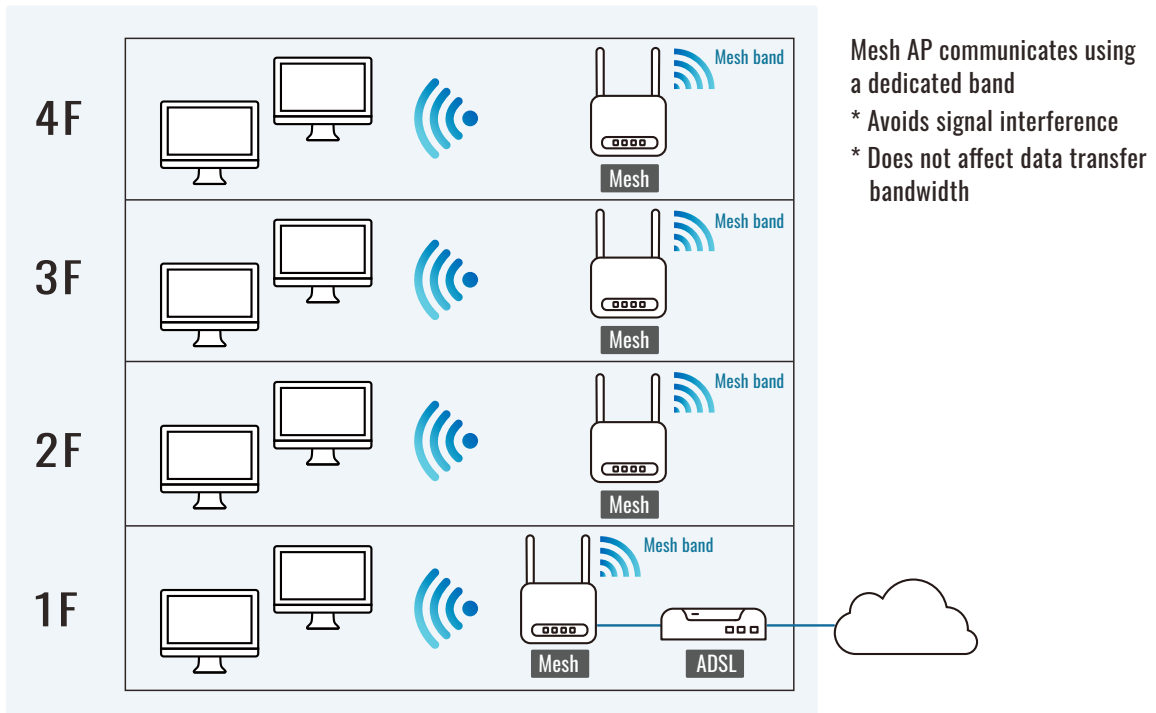
How Wi-Fi Mesh Benefits You

With the spread of Wi-Fi and wireless-enabled devices in the household, it has always been a challenge to ensure these devices – sometimes spread across a large area – have a dependable connection. Sometimes this would require installing multiple access points (leading to confusion in what network to join and dropped connections when moving between networks), or repeaters that provide extended range but can also add latency or slower speeds.

4F

3F

2F

1F

ADSL

Physical connection
No wireless connection requests

Additional devices (computers, mobiles, and smart devices) have wireless requirements.

AP

AP

AP

ADSL

Each side has Access Points (AP)
*Multiple SSIDs make hard associations

Repeater

Repeater

Repeater

ADSL

Repeater
*Signal interference

This has led to routers having so-called large antennas or multi-antennas, which can increase the strength and range of wireless signals. However, certain issues still remain with long-range transmission and another solution is often required.
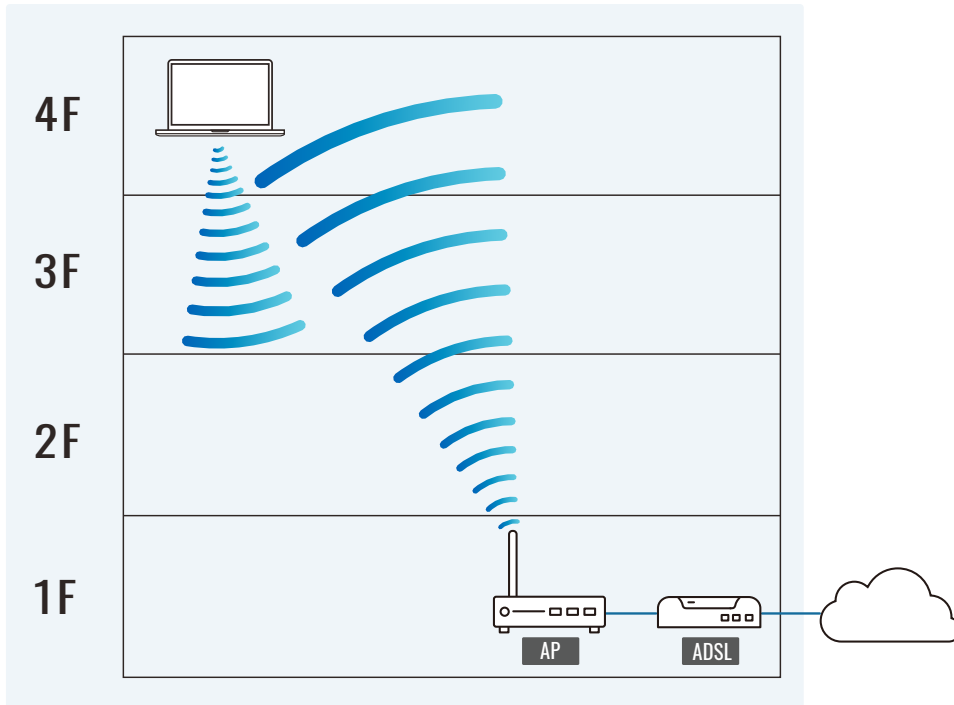

Wi-Fi Mesh is this solution, as it allows wireless access points to have an independent communication band, not to occupy the user's band, and can automatically detect the environment and adjust signals. In terms of the signals provided to users for Internet access, Wi-Fi Mesh also detects and takes steps to minimize any interference (potentially from non-network equipment).

Mesh AP communicates using a dedicated band

* Avoids signal interference
* Does not affect data transfer bandwidth

# Strengthen Wi-Fi Mesh network transmission with Tri Band

Conventional solutions use a dual-band connection with 2.4 GHz and 5GHz wireless channels. These channels are shared between user devices and APs, which can lead to impacted performance and connectivity issues.

Dual Band

AP mesh communicated
Clients data transfer

5 G   5 G

2.4 G   2.4 G
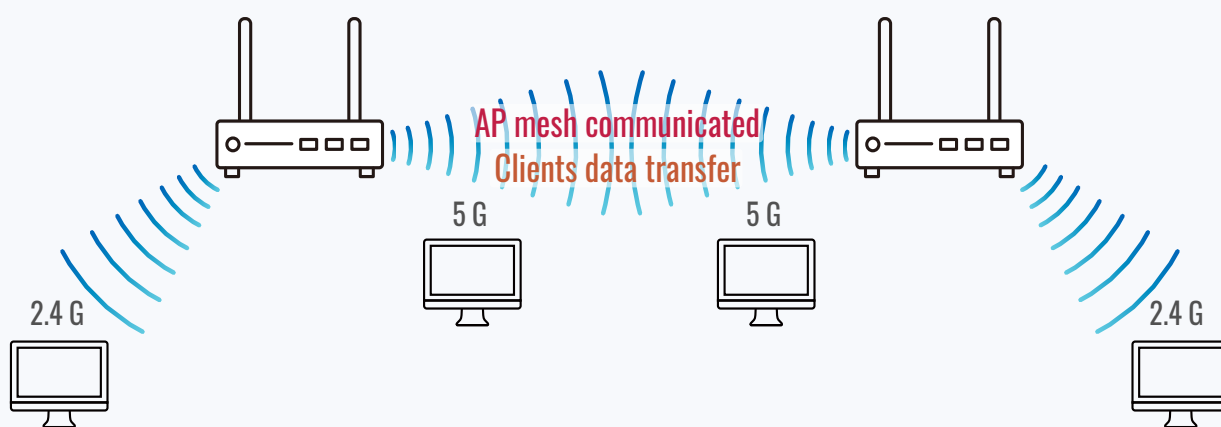
QNAP Wi-Fi Mesh instead uses a Tri-Band (AC2200, 867 + 867 + 400 Mbps) to achieve high-speed and stable connectivity with a dedicated 5G band for AP communication. By using this dedicated band, interference that can lead to poor connectivity is effectively reduced from user connections, allowing users to fully enjoy 2.4 / 5GHz bands.

Tri Band

AP mesh communicated

5G-2

Clients data transfer

5G-1   5G-1

2.4 G   2.4 G
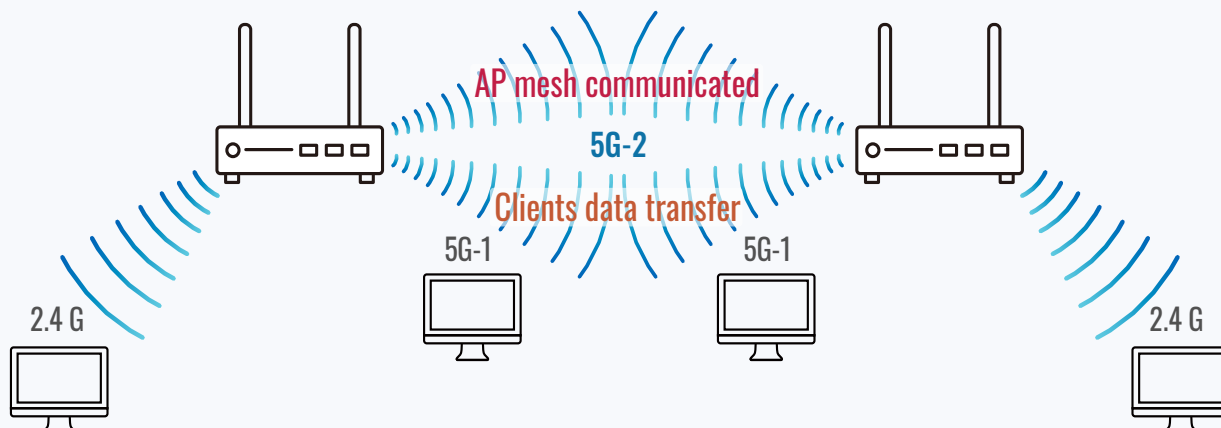
With diverse functions and flexible network deployment, why use a traditional router?

When choosing a home router, there are many options available and prices are similar. So which one is the best option? In fact, the most important question to ask is which one is most suitable for your home? To have multiple APs for Mesh deployment one time is not the key, and do you really need that many AP in your home?

With Wi-Fi Mesh with the SD-WAN capabilities, the QMiroPlus-201W enhances Internet performance and security while extending wireless coverage. After buying a QMiroPlus-201W, users can gauge the connection coverage within their environment and add further QMiro-201W as needed to ensure complete coverage and flexible deployment.

| Single QMiroPlus-201W for master	Additional QMiro-201W for satellite
2100sqft/195 sq. meter	Additional 2,100 sqft. /195 sq. meter for each
1-2 room apartment Small store	3-5 room apartment Large store Single-family house

Note 1: Home size, materials, and layout can affect how Wi-Fi signals travel. These suggestions are based on laboratory tests.
Note 2: A single Wi-Fi Mesh site can only have 4 devices: 1 x QMiroPlus-201W for primary + 3 x QMiro-201W for nodes
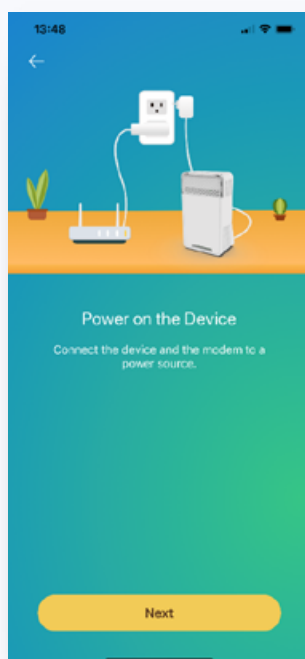
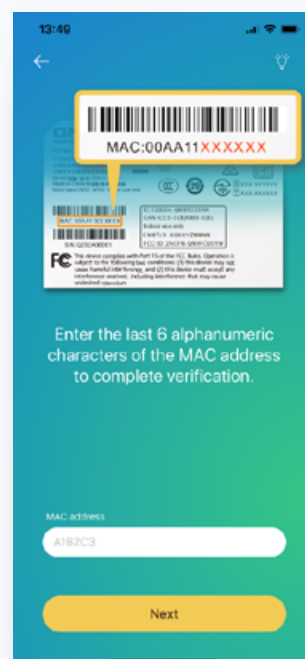# Set up with the easy-to-use QuRouter mobile app

The QuRouter app provides a straightforward setup process, ensuring that users with any level of IT skills can set up their QMiroPlus-201W.
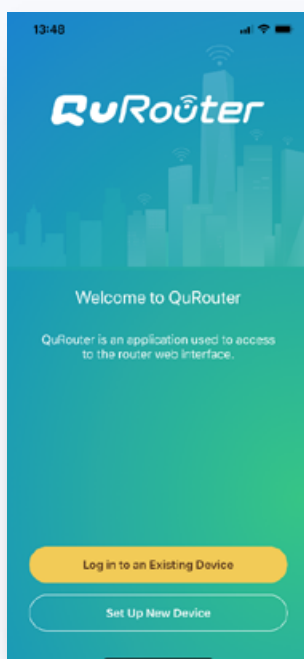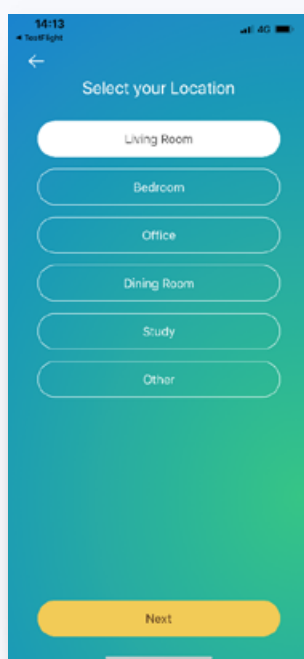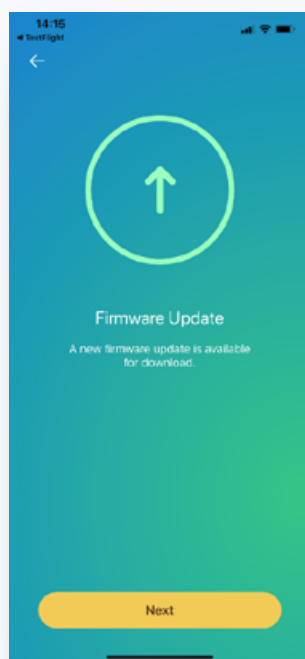

The login page.

A wizard will walk you through every step of the process.
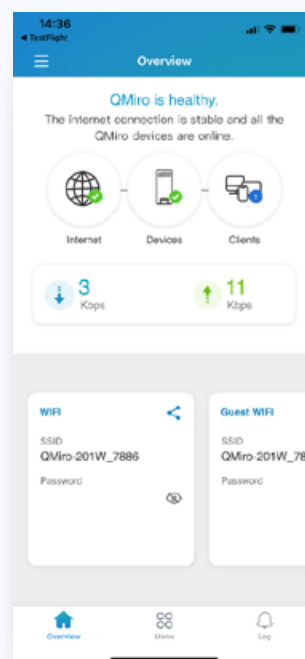

Illustrates key requirements of the installation process.

Select where the QMiroPlus-201W is installed.


Automatically update the QMiroPlus-201W's firmware.

QuRouter clearly displays device and network information.

Quickly connect to wireless networks without configuration — WPS

Imagine that I bought a printer, went home, and then thought about how to connect it to my network. I then discovered that the printer could access the Internet through a wireless network. How do I connect to a wireless network on the printer? I cannot find the management interface on it, or it is very troublesome to connect to the management interface. Are there any alternatives to connecting to the wireless network without using to the management interface?

Wi-Fi Protected Setup (WPS) enables you to connect Wi-Fi enabled devices (such as printers) to your network simply by pushing a button. The QMiroPlus-201W supports WPS, providing extra convenience in making a complete home network.
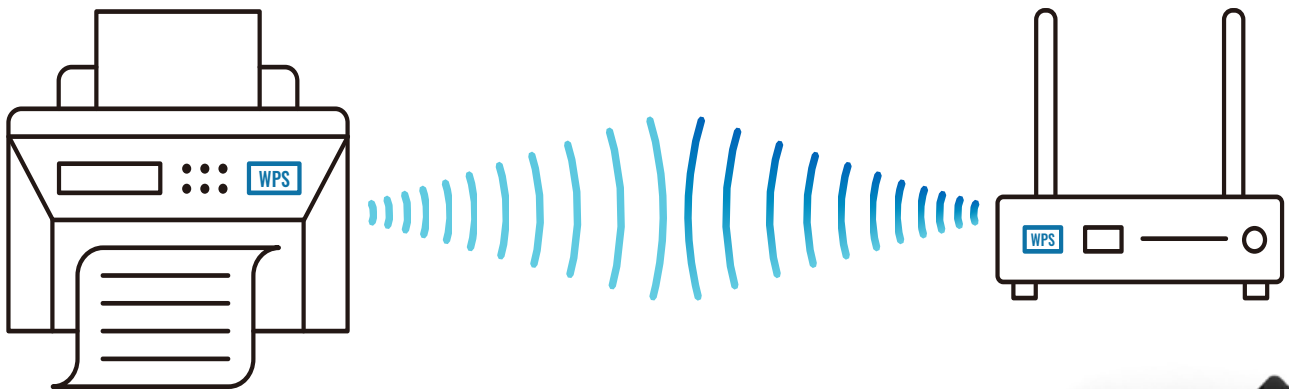
# Guard your network security — NAT

When I was outside today with some friends, I wanted to show them some photos from a trip that are stored on my NAS at home. I opened the NAS login screen with my mobile phone and opened the photos to share with everyone.

This is normal behavior, but also represents some risk. For example, if you can connect to the NAS from outside, does it mean that others can too? Everyone will say that it is can be secure through user account verification, but are you willing to let your NAS at home potentially received countless unwanted login requests on a daily basis? If there is a feature to control the connection from the front, and cut out unwanted connection requests, will it be a good solution?

As the QMiroPlus-201W sits between the internet and intranet, security is exceptionally important to avoid direct internal and external network penetration. For this part, QNAP uses the Zero Trust security concept.

The NAT on QMiroPlus-201W is a function developed based on QNAP Zero Trust. NAT can control the connection of internal devices through Port Forwarding, and limit external connections, which can facilitate connection management.

Network Address Translation
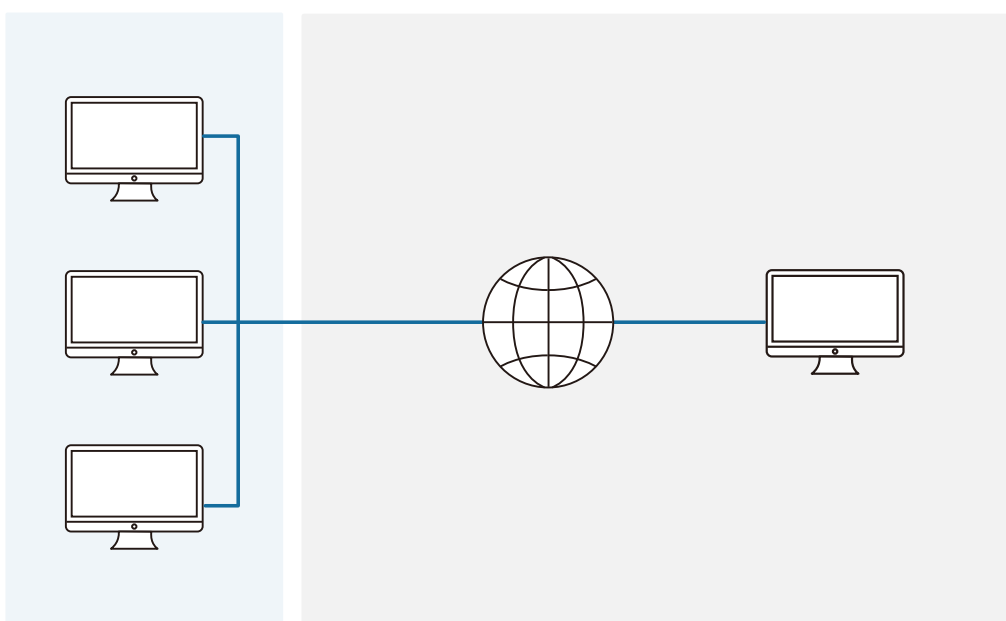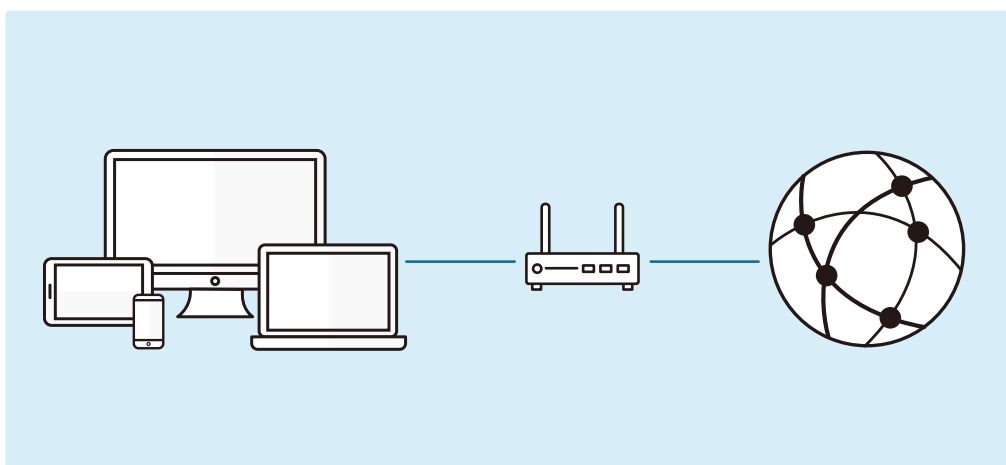
Filter your web browsing — Parental Controls

Passing by my child's room in the middle of the night, I found that they were still watching Instagram, Twitter, YouTube and not sleeping. I reminded them that they should go to bed to no avail. Then I thought that wouldn't it be wonderful if I could directly set a schedule to deny access for children to watch Instagram, Twitter, YouTube so that they would go to bed obediently? Moreover, shouldn't it be possible to block harmful websites to prevent children from accessing their content?

Modern parents have a lot to worry about, and what their children access on the Internet shouldn't be one of them.

The QMiroPlus-201W provides effective parental controls to filter web sites and set rule-based access controls on what websites can be accessed. These filters can also be based on time, allowing parents to set available times for accessing certain websites.

Internet

Parental Controls

URL Filter
Blocking *Facebook.com

Internal Network
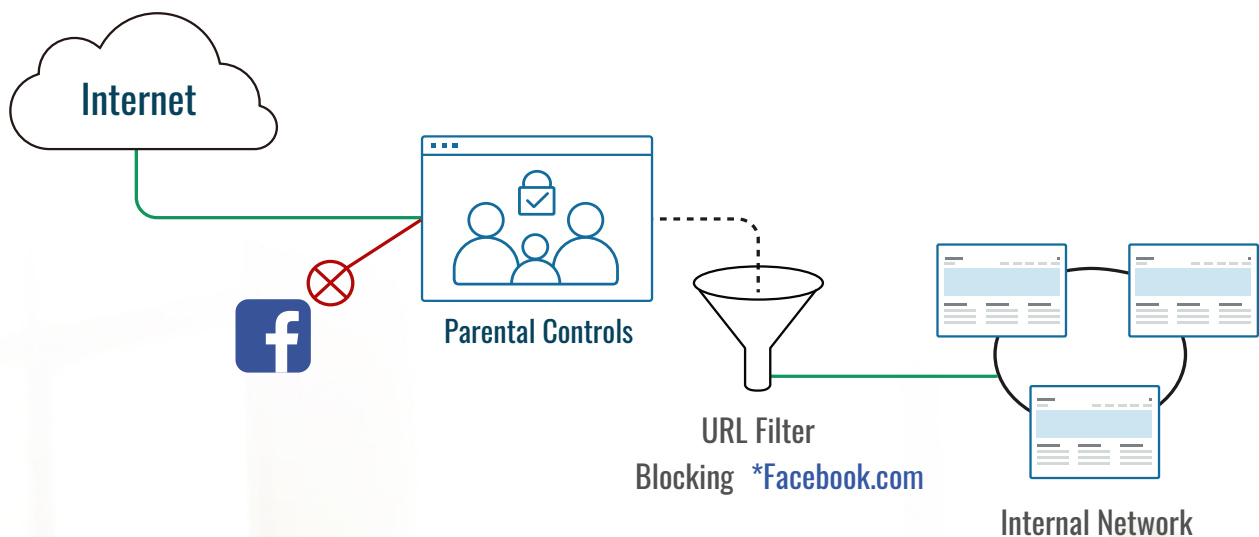
In addition to web filters, the parental controls also enable safe searching to block children from searching and accessing inappropriate content.

Please note: Schedule settings for Parental Controls will be available from Q3 2021.

Effectively handle multiple devices at the same time — MU-MIMO

Traditional WiFi

ISP: 100Mbps

Traditional Wi-Fi routers that use Single-user MIMO (SU-MIMO) can get bogged down when attempting to serve multiple devices at one time – requiring devices to wait to complete transmission before moving to the next and adding latency when there are excessive number of devices. With modern digital households having a large number of wireless-enabled devices a better solution is required.

1st   33.3Mbps

2nd   33.3Mbps

3rd   33.3Mbps
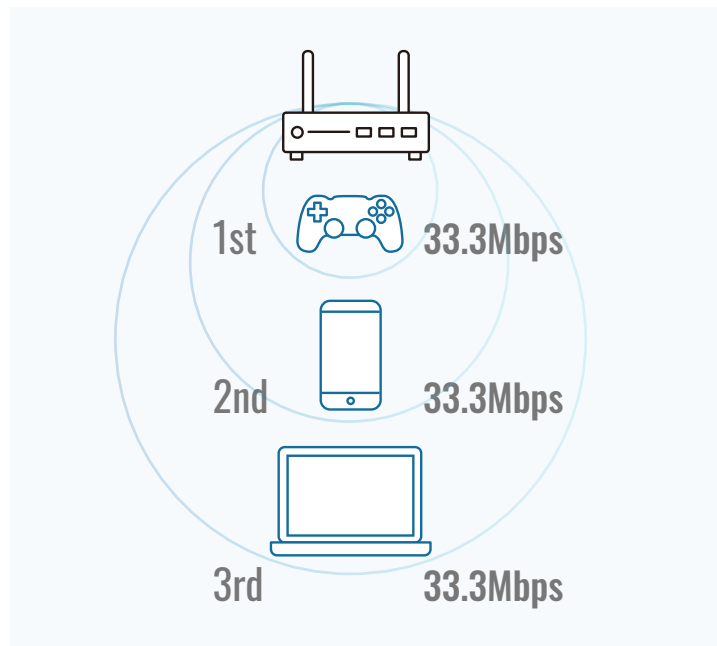
MU-MIMO WiFi

ISP: 100Mbps
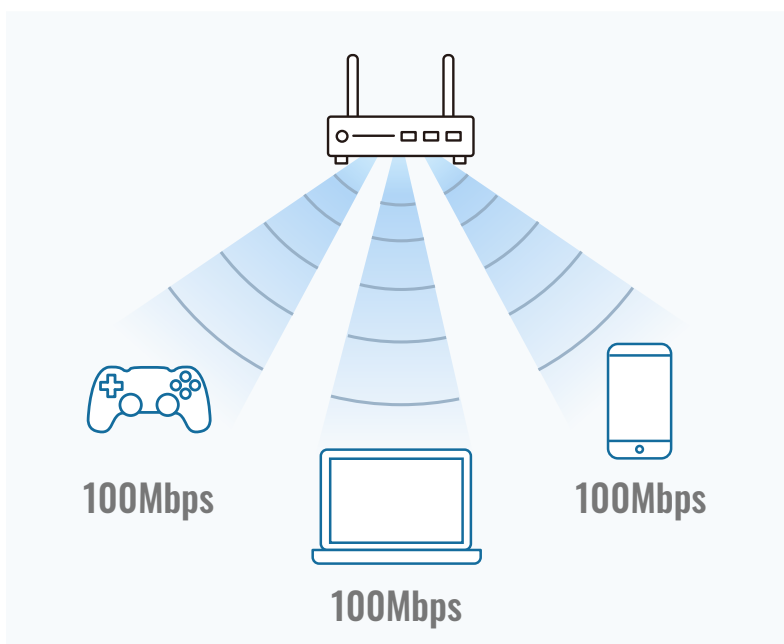
The QMiroPlus-201W supports Multi-User Multiple-Input Multiple-Output (MU-MIMO), ensuring optimized speed and performance for every connected device.

100Mbps

100Mbps

100Mbps

Access company network at home — SD-WAN

Conventional remote access methods to corporate networks can be tricky, often involving complicated network settings, laggy remote desktop connections, or the use of third-party applications and VPNs.

Traditional VPNs can be difficult to deploy, often requiring assistance from corporate IT staff – which becomes even harder if they themselves are working from home.

HQ

VPN — Home 1

VPN — Home 2

VPN — Home 3

VPN — Home 4
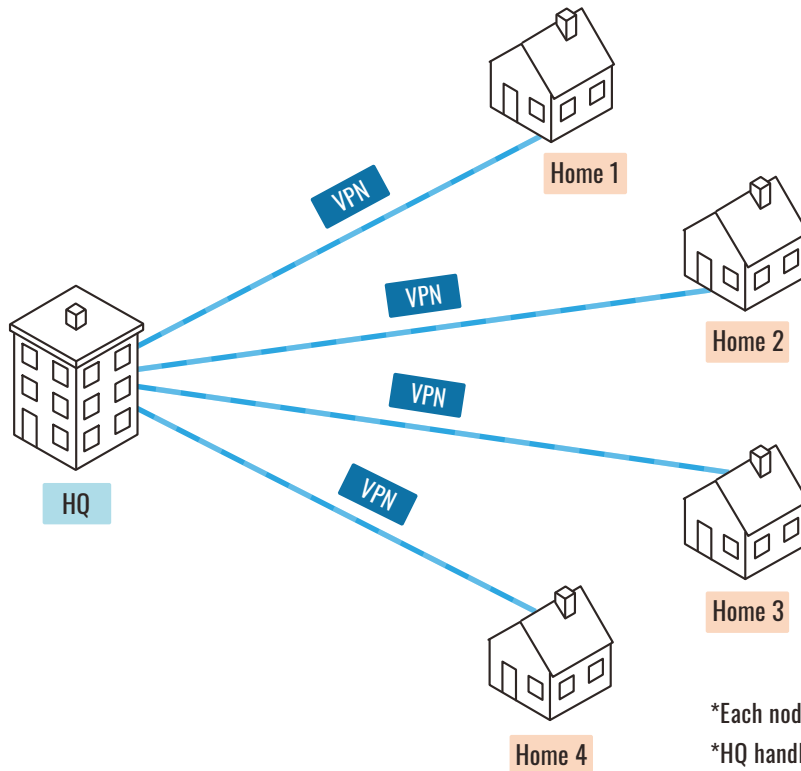
*Each node must connect back to HQ

*HQ handles all the routing to/from each node, and between nodes

QMiro- 201W retains VPN functionality but also supports SD-WAN. SD-WAN operates as a traditional VPN, but optimizes its configuration, deployment and management. As long as devices join the same SD-WAN organization, the SD-WAN will automatically establish a Mesh VPN and connect to each of them. Employees working from home can then enjoy smoother and more efficient connections to their corporate networks – with IT staff being able to remotely control all settings.

HQ

Home 4

Home 1

Home 3

Home 2
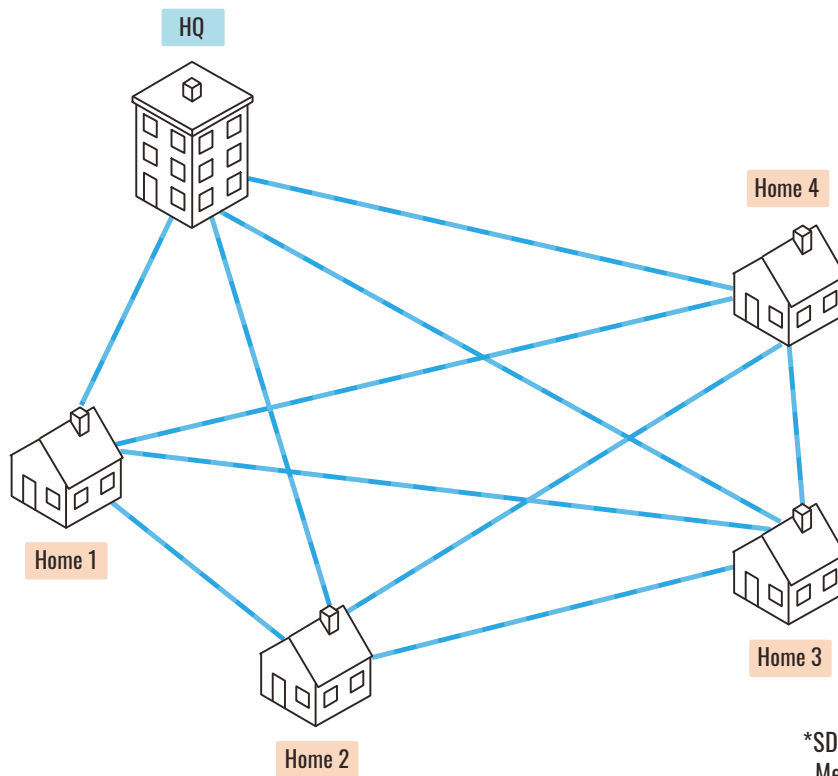
*SD-WAN automatically connects the Mesh VPN between nodes
*Routing is optimized by SD-WAN

SD-WAN also optimizes network connectivity to prevent slowdown. SD-WAN immediately swaps routing when routes are busy, ensuring optimized connections without requiring the intervention of IT staff.

|	Traditional Site-to-Site VPN	QNAP SD-WAN solution, QuWAN
Configuration	Individual devices	Auto batch deployment from the cloud
Management	Individual devices	Centrally managed from the cloud
Add additional VPN nodes	Manually configure a VPN at branches and HQ	Log in to your device and choose the QuWAN criteria
Connecting each node	Manually set up each VPN	Mesh VPN builds all VPNs through the nodes
Deployment cost	Additional costs for each node	Free deployment

Setup QuWAN quickly

1 Log in to your QNAP account at https://account.qnap.com.

2 Create a new organization.
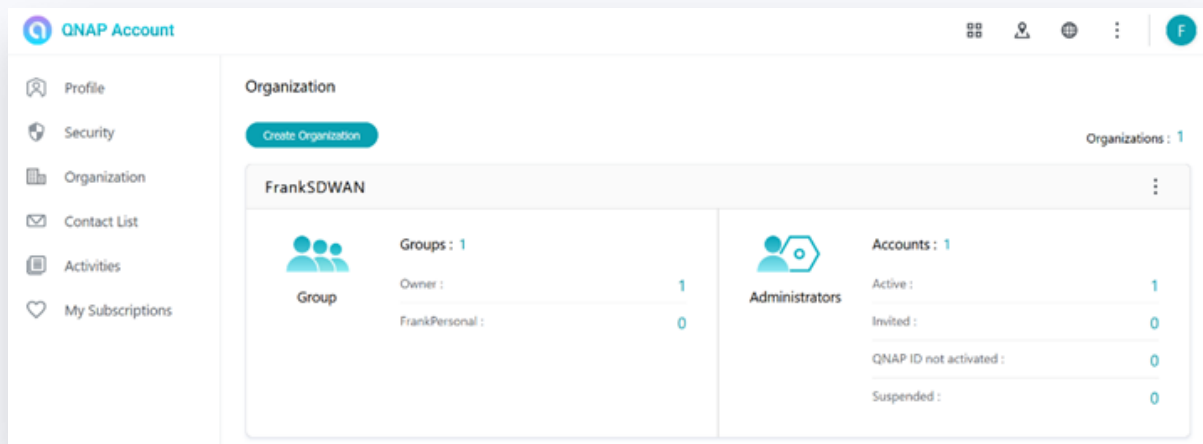
3 Create one or more sites under the organization.
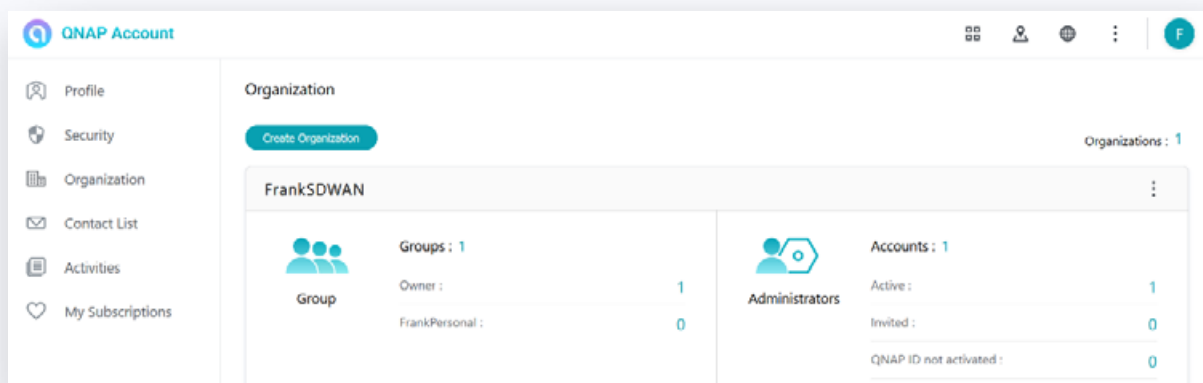
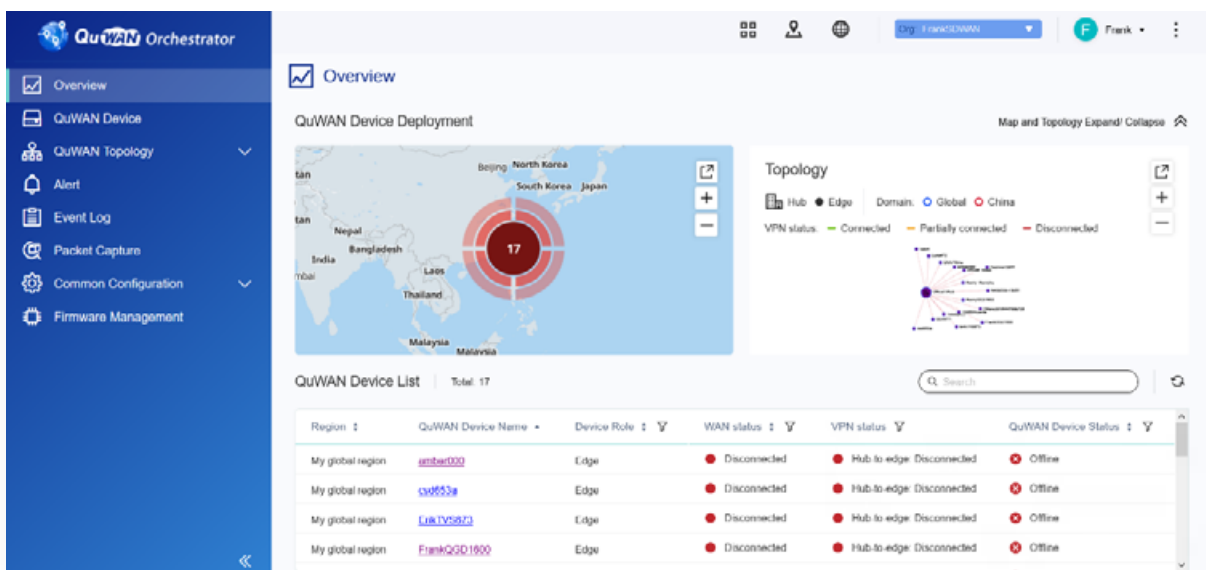**4** Log in to the QuWAN cloud-managed page with the organization at https://quwan.qnap.com/.
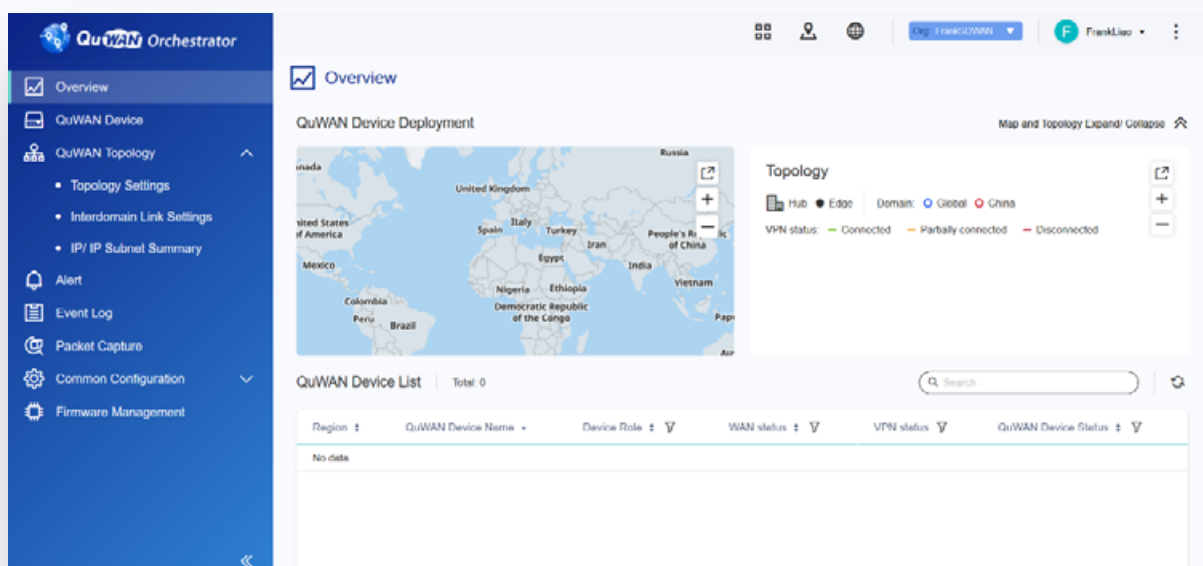
QMiro-201W join QuWAN

1. Log in using your QNAP ID on the QMiroPlus-201W.

2. Go to the QuWAN setup page.

3. Create or choose an organization, select the region and site.

4. Click Apply.
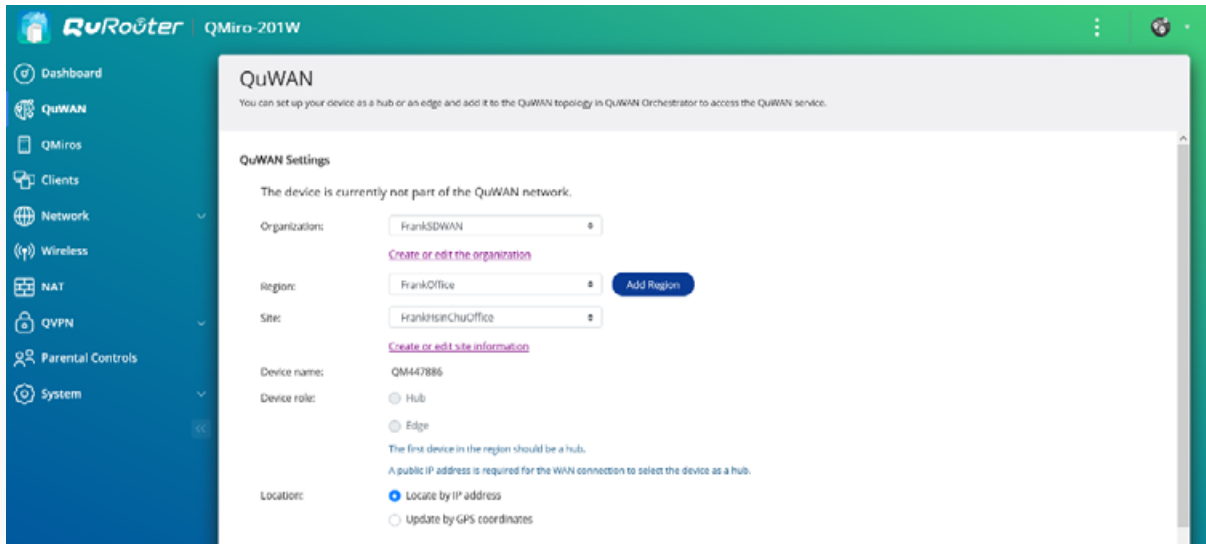
Note: The first device of a new organization in QuWAN must have a public IP address on the QMiroPlus-201W and must be a Hub. This is required for the organization to have a gateway for routing. Other QMiroPlus-201W will not need to do this if they join the same organization.

You can view all of the QMiroPlus-201W connected to the QuWAN by logging into the QuWAN cloud managed page at https://quwan.qnap.com/.

QMiroPlus-201W Hardware Specifications

CPU	• Router (QuRouter): Qualcomm IPQ4019 ARM 4cores 717MHz • NAS (QTS): Intel Celeron J4125 4C 2.0GHz, up to 2.7GHz
Memory	• Router: 512MB DDR3 onboard • NAS: 4GB DDR4 onboard
Flash Memory	• Router: 4MB SPI NOR Flash, 4GB eMMC • NAS: 4GB
USB Port	• Router: -- • NAS: 2 x USB 3.2 Gen1 5Gb/s Type-A

Ethernet port	• Router:
	  - 3 x LAN GbE RJ45 ports
	  - 1 x WAN GbE RJ45 port
	• NAS:
	  - 1 x 2.5GbE RJ45 port

SSD/HDD slot	• Router: -- • NAS: 2 x 2.5" SATA 3Gbps SSD/HDD(compatible with 6Gb/s SSD/HDD)

Button	• Router: WPS, Reset(share with NAS) NAS: Power button, Reset(share with router)
LED	• Router: QuRouter status LED • NAS: hard disk1 & hard disk2 status LED
Wireless antenna	• 2 x internal dual band(2.4GHz/5GHz) antenna • 2 x internal single band(5GHz) antenna
Wireless Standard	• 802.11a/b/g/n/ac
Wireless Speed Rating	• Wi-Fi 5 AC22002.4GHz (400Mbps)+ 5GHz (867Mbps x 2)
Wireless bandwidth	• 20/40/80MHz
Bluetooth	• Version 5

QMiroPlus-201W 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	• 1x WAN port
	  - DHCP client
	  - PPPoE
	  - Static IP
	• 1x LAN port
	  - DHCP server
	  - Reserved IP table

Wireless Network Management	• Supports IEEE 802.11ac (WiFi 5) • Supports MU-MIMO • Supports band steering for dual-band (2.4GHz and 5GHz bandwidth) access points • Transmission power (high, middle, and low) • 20/40/80 MHz bandwidth • RTS/CTS (Request to Send/Clear to Send) function • Dual-band 2.4G and 5G band settings • Guest wireless • Smart connect • SSID and password configuration • Supports IEEE 802.11r fast roaming • Wireless scheduler • Wireless (Protected Setup (WPS)
WiFi Mesh	• Supports 4 devices (1 master 3 satellites per mesh system) • Tri-band • Add/delete node
IPv4 routing management	• Direct route • Static route
NAT	• Port forwarding and Network Address Translation (NAT) • Supports FTP ALG, PPTP ALG and SIP ALG

QVPN	• Secure remote access with L2TP, OpenVPN and QBelt (QNAP proprietary) protocol • Client IP pool configuration • VPN client management • Connection logs • Maximum tunnel scale: 30

Parental Controls	• Website filter
	• Safe search
	  - Youtube
	  - Google
	  - Bing

System Settings	• Restart, Reset, Backup, Audio Alert • Local account, QNAP ID, Remote management • Even Logs

Firmware	• Firmware update
	  - Live update
	  - Schedule update
	  - Manual update
	• Display mesh nodes firmware status

QuWAN SD-WAN Service	• Auto multi-site VPN • WAN optimization • WAN aggregation • Failover • Load Balancing • Traffic monitoring using QuWAN Orchestrator
Download the QuRouter App Apple Store Google Play	• Managed QMiroPlus-201W • Create WiFi mesh • Add/delete WiFi mesh nodes
NAS operating system	• QTS

Smart Home

Mesh WiFi System

QNAP SYSTEMS, INC.
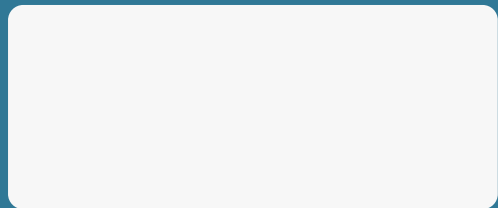
Netherlands (Warehouse Services)
Email: nlsales@qnap.com

China
Email: cnsales@qnap.com

Thailand
Email: thsales@qnap.com

Japan
Email: jpsales@qnap.com

US
Email: usasales@qnap.com

India
Email: indiasales@qnap.com

Germany
Email: desales@qnap.com

France
Email: Frsales@qnap.com