QNAP

QVR Pro

User Guide

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1. Introduction

This chapter provides an overview of QVR Pro.

About QVR Pro

QVR Pro is a comprehensive surveillance system that leverages the powerful storage features of the QNAP NAS.

QVR Pro includes the following components. Each of them is a QTS application that can be installed on your QNAP NAS.

Component	Description
QVR Pro server	QVR Pro allows you to create a separate surveillance and recording environment on the QNAP NAS. Once installed with application, your NAS can function as a dedicated surveillance server.
QVR Pro Client	QVR Pro Client allows you to monitor live views and play back recordings on Windows or Mac devices, or in the QNAP HD Station on the NAS.
QVR Center	QVR Center allows you to centrally manage multiple QVR Pro servers and track surveillance events.
QVR Guard	QVR Guard is a high-availability management application that takes over recording tasks from the QVR Pro server when unexpected failure occurs.

> **Note**
> This user guide only covers the features, settings, and tasks on the QVR Pro server. For more information on QVR Pro Client, QVR Center, and QVR Guard, see their respective user guides.

Key Features and Benefits

QVR Pro provides the following features and benefits.

Feature	Description
Dedicated recording space	QVR Pro supports creating recording spaces using volumes or CacheMount shared folders. QVR Pro enables you to decide how much space to allocate for surveillance recordings. Even though QVR Pro shares the NAS storage space with other applications, a dedicated space is reserved for surveillance recordings.
Spare volume or shared folder	QVR Pro allows you to assign a spare volume or a CacheMount shared folder to ensure the continuity of recording even when the current storage space is unavailable.
Expandable storage	QVR Pro provides a scalable solution. You can expand existing recording spaces without losing your data by allocating more volumes using different types of storage, such as SAS, USB, Thunderbolt, and VJBOD.
Recording backup	QVR Pro allows you to back up recordings from the server to a remote NAS, helping safeguard important data.
Recording import	QVR Pro allows you to import existing recordings to a specified destination.

Feature	Description
Batch adding and camera management	QVR Pro allows you to add and access multiple cameras at the same time to simplify camera management.
Advanced camera search	QVR Pro allows you to search and add cameras that are on another network. Even if your network environment uses multiple LANs, you can still use QVR Pro to quickly locate and add IP cameras.
Individual camera recording management	QVR Pro allows you to modify the recording settings of each camera to better manage your resources. For example, you can assign 4K ultra-high resolution streams to event recording tasks and save the footage to SSDs for optimal video quality.
Network interface assignment	QVR Pro allows you to assign a specific network interface for each camera to improve bandwidth load balancing and ensure video recording quality.
Real-time messaging protocol (RTMP) support	QVR Pro supports RTMP, which creates an open video input platform where you can receive and record RTMP streams from a third-party application.
Share channel live view	QVR Pro allows you to share a live channel view without requiring viewers to install any plug-ins.
External events and actions	QVR Pro is an open event management system that supports external events and actions. You can receive custom external events and trigger external actions using an HTTP URL.
QVR Pro Client mobile app	QVR Pro allows you to check videos and receive push notifications anywhere using the QVR Pro Client mobile application.

Getting Started

1. Install QVR Pro.
   For details, see QVR Pro Installation and Login.

2. Add a recording space.
   For details, see Adding a Local Recording Space.

3. Add a camera.
   For details, see Adding Cameras.

4. Add an event rule.
   For details, see Adding a Rule.

5. Install QVR Pro Client.

   a. Go to the QVR Pro desktop.

   b. Click the QVR Pro Client shortcut or go to **Main Menu** > **QVR Pro Client** .

   c. Select the operating system and then click **Download**.

   d. Run the installer.

2. Overview and Basic Operations

QVR Pro Installation and Login

Installing QVR Pro

1. Log on to QTS.

2. Go to **App Center** > **Surveillance** .

3. Locate **QVR Pro** and then click **Install**.
   QTS downloads the QVR Pro installer.

   > **Note**
   > QTS also downloads and installs Container Station if the application is not yet installed.

4. Click **Open**.
   The **QVR Pro Initial Setup** window opens.

5. Complete the initial setup.

   a. Click **Start**.

   a. Verify that your system meets the minimum requirements and then click **Next**.

   b. Review the date and time settings and then select **I have confirmed that the date and time settings are correct**.
      You can also choose to modify the date and time settings, if necessary.

   c. Click **Apply**.
      QTS installs QVR Pro and a confirmation message appears.

   d. Click **Finish**.

QVR Pro is now installed on the NAS.

> **Warning**
> Uninstalling QVR Pro deletes all the recording files and system settings. Ensure that you back up recording files and system settings before uninstalling QVR Pro.
> For details, see Recording File Explorer and QVR Pro Backup / Restore.

Opening QVR Pro

- Perform one of the following steps.

  - On QTS, go to **App Center** > **My Apps** , locate QVR Pro, and then click **Open**.

  - On QTS, go to **Main Menu** > **QVR Pro** .

  - On a web browser, type the following URL: `<IP address>:<port>/qvrpro/`.
    For example, `http://118.000.00.00:8080/qvrpro/`.

Logging On to QVR Pro

1. Open QVR Pro.

For details, see Opening QVR Pro.

2. Type the user name and password.
   QVR Pro uses the current QTS user name and password.

3. Click **Login**.

Uninstalling QVR Pro

⚠️ | **Warning**
Uninstalling QVR Pro deletes all the recording files and system settings. Ensure that you back up recording files and system settings before performing this task.
For details, see Recording File Explorer and QVR Pro Backup / Restore.

1. Log on to QTS.

2. Go to **Main Menu** > **App Center** > **My Apps** .

3. Locate QVR Pro and click ⌄ .

4. Select **Remove**.
   A confirmation message appears.

5. Select **OK**.

QVR Pro is uninstalled.

QVR Pro Navigation

Desktop

Manage and run applications, check notifications, and more. The desktop gives you direct access to the main menu, toolbar, dashboard, and desktop space, enabling you to take full advantage of the QVR Pro features.

Task Bar

#	Element	Possible User Actions
1	**Show Desktop**	Click the button to minimize or restore all open windows.
2	**Main Menu**	Click the button to open the Main Menu panel on the left side of the desktop.
3	**Search**	• Type key words to locate settings, applications, and help content. • Click an entry in the search results to open the application, system utility, or **Help Center** window.

#	Element	Possible User Actions
4	**Background Tasks**	• Position the mouse pointer over the button to see the number of background tasks that are running. Examples of background tasks are file backup and multimedia conversion. • Click the button to see the following details for each background task: • Task name • Task description • Progress (percentage of completion) • Click ◉ to stop a task.
5	**Event Notifications**	• Position the mouse pointer over the button to see the number of recent errors, warnings, and notices. • Click the button to view the following details for each event: • Event type • Description • Timestamp • Number of instances • Click a list entry to view the related utility or application screen. Clicking a warning or error log entry opens the **System Logs** window. • Click **More>>** to open the **System Logs** window. • Click **Clear All** to delete all list entries.
6	**Options**	Click your profile picture to open the **Options** screen.

#	Element	Possible User Actions
7	**[USER_NAME]**	Click the button to view the last login time and the following menu items: • **Options**: Opens the Options window. • **Restart**: Restarts the NAS • **Shutdown**: Shuts down QVR Pro and then powers off the NAS **Note** You can also power off the NAS using one of the following methods: • Press and hold the power button for 1.5 seconds. • Run Qfinder Pro and go to **Tools** > **Shut down Server** . • Open Qmanager and go to **Menu** > **System Tools** > **System** . Tap **Shutdown**. • **Logout**: Logs the user off the current session
8	**More**	Click the button to view the following menu items: • **Help**: Displays links to the Quick Setup Tutorial, Help Center, and Tutorials. • **Language**: Opens a list of supported languages and allows you to change the language of the operating system • **Desktop Preferences**: Opens a list of display modes and allows you to select your preferred mode of displaying the QVR Pro desktop based on your device type • **Help Request**: Opens the Helpdesk window • **About**: Displays the following information: • QVR Pro application version
9	**Dashboard**	Click the button to display the dashboard.

#	Element	Possible User Actions
10	**QVR Pro Event Notification**	• Position the mouse pointer over the button to see the number of recent errors, warnings, and notices. • Click the button to view the following details for each event: • Event type • Camera IP • Camera name • Content • Timestamp • Users • Click a list entry to view the related utility or application screen. • Click a warning or error log entry to open the **Logs** window. • Click **More>>** to open the **Logs** window.

Options

#	Tab	Possible User Actions
1	**Profile**	• Specify the following optional information: • Profile picture • E-mail • Phone number • Click **Apply** to save all changes.

#	Tab	Possible User Actions
2	**Wallpaper**	• Select a wallpaper from the built-in options or upload a photo. • Click **Apply** to save all changes.
3	**Change Password**	• Specify the following information: • **Old password** • **New password**: Specify a password with a maximum of 64 characters. QVR Pro recommends using passwords with at least 6 characters. ⚠ **Important** Changing the QVR Pro password also changes the QTS password. • Click **Apply** to save all changes.
4	**Miscellaneous**	• Enable the following settings. • **Auto logout after an idle period of**: You can specify the duration of inactivity after which the user is automatically logged out. • **Warn me when leaving QVR Pro**: When enabled, QVR Pro displays a confirmation message whenever you try to leave the desktop (by clicking the **Back** button or closing the browser). QVR Pro recommends enabling this setting. • **Reopen windows when logging back into QVR Pro**: When enabled, the current desktop settings (including all open windows) are retained until the next session. • **Show the desktop switching button**: When enabled, QVR Pro displays the desktop switching buttons **< >** on the left and right sides of the desktop. • **Show the link bar on the desktop**: When enabled, QVR Pro displays the link bar on the bottom of the desktop. • **Show the Dashboard button**: When enabled, QVR Pro displays the **Dashboard** button on the task bar. • **Show the QVR Pro time on the desktop**: When enabled, QVR Pro displays the server date and time on the desktop. • **Keep Main Menu open after selection**: When enabled, QVR Pro keeps the main menu pinned to the desktop after you open it. • Click **Apply** to save all changes.

Dashboard
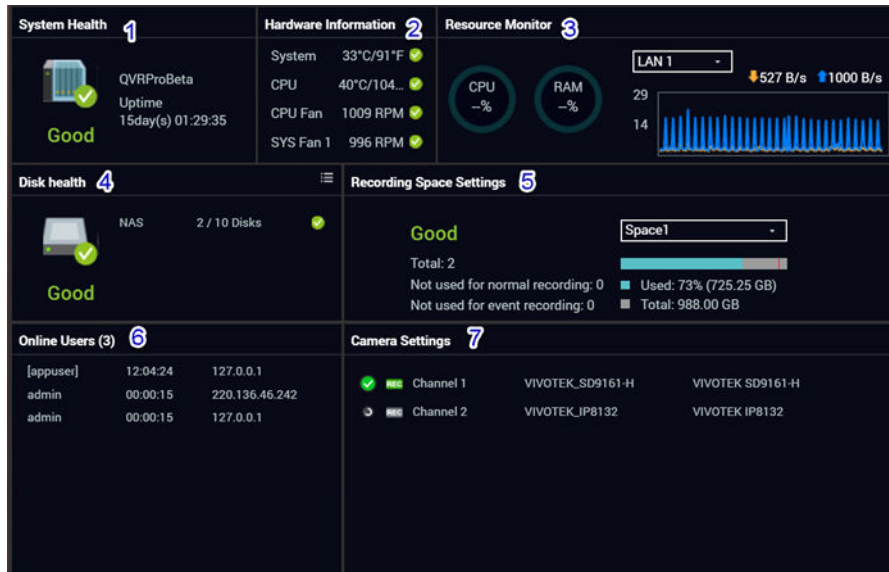
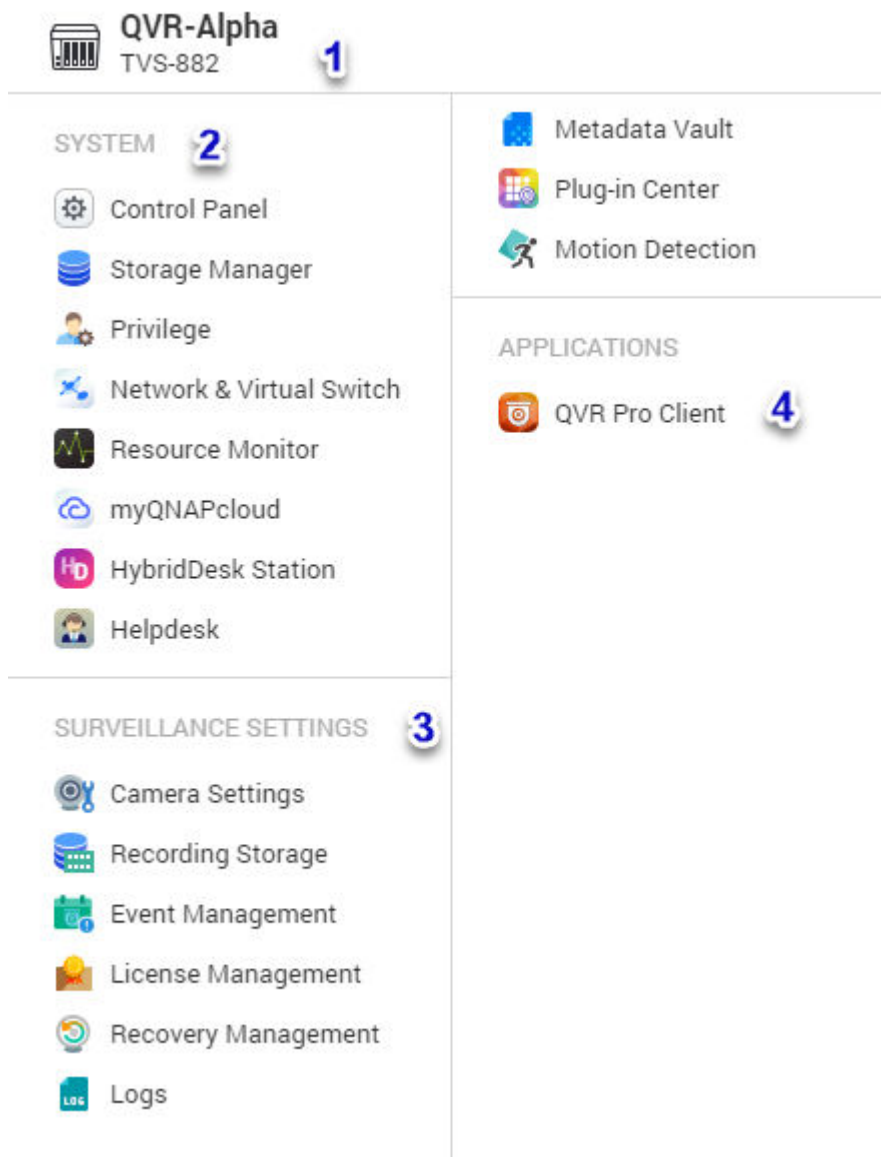The dashboard opens in the lower right corner of the desktop.

> 💡 **Tip**
> You can click and drag a section onto any area of the desktop.

#	Section	Displayed Information	User Actions
1	System Health	• NAS name • Uptime (number of days, hours, minutes and seconds) • Health status	Click the heading to open the **System Information** screen in the **System Status** window. If disk-related issues occur, clicking the heading opens the **Storage Manager** window.
2	Hardware Information	• System temperature • CPU fan speed • System fan speed	Click the heading to open the **Hardware Information** screen in the **System Status** window.
3	Resource Monitor	• CPU usage in % • Memory usage in % • Network upload and download speeds/rates	Click the heading to open the **Overview** screen in the **Resource Monitor** window.

#	Section	Displayed Information	User Actions
4	Disk Health	• Number of installed disks • Health status of installed disks	• Click the heading to open the **Disk Health** screen in the **Storage Manager** window. • Click 🔲 to view the following information for each installed disk: • Capacity/size • Temperature • Health status • Click **Details** to open the **Overview** screen in the **Storage Manager** window.
5	Recording Space Settings	• Status • Total number of recording spaces • Number of recording spaces not used for normal recording • Number of recording spaces not used for event recording	• Click the heading to open the **Recording Storage** window. • Select the recording space to modify the displayed information.
6	Online Users	• User name • Session duration • IP address	Click the heading to open the **Online Users** screen in the **System Logs** window.
7	Camera Settings	• Channel recording status	Click the heading to open the **Camera Settings** window.

Main Menu

#	Section	Description	Possible User Actions
1	NAS Information	Displays the NAS name and model number.	N/A

#	Section	Description	Possible User Actions
2	System	Displays a list of system utilities and other programs that enable you to manage the NAS. The following are the default system utilities: • Control Panel • Storage Manager • Privilege • Network & Virtual Switch • Resource Monitor • myQNAPcloud • HybridDesk Station • Helpdesk	• Open a system utility or application in the QVR Pro or QTS desktop • Click a menu item. • Right-click a menu item and then select **Open**. • Open an application in a new browser tab (only for certain apps) • Create a shortcut on the desktop • Right-click a menu item and then select **Create shortcut**. • Click and drag a menu item to the desktop.
3	Surveillance Settings	• Camera Settings • Recording Storage • Event Management • License Management • Recovery Management • Logs • Metadata Vault • Plug-in Center • Motion Detection	• Open a surveillance application in the QVR Pro desktop • Click a menu item. • Right-click a menu item and then select **Open**. • Create a shortcut on the desktop • Right-click a menu item and then select **Create shortcut**.
4	Applications	When an app is installed, it is automatically added to the applications list. The following are the default applications: • QVR Pro Client	• Click and drag a menu item to the desktop.

3. Control Panel

QVR Pro provides direct access to some configuration settings of QTS, the QNAP NAS operating system.

System Settings

General Settings

The **General Settings** page includes the following tabs.

Tab	Possible User Actions

System Administration	• Specify the following information.
	
	    • Server name
	
	    • System port
	
	• Select any of the following.
	
	    • Disable and hide multimedia functions (these functions include the Media Library, DLNA server, iTunes server, and more)
	
	    • Enable secure connection (HTTPS)
	
	    • Force secure connection (HTTPS) only
	
	• Click **Apply** to save all changes.
	
	Important
	These settings are applied to all NAS services.

Time	• Review the current date and time. • Specify the time zone. • Specify the date and time format. • Specify whether to manually set the time or synchronize the NAS time with a Network Time Protocol (NTP) server. • Click **Apply** to save all changes.
Daylight Saving Time	• Select **Adjust system clock automatically for daylight saving time**. • Optional: Select **Enable customized daylight saving time table** and then add the daylight savings time data. • Click **Apply** to save all changes.
Codepage	• Select the file name for encoding non-Unicode file name conversion. • Click **Apply** to save all changes.

Storage Manager

Storage Manager is a system utility that enables you to manage storage space. You can perform the following tasks.

- Create and configure storage pools, volumes, LUNs, and shared folders

- View the amount of free storage space

- Check the health of installed disks

- Back up data using snapshots

- Manage external storage devices connected to the NAS, such as USB drives and expansion units

> **Note**
> The utility name changes depending on your NAS model. If the NAS supports snapshots, the name becomes Storage & Snapshots.
> For details on using Storage Manager, see the QTS Getting Started Guide.

Security

The **Security** page includes the following tabs.

Tab	Possible User Actions

Security Level	- Select one of the following.
	
	  - Allow all connections
	
	  - Deny connections from the list
	
	  - Allow connections from the list only
	
	- Add IP addresses or network domains.
	
	- Click **Apply** to save all changes.
	
	> **Important**
	> Blocking an IP address prevents connections to the server regardless of the connection ports used.

Network Access Protection	- Select **Enable Network Access Protection** and then select and configure the following.
	
	  - SSH
	
	  - Telnet
	
	  - HTTP(S)
	
	  - FTP
	
	  - SAMBA
	
	  - AFP
	
	- Click **Apply** to save all changes.

Tab	Possible User Actions
Certificate & Private Key	• Replace the certificate • Download the certificate For details, see Certificate & Private Key.
Password Policy	• Select the requirements for password strength. • Force NAS users to regularly change their password. • Click **Apply** to save all changes.

Certificate & Private Key

Certificates are used to verify the identity of a QNAP NAS and to create SSL/TLS encrypted communications between users and their NAS services (including web sites, FTP, and more).

Field	Description
Download Certificate	Click to download a certificate, private key (or intermediate certificate).
Replace the Certificate	There are three methods to replace the original certificate: • Import certificate: Upload a certificate and private key (or intermediate certificate) from your PC. • Get from Let's Encrypt: Obtain a free certificate from an open certificate authority. **Note** Let's Encrypt is not affiliated with QNAP, and QNAP cannot not guarantee its safety, browser compatibility, or quality. If you have any concerns about using a Let's Encrypt certificate, please use a myQNAPcloud SSL certificate instead. • Create self-signed certificate: Enter the required information to create a self-signed certificate.

Hardware

The **Hardware** page includes the following tabs.

Tab	Possible User Actions

General	• Select one of the following.
	
	    • Enable configuration reset switch
	
	    • Enable the light signal alert when the free storage size is less than the value (Only support simple volume)
	
	    • Enable write cache (EXT4 delay allocation)
	
	    • Run user defined processes during startup
	
	    • Turn on LED light
	
	• Click **Apply All** to save all changes.

Audio Alert	• Select one of the following.
	
	    • System operations (startup, shutdown, and firmware upgrade)
	
	    • Enable speech notification
	
	• Click **Apply All** to save all changes.

Smart Fan	After enabling Smart Fan, the fan rotation speed will be automatically adjusted according to the server temperature. QNAP recommends enabling this option. You can define the system temperatures to trigger high speed or low speed rotation of the fan. By manually setting the fan rotation speed, the fan will rotate at the defined speed continuously. **Note** The available smart fan settings vary depending on the NAS model.
Graphics Card	You can view the list of installed graphics card. To check the list of compatible cards, go to https://www.qnap.com/compatibility?device_category=gpgpu.

Power

The **Power** page includes the following tabs.

Tab	Possible User Actions

EuP Mode Configuration	• Select one of the following.
	
	    • Enable
	
	    • Disable
	
	• Click **Apply** to save the changes.
	
	For details, see EuP Mode Configuration.

Tab	Possible User Actions

Wake-on-LAN	• Select one of the following.
	
	    • Enable
	
	    • Disable
	
	• Click **Apply** to save the changes.
	
	For details, see Wake-on-LAN.

Power Recovery	• Select one of the following.
	
	    • Resume the server to the previous power-on or power-off status
	
	    • Turn on the server automatically
	
	    • The server should remain off.
	
	• Click **Apply** to save the changes.

EuP Mode Configuration

EuP (also Energy-using Products) is a European Union (EU) directive designed to improve the energy efficiency of electrical devices, reduce use of hazardous substances, increase ease of product recycling, and improve environment-friendliness of the product.

Field	Description
Enable	When EuP is enabled, the following settings will be affected so that the server maintains low power consumption (less than 1W) when the server is powered off: • Wake on LAN: Disabled. • AC power resumption: The server will remain off after the power restores from an outage. • Schedule power on/ off/ restart settings: Disabled.
Disable (default)	When EuP is disabled, the power consumption of the server is slightly higher than 1W when the server is powered off. EuP is disabled by default so that you can use the functions Wake on LAN, AC power resumption, and power schedule settings properly.

Wake-on-LAN

This option lets you enable or disable the Configure Wake on LAN feature. If enabled, this feature allows the NAS to be powered on remotely from the LAN by the NSS Discovery Tool found in the set-up wizard CD or by a user-generated program incorporating a "magic packet" in the code.

> **Note**
> The function or its content is only applicable on some models.

Notification

The **Notification** page includes the following tab.

Tab	Possible User Actions
Push	• Enable myQNAPcloud. • Download the QVR Pro Client mobile application and then enable push notification. • View the list of paired devices.

QVR Pro Backup / Restore

Back Up Surveillance Settings

Click **Backup** to back up the surveillance settings, including recording storage, camera settings, event management, users, privileges, e-maps, and views.

Restore Surveillance Settings

Click **Browse** to select the backup file and then click **Restore**.

> 🛑 **Important**
> If the selected file is in a CacheMount shared folder, ensure that CacheMount is installed on this device and is correctly configured. The shared folder name must remain the same.

External Device

The **External Devices** page includes the following tab.

Tab	Possible User Actions

UPS	• Select one of the following.
	
	    • USB connection
	
	    • SNMP connection
	
	    • Network UPS slave
	
	• Click **Apply All** to save all changes.
	
	For details, see UPS Settings.

UPS Settings

Enable UPS (Uninterruptible Power Supply) support to protect your NAS from abnormal system shutdown caused by power disruption. There are two options provided for the NAS during a power failure:

• Turn off the server after the AC power fails: The NAS shuts itself down after the specified time.

• Enter the auto-protection mode after the AC power fails: The NAS stops all running services and unmounts all volumes after the specified time.

However, regardless of the specified time, the NAS automatically turns itself off or enters the auto-protection mode 30 seconds after a power outage if the remaining UPS battery charge is less than 15%.

System Status

The **System Status** page includes the following tabs.

Tab	Possible User Actions
System Information	View the following information. • Server name • Model name • CPU • Serial number • Total number • Dual channel supported • Memory slots • Firmware version • System up time • Time zone • Filename encoding • Q'center address **Note** This page refreshes every 6 seconds.
Network Status	View the following information for each ethernet port. • Link • IP address • MAC address • Subnet mask • DNS • Packets received • Packets sent • Error packets
Hardware Information	View an overview of the CPU and memory usage, system and disk drive temperatures, and fan speed.

Logs

QVR Pro displays the following logs:

Log	Description
System events	Displays a list of system-related events such as volume creation, application installation, and firmware updates.
System connections	Displays a list of connection attempts to the system.

Log	Description
Surveillance events	Displays a list of surveillance-related events such as motion detection, recording space full, and event URL.
Surveillance connections	Displays a list of connection attempts to the QVR Pro Client.
Surveillance settings	Displays a list of the changes made to the surveillance settings.

Resource Monitor

The **Resource Monitor** displays the following tabs.

Tab	Possible User Actions
Overview	View the following information. • Average CPU Usage • Memory Usage • Total Physical Network Usage • Processes
System Resource	View the following information. • CPU • Memory • Network
Storage Resource	View the following information. • Volume/LUN activity • Pool activity • RAID activity • Disk activity • Storage space
Processes	View the list of processes and the following information. • Process name • User • PID • Status • CPU usage • Memory

Network & Virtual Switch

Network & Virtual Switch integrates physical interface management, virtual adapters (VMs and containers), Wi-Fi, DHCP server, default gateway, IPv6, and Thunderbolt features. It also supports virtual switches that

can bridge 1 Gigabit and 10 Gigabit environments just like using physical switches. You can bridge 1GbE devices and the NAS via virtual switches, and also bridge your NAS and 10GbE environment for file access from the NAS or remotely from the internet.

> **Note**
> These functions or their content only apply to some models. To check for applicable models, refer to the product comparison table on the QNAP website. The topology may vary among different models.

4. Surveillance Settings

QVR Pro provides the following surveillance settings.

Feature	Possible User Actions
Camera Settings	• Add a camera one at a time or by batch. • Edit camera settings. • Assign a network interface to a camera. • Delete a camera. • Share a channel. For details, see Camera Settings.
Recording Storage	• Add a recording space. • Edit recording space settings. • View recording space details. • Delete a recording space. • Specify the recording location and recording size for normal and event recordings. • Import recording data. • Back up recording data. For details, see Recording Storage.
Event Management	• Add a rule. • Edit a rule. • Delete a rule. For details, see Event Management.
License Management	View QVR Pro license information. For details, see License Management.
Recovery Management	• View the edge recording status. • View the recovery status. For details, see Recovery Management.

Feature	Possible User Actions
Metadata Vault	• Add a data source. • Pair cameras with data sources. • Configure the on-screen display (OSD) settings. • Edit the data source settings. • Remove a data source from the list. • Enable or disable a data source. • View the metadata list from connected data sources. For details, see Metadata Vault.

Camera Settings

The **Camera Settings** screen enables you to manage the cameras in your network.

You can modify the following settings.

Setting	Description
Connection	QVR Pro automatically detects the settings of added cameras. You can modify the connection settings as required. For details, see Connection Settings.
Stream and Recording	QVR Pro automatically detects the video stream settings and displays the information for all available streams. One camera can support up to three video streams depending on a camera's capabilities. QVR Pro allows you to configure various recording settings, including normal recording, event recording, and Autosnap. For details, see Stream and Recording Settings.
Event	QVR Pro allows you to specify which digital input status is considered an event. The options vary depending on the camera.

Adding Cameras

> **Note**
> The maximum number of cameras allowed depends on the NAS model and the number of camera licenses installed.

There are several ways to add a camera:

• Add a camera that is connected to the network. For details, see Adding a Camera Connected to the Network.

• Add a camera manually. For details, see Adding a Camera Manually.

• Batch add multiple cameras. For details, see Batch Adding Multiple Cameras.

Adding a Camera Connected to the Network

QVR Pro displays the list of added cameras on the **Camera Settings** screen. Perform the following task to add a camera that is connected to the network.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first camera.
Add	Click to add more cameras.

   The **Camera Selection** screen appears.

3. Select a camera from the list.

   • QVR Pro automatically scans the network for available cameras.

   • To add a camera from a different network, use the Advanced Search feature. To add a camera of a specific brand or model, use the Filter feature.
     For details, see Using the Search Features.

4. Click **Next**.
   The **Edit Camera Selection** screen appears.

5. Specify the camera information, including the account name and password.

   Tip
   You can click **Test** to verify the camera connection.
   For details, see Testing the Camera Connection.

6. Click **Next**.
   A confirmation message appears.

7. Select one of the following options and then click **OK**.

Option	Description
Edit now	Immediately modify the camera settings.
Edit later	Use the default camera settings. You can modify the settings later.

8. Depending on your selection in the previous step, perform one of the following steps.

   • Modify the camera settings.
     For details on the camera settings, see Editing the Camera Settings.

   • Proceed to the next step.

9. Click **Finish**.

The camera is added to the QVR Pro server.

Adding a Camera Manually

1. Open **Camera Settings** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first camera.
Add	Click to add more cameras.

The **Camera Selection** screen appears.

3. Click **Next**.

4. Click **Add Manually**.
A new entry is added to the list.

5. Specify the following information.

Field	Task
Name	Specify a name for the camera.
Brand	Select the camera brand.
Model	Select the camera model.
IP Address	Specify the IP address.
Port	Modify the port number. The default value is 80.
RTSP Port	Modify the real time streaming protocol (RTSP) port number. The default value is 554.
Account	Specify the camera username.
Password	Specify the camera password.

> **Tip**
> You can click **Test** to verify the camera connection.
> For details, see Testing the Camera Connection.

6. Click **Next**.
A confirmation message appears.

7. Select one of the following options and then click **OK**.

Option	Description
Edit now	Immediately modify the camera settings.
Edit later	Use the default camera settings. You can modify the settings later.

8. Depending on your selection in the previous step, perform one of the following steps.

- Modify the camera settings.
  For details on the camera settings, see Editing the Camera Settings.

- Proceed to the next step.

9. Click **Finish**.

The camera is added to the QVR Pro server.

Batch Adding Multiple Cameras

You can batch add multiple cameras to the QVR Pro server if they share the same login credentials.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first camera.
Add	Click to add more cameras.

The **Camera Selection** screen appears.

3. Select the cameras from the list.
   To add cameras from a different network, use the Advanced Search feature. To add cameras of specific brands or models, use the Filter feature.
   For details, see Using the Search Features.

4. Click **Next**.
   The **Edit Camera Selection** screen appears.

5. Select the cameras that share the same login credentials.

6. Click **Batch Login**.

7. Specify the following information.

Field	Task
Username	Specify the camera username.
Password	Specify the camera password.
Port	Specify the port number.
RTSP Port	Specify the real time streaming protocol (RTSP) port number.

8. Click **Apply**.

9. Click **Next**.
   A confirmation message appears.

10. Select one of the following options and then click **OK**.

Option	Description
Edit now	Immediately modify the camera settings.
Edit later	Use the default camera settings. You can modify the settings later.

11. Depending on your selection in the previous step, perform one of the following steps.

    • Modify the camera settings.
      For details on modifying the camera settings, see Editing the Camera Settings.

    • Proceed to the next step.

12. Click **Finish**.

The cameras are added to the QVR Pro server.

Editing the Camera Settings

- After adding a camera, you can click **Edit** (📝) to modify its connection, stream, recording, and event settings.

Connection Settings

The following settings are available on the **Connection** tab.

Field	Description
Preview	Displays a snapshot of the video feed if the camera connection to QVR Pro has been established.
Name	Displays the name of cameras that have been added to QVR Pro using the following format: `<brand>_<model>`. The default name of a manually added camera is `Camera`.
Brand	Displays the camera brand.
Model	Displays the camera model.
IP Address	Displays the camera IP address.
Port	Displays the camera port number. The default value is 80.
RTSP Port	Displays the real time streaming protocol (RTSP) port number. The default value is 554.
Account	A text field where you can type the camera account name.
Password	A text field where you can type the camera password. 💡 **Tip** You can hide or display the password by clicking **Password** (👁).
Action	Displays the **Test** button. For details, see Testing the Camera Connection.

Editing the Camera Connection Settings

1. Open **Camera Settings** from the desktop or from the main menu.

2. Locate the camera in the list and then click **Edit** (📝).
 The **Edit** screen appears.

3. On the **Connection** tab, modify the following settings as required.

Field	Task
Name	Type a name for the camera.
Brand	Select the camera brand.
Model	Select the camera model.
IP Address	Type the IP address.
Port	Modify the port number. The default value is 80.
RTSP Port	Modify the real time streaming protocol (RTSP) port number. The default value is 554.

Account	Type the camera account name.
Password	Type the camera password.

4. Click **Test** to test the connection.

5. Click **Apply**.

Stream and Recording Settings

The following settings may be available on the **Stream & Recording** tab, depending on the model of the selected camera.

Stream Settings

Field	Description
Fisheye mount type	Displays the specified mount type. The mount type determines the location of the fisheye camera.
Stream mode	Displays the specified stream mode. The options are hidden when a camera only supports the single stream mode.
Name	The default format of a stream name is `Stream<number>`. The number changes depending on the number of supported streams.
Video compression	Displays the default video compression settings of the stream.
Resolution	Displays the default resolution of the stream. In cases where a camera has multiple streams and two or all streams use the same resolution, QVR Pro checks the video compression settings of each stream. When a camera has multiple streams, QVR Pro automatically assigns different resolutions to different streams.
Frame rate	Displays the frame rate or frequency in the number of frames per second (FPS).
Bitrate control	Displays the default bitrate control. You can choose to use one of the following options. • VBR: variable bit rate • CBR: constant bit rate
Bit rate	Displays the bit rate when CBR is selected.
Quality	Displays the quality when VBR is selected.

Recording Settings

Option	Description
Enable video recording	Selecting this option allows you to enable and configure the following features. • Normal recording: QVR Pro records videos based on the specified schedule. **Note** The schedule indicates the hours and days when QVR Pro records videos. **Workdays** are days from every Monday to Friday. **Weekends** include every Saturday and Sunday. • Event recording: QVR Pro only records video streams when an event is detected. • Audio recording: QVR Pro captures the audio when recording videos. • Edge recording recovery: QVR Pro records and saves the selected stream directly to a camera SD card. The recorded stream can be used for recording recovery in the future. **Note** This feature only supports using Stream 1 and H.264 codec. For details, see Enabling Video Recording.
Enable Autosnap	Selecting this option allows QVR Pro to take snapshots at regular intervals. For details, see Enabling Autosnap.

Editing the Stream Settings

Important
QVR Pro hides the features that the selected camera does not support. Some of the options may not be available to your camera.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Locate the camera in the list and then click **Edit** (✎).
   The **Edit** screen appears.

3. Select the **Stream & Recording** tab.

4. Optional: Select the stream mode.

   • Single stream

   • Multiple stream

5. Click **Edit** (✎) beside **Stream Settings**.
   The **Stream Settings** screen appears.

6. Optional: Configure the fisheye settings.

   a. Select **Enable fisheye lens**.

b. Select the fisheye mount type.

- Wall mount

- Ceiling mount

- Table mount

c. Select the display mode.

> **Note**
> Ensure that the camera fisheye lens has been installed before enabling this feature. After installing the lens, you must also verify that the camera displays a circular video image. Otherwise, the dewarped image would be incorrect.

7. Configure the bitrate reduction settings.

a. Click **Edit** (✎) beside **Bitrate Reduction**.
The **Codec Optimization** screen appears.

b. Select the following options if needed.

Option	Description
Enable bitrate reduction	Bitrate reduction is a compression method that lowers the bitrate, and reduces the number of keyframes and frames per second (FPS). This feature works best with still videos. When this feature is enabled, you can customize the dynamic keyframe interval. You can also enable dynamic FPS to decrease the number of frames per second for still videos.
Enable dynamic keyframe interval	Dynamic keyframe interval increases the interval between keyframes to reduce the video size. This feature works best with still videos.

c. Click **Apply**.

8. Modify the following settings if needed.

| Field	Task
Video compression	Select the video compression.
Resolution	Select the resolution.
Frame rate	Select the frame rate.
Bitrate control	Select one of the following bitrate controls. • VBR: variable bit rate • CBR: constant bit rate
Bit rate	Select the bitrate. This option is only available when CBR is selected.
Quality	Select the quality. This option is only available when VBR is selected.

9. Optional: Click **Preview**

> **Note**
>
> - To see the stream preview, ensure that you allow pop-ups in your browser settings.
>
> - Depending on the camera model, you may need to restart the camera to see the preview. Restarting the camera may affect recording sessions that are using the selected stream.

QVR Pro displays a preview of the camera stream.

10. Click **Apply**.

Enabling Video Recording

1. Click **Camera Settings** from the desktop or from the main menu.

2. Locate the camera from the list and then click **Edit** (✎).
   The **Edit** window opens.

3. Select the **Stream & Recording** tab.

4. Select **Enable video recording**.

5. Modify the following settings as required.

Option	Possible User Actions
Normal Recording	• Select one or multiple streams. • Specify the schedule. 💡 **Tip** The schedule indicates the hours and days when QVR Pro performs normal recording. **Workdays** are days from every Monday to Friday. **Weekends** include every Saturday and Sunday. You can use the default schedule or click **Add** (+) to create a custom schedule and specify active and inactive time slots.

Event Recording	• Select one stream or multiple streams
	
	• Click **Edit** (✎) to configure the following settings:
	
	    • Pre-recording: the duration (seconds) of video recording before the actual alarm event.
	
	    • Post-recording: the duration (seconds) of video recording after the actual alarm event.

6. Optional: Select **Enable audio recording on this camera** and **Edge Recording Recovery**.

7. Click **Apply**.

Enabling Autosnap

1. Click **Camera Settings** from the desktop or from the main menu.

2. Locate the camera from the list and then click **Edit** (✎).
   The **Edit** window opens.

3. Select the **Stream & Recording** tab.

4. Select **Enable Autosnap**.

5. Select a stream.

6. Specify the schedule.

> **Tip**
> The schedule indicates the hours and days when QVR Pro performs normal recording.
> **Workdays** are days from every Monday to Friday. **Weekends** include every Saturday and
> Sunday.
> You can use the default schedule or click **Add** (+) to create a custom schedule and specify
> active and inactive time slots.

7. Click **Edit** (✎) beside **Enable Autosnap**.
   The **Autosnap** window appears.

8. Specify the interval between every snapshot.

9. Specify the location to save the snapshots.

   - NAS folder

   - Remote destination

      1. Remote host IP address

      2. Destination path

      3. User name

      4. Password

> **Tip**
> You can click **Test** to test the connection.

10. Click **Apply**.
    QVR Pro applies the Autosnap settings and closes the **Autosnap** window.

11. Click **Apply**.

Event Settings

> **Note**
> Only specific camera models support this feature.

The following settings are available on the **Event** tab.

Feature	Possible User Tasks
Alarm Input	Select the alarm input for each camera.
Alarm Output	Select the alarm output for each camera.

Assigning a Network Interface to a Camera

QVR Pro allows you to assign a network interface to each camera. This ensures that the bandwidth is load-balanced.

1. Open **Camera Settings** from the desktop or from the main menu.

2.
   Locate the camera in the list and then click **Network Interface** (⬙).
   The **Network Interface Assignment** screen appears.

3. Select an interface from the list.

4. Click **Apply**.
   The changes are saved.

Testing the Camera Connection

Test the camera connection to verify that the settings are correct.

QVR Pro displays the following connection status icons.

Connection Status Icons

Icon	Description
✅	QVR Pro successfully connected to the camera.
⚠	QVR Pro was unable to connect to the camera. **Tip** You can mouse over the warning icon to display additional information.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Locate the camera in the list and then click **Edit**.
   The **Edit** screen appears.

3. On the **Connection** tab, locate the camera in the list.

4. Under the **Action** column, click **Test**.
   QVR Pro tests the connection and displays the connection status.

Deleting a Camera

Delete cameras to remove them from the list.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Locate the camera in the list and then click **Delete** (🗑).
   A confirmation message appears.

3. Click **OK**.
   The selected camera is deleted from the list.

Sharing a Channel

QVR Pro allows you to share a live channel view without requiring the viewers to install a plugin.

1. Open **Camera Settings** from the desktop or from the main menu.

2.
   Locate the camera in the list and then click **Share** (⌁).

The **Share Channel** screen appears.

3. Select **Share this channel**.
   The available streams for the selected channel are displayed.

4. Select the stream.

5. Optional: Enable the validation code.

   a. Select **Enable**.

   b. Type a validation code.

6. Click **Apply**.
   QVR Pro creates the shareable link.

Customizing the Camera List

The camera list displays all the cameras that have been added to QVR Pro. You can choose to modify the camera list in two ways.

- Click ▽.

   a. Specify the search parameters or type the camera name.

      - Camera Brand

      - Camera Model

      - Status

      - Camera Name

   💡 **Tip**
   You can specify one or all options, as required.

   b. Click **Apply**.

   The search results appear.

- Click ➕ to display the list of available camera information.

   a. Select or deselect any of the following to customize the table columns.

      - Channel

      - Status

      - Recording Settings

      - Days Recorded

      - Brand

      - Camera Model

      - IP Address

      - MAC Address

• Firmware Version

The selected items are added to the camera list table.

Using the Search Features

QVR Pro provides the following search methods.

- Use advanced search.
  For details, see Using Advanced Search.

- Use search filters.
  For details, see Using Search Filters.

Using Advanced Search

Tip
When searching a different network, use the camera's login username, password, or port number for more accurate search results.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first camera.
Add	Click to add more cameras.

The **Camera Selection** screen appears.

3. Click **Advanced Search** (🔍).
   The advanced search options appear.

4. Specify the search parameters.

Option	Description
Search this NAS network	QVR Pro searches for cameras connected to the network.
Search a different network	QVR Pro searches for cameras connected to another network. Specify the search parameters by providing the following information. • Start IP - Type the first IP address in the search range. • End IP - Type the last IP address in the search range. • Optional: Port - Type the camera port number. • Optional: Username - Type the camera user name.

	• Optional: Password - Type the camera password.

> **Tip**
> You can select one or both options, as required.

5. Click **Apply**.
   The search results appear.

Using Search Filters

> **Tip**
> Use the filter feature to only display cameras of a specific brand and model. For best results, add cameras of the same brand and model by batch.

1. Open **Camera Settings** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first camera.
Add	Click to add more cameras.

   The **Camera Selection** screen appears.

3. Click **Filter** (▽).
   The filter options appear.

4. Specify the search parameters.

   • Camera Brand

   • Camera Model

> **Tip**
> You can specify one or both options, as required.

5. Click **Apply**.
   The search results appear.

Importing or Exporting Camera Settings

You can import or export the profiles of your surveillance cameras to quickly configure or back up camera connection settings.

> **Note**
>
> • QVR Pro only supports importing CSV files in the UTF-8 format.
>
> • You can edit the CSV files using Microsoft Excel or other software programs that support the CSV format.

1. Open **Camera Settings** from the desktop or the main menu.

2. Click **Export/Import Camera Settings**.

3. Perform one of the following tasks.

Task	Steps
Export Camera Settings	a. Click **Export Camera Settings**. b. Choose whether to include camera passwords in the exported CSV configuration file. c. Click **Export**.
Import Camera Settings	a. Click **Import Camera Settings**. b. Click **Browse** and select a CSV configuration file. c. Click **Next**. d. Select the camera profiles that you want to import. e. Click **Apply**.

Recording Storage

The **Recording Storage** screen provides an overview of recording spaces and cameras as well as several configuration options for managing your storage space.

Overview

Recording Space

A recording space is composed of one or more volumes allocated for video surveillance. By creating a dedicated storage space for video recordings, QVR Pro transforms your NAS into a powerful video recording device.

Adding a Local Recording Space

You can add a local recording space to allocate a fixed amount of storage space for video recordings.

> ⚠️ **Warning**
> Modifying, moving, or deleting the files in the `QVRProDB` and `QVRProSpace_[volume name]` folders will cause QVR Pro to malfunction.

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Space**.

3. Click one of the following buttons.

Button	Description
+	Click to add your first recording space.
Add	Click to add more recording spaces.

The **Add Recording Space** screen appears.

4. Select **Local**.

5. Specify the following information.

Field	Task
Name	Specify a name for the recording space. **Note** Name requirements: • Length: 1-30 characters. • Valid characters: A-Z, a-z, 0-9 • Valid special characters: space ( ), hyphen (-), underscore (_), and period (.)
Overwrite Trigger Threshold	Select the overwrite trigger threshold. **Note** QVR Pro starts overwriting the oldest recording data when the percentage of used recording space exceeds the specified threshold.
Pre-allocated	Select this option to pre-allocate storage space for recording data. **Important** If you choose not to enable this option, ensure that you have enough storage space and the overwrite mechanism can be triggered as expected. Otherwise, QVR Pro would stop recording due to insufficient space.

6. Select a volume.

7. Specify the estimated size of allocated space.

8. Click **Next**.

9. Optional: Assign a spare volume or a spare shared folder if available.

    a. Select a volume or a CacheMount shared folder.

Tip
You can click **Local** or **CacheMount** to view available volumes or shared folders.

Note
You cannot assign a spare CacheMount shared folder if the active storage space consists of more than one local volume.

    b. Specify the amount of allocated space.

10. Click **Next**.

11. View the summary of the recording space.

> 💡 **Tip**
> Click **Back** to return to earlier steps and modify settings.

12. Click **Apply**.
    A confirmation message appears.

13. Click **Apply**.

14. Click **Finish**.
    The new recording space is created. QVR Pro creates a shared folder using the name
    `QVRProSpace_[volume name]`.

Adding a Cloud Recording Space

You can add a cloud recording space using CacheMount shared folders and allocate a fixed amount of storage space for video recordings.

> ⚠️ **Warning**
> Modifying, moving, or deleting the files in the `QVRProDB` and `QVRProSpace_[volume name]` folders will cause QVR Pro to malfunction.

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Space**.

3. Click one of the following buttons.

Button	Description
+	Click to add your first recording space.
Add	Click to add more recording spaces.

The **Add Recording Space** screen appears.

4. Select **CacheMount**.

5. Specify the following information.

Field	Task
Name	Specify a name for the recording space. 📘 **Note** Name requirements: • Length: 1-30 characters. • Valid characters: A-Z, a-z, 0-9 • Valid special characters: space ( ), hyphen (-), underscore (_), and period (.)

Field	Task
Overwrite Trigger Threshold	Select the overwrite trigger threshold. **Note** QVR Pro starts overwriting the oldest recording data when the percentage of used recording space exceeds the specified threshold.

Note
Space pre-allocation is not available for CacheMount shared folders.

6. Select a CacheMount shared folder.

Tip
To add and manage CacheMount shared folders, go to CacheMount.
For details, see the CacheMount help.

7. Specify the estimated size of allocated space.

8. Click **Next**.

9. Optional: Assign a spare volume or a spare shared folder if available.

   a. Select a volume or a CacheMount shared folder.

Tip
You can click **Local** or **CacheMount** to view available volumes or shared folders.

   b. Specify the amount of allocated space.

10. Click **Next**.

11. View the summary of the recording space.

Tip
Click **Back** to return to earlier steps and modify settings.

12. Click **Apply**.
    A confirmation message appears.

13. Click **Apply**.

14. Click **Finish**.

Editing Recording Space Settings

You can edit the recording space name, change the retention ratio, expand the allocated volume, or add a spare volume.

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Space**.

3. Select a recording space.

4. Under **Action**, click **Edit** (✎).

The **Edit Recording Space Settings** screen appears.

5. Under **Allocated Volume(s)**, modify any of the following information.

Field	Task
Name	Specify a name for the recording space. **Note** Name requirements: • Length: 1-30 characters. • Valid characters: A-Z, a-z, 0-9 • Valid special characters: space ( ), hyphen (-), underscore (_), and period (.)
Overwrite trigger threshold	Specify the overwrite trigger threshold. **Note** QVR Pro starts overwriting the oldest recording data when the percentage of used recording space exceeds the specified threshold.

6. Optional: Expand the estimated size of allocated space.

Important
The new volume size must be larger than the current size.

    a. Under the **Allocated Size** column, click **Expand Size** ( ).

    b. On the **Expand Size** screen, select the new volume size.

    c. Click **Apply**.

7. Optional: Add a new volume.

Important
Deleting an existing volume is not allowed.

    a. Select a volume from the list of available volumes.

    b. Specify the allocated amount.

8. Optional: Assign a spare volume or a spare shared folder if available.

    a. Select a volume or a CacheMount shared folder.

Tip
You can click **Local** or **CacheMount** to view available volumes or shared folders.

    b. Specify the amount of allocated space.

9. Click **Apply**.

Viewing the Recording Space Dashboard

Check the health status of the recording spaces and review the list of recording spaces.

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Space**.

3. Check the following widgets.

Widget	Description
Storage Overview	Displays each recording space as a slice in the pie chart. The pie chart is a visual representation of how each recording space relates to other recording spaces.
Camera Overview	Displays the overall status of the cameras in QVR Pro. The widget also lists the following information: • Total: the total number of cameras that have been added to QVR Pro • Without recording space assigned: the number of cameras to which no recording space is assigned • Overwrite disabled: the number of cameras where QVR Pro does not delete the oldest recordings to make room for new recordings.

4. Check the recording space list.

Column	Description
Name	Displays the specified recording space name.
Status	Displays the status of the recording space health. The status can be any of the following: • Normal: the recording space is available and in use • Idle: the recording space is available but not in use. • Allocating: QVR Pro is creating the recording space • Spare Enabled: the spare volume is in use • Deleting: QVR Pro is deleting the recording space • Error: the recording space has encountered an issue and is not available • Warning: QVR Pro has detected an issue that might result in an error • Normal (Expanding): QVR Pro is increasing the recording space size

Column	Description
Recording space capacity	Displays the following information: • Total: total storage space • Used: total storage space used • Reserved: the percentage of the reserved volume that remains unused before overwriting starts This displays information from Storage & Snapshots. To change the percentage, go to QTS.
Recording status	Displays the total number of channels recording to the space.
Action	Displays the following buttons: • Edit: click to modify the recording space settings • Remove: click to delete a volume You must provide the password and confirm the action before QVR Pro deletes the volume. • Details: click to view the recording space details For details, see Viewing Recording Space Details.

Viewing Recording Space Details

The **Details** screen gives you a quick overview of the recording space information.

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Space**.

3. Select the recording space and then click 👁 under the **Action** column.
   The **Details** screen appears.

4. Review the following information.

Field	Description
Name	Displays the recording space name
Number of allocated volume(s)	Displays the total number of allocated volumes
Overwrite trigger threshold	Displays the percentage of the reserved volume that will remain unused before overwriting the recording files
Total allocated size	Displays the total size of the allocated volume(s)
Allocated volume(s)	Displays the volume name, RAID Type/Disk, storage space name, comparison between the allocated size and the total size, and the space status of the allocated volumes
Spare volume(s)	Displays the volume name, RAID Type/Disk, storage space name, comparison between the allocated size and the total size, and the space status of the spare volumes

5. Click **OK**.

Deleting a Recording Space

Delete an existing recording space if you no longer need the space or if you want to re-allocate the volume.

> ⚠️ **Warning**
> Deleting a recording space also deletes the recording information. The deleted space cannot be recovered.

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Space**.

3. Select the recording space and then click 🗑 under the **Action** column.
   A confirmation message appears.

4. Review the recording space details and then click **Delete**.
   A warning message appears.

5. Type the password and then click **OK**.
   The recording space is deleted.

Recording Location and Days

QVR Pro allows you to specify where to save recorded videos. You can also specify the number of days that normal and event recording streams are recorded, the maximum file size for the saved files, and whether or not to overwrite files older files to make space for new recordings.

Editing the Channel Recording Settings

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Location and Days**.

3. Click ✎ beside any camera on the list.
   The **Edit Channel Recording Settings** screen appears.

4. Select **Use custom settings** and then modify the following settings as required.

Stream Type	Possible User Actions
Normal Event	• Select the recording location. • Specify the minimum and maximum number of days. • Specify the maximum file size. • Select **Enable** or **Disable** to specify whether or not to overwrite older files. 🛑 **Important** Specifying the minimum number of days and selecting **Disable** may cause conflict. In such cases, QVR Pro still overwrites the oldest recording and creates a log entry for this action.

5. Click **Apply**.
   The changes are applied.

Editing the Default Channel Settings

> 💬 **Note**

> Changes to the default settings only apply to the currently selected channel. You must manually repeat the process for other channels.

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Location and Days**.

3. Click ✎ beside any camera on the list.
   The **Edit Channel Recording Settings** screen appears.

4. Click **Edit Default Settings**.
   The **Edit Default Settings** screen appears.

5. Select **Use default settings** and then modify the following settings as required.

Stream Type	Possible User Actions
Normal Event	• Select the recording location. • Specify the minimum and maximum number of days. • Specify the maximum file size. • Select **Enable** or **Disable** to specify whether or not the overwriting of older files is allowed. ⊙ **Important** Specifying the minimum number of days, and **Disable** may cause conflict. In such cases, QVR Pro still overwrites the oldest recording and creates a log entry for this action.

6. Click **Apply**.
   The default channel settings are modified.

Recording Management

Recording Import

Importing Recording Data

You can import recording data to QVR Pro from the local or a remote NAS.

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Import**.

3. Click **Import Recording**.
   The **Import Recording** window appears.

4. Click **Browse**.

5. Perform one of the following tasks.

Task	Action
Import recordings from the local NAS	**a.** Select **Local NAS**. QVR Pro displays the folders on the local NAS. **b.** Select a folder. 🛑 **Important** You must select a `QVI_Format` folder to import recording data. **c.** Click **Next**.

Import recordings from a remote NAS	**a.** Click **Remote NAS**. The **Remote NAS Login** window appears.
	
	b. Specify the following information.
	
	   • **Host name/IP address**
	
	   • **Port number**
	
	   • **Username**
	
	   • **Password**
	
	c. Click **Connect**. QVR Pro displays the folders on the remote NAS.
	
	d. Select a folder.
	
	🛑 **Important**
	You must select a `QVI_Format` folder to import recording data.
	
	e. Click **Next**.

6. Select a source channel.

7. Select a destination channel.

8. Select a recording space.

9. Specify a time range for the imported recording.

10. Click **Apply**.
    The **Important Notice** window appears.

11. Read the Important Notice.

12. Select a policy for handling duplicate recordings.

    • **Keep the recording on the destination**

    • **Overwrite the recording on the destination**

13. Select **I have read and understood this import notice**.

14. Click **OK**.

QVR Pro starts importing recording data to the specified destination. You can view import tasks in **Import History**.

Recording Backup

Backing Up Recording Data

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Backup**.

3. Click **Create Task**.

4. Specify the following information for the destination NAS.

Field	Action
Task name	Specify a name for the backup task. 🗨 **Note** Name requirements: • Length: 1-64 characters. • Valid characters: A-Z, a-z, 0-9 • Valid special characters: space ( ), hyphen (-), underscore (_), and period (.)
Name or IP address	Specify the name or the IP address of the destination NAS.
Port number	Specify a port number for the connection.
Username	Specify a username for the destination NAS.
Password	Specify the password.
Path	Specify a path for the backup recording data.

5. Optional: Click **Test**.
   QVR Pro tries to connect to the destination NAS with the specified credentials and then displays the test result.

6. Click **Next**.

7. Select camera channels from the channel list.

8. Click **Next**.

9. Select one of the following backup plans.

Plan	Action
Back up recording data in the last few days	a. Select **Back up recording data in the last few days**. b. Specify the number of days.
Back up recording data in a specific time range	a. Select **Back up recording data in a specific time range**. b. Specify the start time and end time.

10. Specify a backup schedule.

    a. Click **Backup Schedule**.
       The **Backup Schedule** window appears.

    b. Select one of the schedule options.

    c. Specify the backup time or the interval between every backup.

    d. Click **Apply**.

11. Optional: Select **Perform the backup task immediately**.

12. Select a recording type.

    • **Back up normal recordings only**

    • **Back up event recordings only**

    • **Back up both normal and event recordings**

13. Select a recording format.

    • **Standard format (mp4)**

    • **QVR Pro format (can be imported to other QVR Pro servers)**

14. Configure backup rules.

    a. Optional: Specify a retention period for the recording data.

    b. Specify a storage policy in the event that the destination space is full.

15. Click **Finish**.

QVR Pro creates the recording backup task. You can view and manage tasks on the task list.

Editing Recording Backup Settings

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Backup**.

3. Locate a recording backup task from the task list.

4. Click 🖉
   The **Edit Recording Backup Task** window appears.

5. Specify the following information for the destination NAS.

Field	Action
Task name	Specify a name for the backup task. **Note** Name requirements: • Length: 1-64 characters. • Valid characters: A-Z, a-z, 0-9 • Valid special characters: space ( ), hyphen (-), underscore (_), and period (.)
Name or IP address	Specify the name or the IP address of the destination NAS.
Port number	Specify a port number for the connection.
Username	Specify a username for the destination NAS.
Password	Specify the password.
Path	Specify a path for the backup recording data.

6. Optional: Click **Test**.
   QVR Pro tries to connect to the destination NAS with the specified credentials and then displays the test result.

7. Click **Next**.

8. Select camera channels from the channel list.

9. Click **Next**.

10. Select one of the following backup plans.

Plan	Action
Back up recording data in the last few days	a. Select **Back up recording data in the last few days**. b. Specify the number of days.
Back up recording data in a specific time range	a. Select **Back up recording data in a specific time range**. b. Specify the start time and end time.

11. Specify a backup schedule.

   a. Click **Backup Schedule**.
      The **Backup Schedule** window appears.

   b. Select one of the schedule options.

   c. Specify the backup time or the interval between every backup.

   d. Click **Apply**.

12. Optional: Select **Perform the backup task immediately**.

13. Select a recording type.

- **Back up normal recordings only**

- **Back up event recordings only**

- **Back up both normal and event recordings**

14. Select a recording format.

- **Standard format (mp4)**

- **QVR Pro format (can be imported to other QVR Pro servers)**

15. Configure backup rules.

a. Optional: Specify a retention period for the recording data.

b. Specify a storage policy in the event that the destination space is full.

16. Click **Finish**.

QVR Pro saves changes to the recording backup task.

Managing Recording Backup Tasks

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Backup**.

3. Select a recording backup task from the task list.

4. Perform any of the following actions.

Action	Step
Start a task	Click ⊙ .
Stop a task	Click ◉ .

Delete a task	a. Perform one of the following actions.
	
	    • Click 🗑 .
	
	    • Click **Delete**.
	
	    A confirmation message appears.
	
	b. Click **OK**.

Enable a task	Click ⬜◯ .
Disable a task	Click ◯⬛ .
View task logs	Click **Logs**. The **Recording Backup Task Logs** window appears. 💡 **Tip** You can click **Export** to download the logs to your device.

Recording File Explorer

Recording File Explorer allows you to access video recordings in File Station. You may play, copy, or download the recording files in the `QVRProRecording/File` folder.

QVR Pro uses an index and frame data to generate media files instead of storing traditional recording files.

> **(!) Important**
> If you enable this feature, you might not be able to retrieve some recorded data if QVR Pro stops working unexpectedly.

File Station supports the following formats:

Object	QVI Format	Standard Format
Folder name	QVI_Format	Standard_Format
File extension	`.qvi`	`.mp4` or `.avi`
Video player	Windows Media Player	Third-party player
Limitations	This format is only supported on Windows.	This format does not support the following: • MxPEG • Digital watermark

Enabling Recording File Explorer

You must enable Recording File Explorer to view recordings in the QVR Pro recording folder (`QVRProRecording/file`).

> **(!) Important**
>
> • If you delete recording files from the `QVRProRecording` folder, you will not be able to access the deleted recordings in QVR Pro.
>
> • The `QVRProRecording/file` folder only provides shortcuts to recording files and does not take up storage space.

1. Open **Recording Storage** from the desktop or main menu.

2. Go to **Recording Management** > **Recording File Explorer** .

3. Select **Use Recording File Explorer to access recordings**.

Using Recording File Explorer

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Recording Management** > **Recording File Explorer** .

3. Click **Open Recording File Explorer**.
   File Station opens in a new tab or window.

4. Specify the duration of a single recording file.

You can play, copy, or download the recording files in the `QVRProRecording/File` folder. Recording files are read-only.

> ⚠️ **Warning**
> Modifying, moving, or deleting the files in the `QVRProDB` and `QVRProSpace_[volume name]` folders will cause QVR Pro to malfunction.

Advanced Settings

Rebuilding the Recording Index

QVR Pro allows you to rebuild the recording index to repair corrupted data. The index usually becomes corrupted when removing a volume with stored recordings.

1. Open **Recording Storage** from the desktop or from the main menu.

2. Go to **Advanced Settings** > **Rebuild Recording Index** .
   The **Rebuild Recording Index** screen appears.

3. Click **Rebuild Recording Index**.

4. Select the channel of the recording indexes that you want to rebuild.

5. Click **Rebuild**.

Event Management

The **Event Management** screen enables you to define rules that identify the types of events and actions that will be monitored in your organization.

Rules

A rule follows a schedule, and a set of events and actions. When the specified events occur within the specified schedule, QVR Pro performs the corresponding actions.

Each rule must have at least one event and one action.

Component	Description
Name	A rule name briefly describes the purpose of the rule. For example, `Start recording after detecting movement - lobby`.
Schedule	A schedule specifies the days of the week and the hours of the day that QVR Pro monitors. There are default schedules available. However, you can create custom schedules as needed.
Event	A predefined behavior or activity that usually signals a problem. Each event triggers a corresponding action or set of actions. For details, see Events.
Action	A predefined response to an event. Each action is triggered by an event or set of events. For details, see Actions.

Adding a Rule

Add a rule to monitor events and assign actions. Each rule follows a specified schedule, and a set of events and actions. When the events occur within the selected schedule, QVR Pro performs the corresponding actions.

You can also decide whether all events are required to occur within a specified period before applying the actions.

> **Tip**
> You can add up to 128 rules.

1. Open **Event Management** from the desktop or from the main menu.

2. Click one of the following buttons.

Option	Description
+	Click to add your first rule.
Add	Click to add more rules.

The **Add Rule** screen appears.

3. Under **Name**, type the following information.

Field	Task
Name	Type a name for the rule.
Description	Type a description that provides more detailed information about the rule.

4. Select **Enable rule**.

5. Under **Schedule**, select a schedule.

> **Note**
> The schedule indicates the hours and days when an event is considered valid. You can use the default settings or create custom schedules by clicking **Add** (+).

6. Click **Next**.
   The **Add Events and Actions** screen appears.

7. Add an event.

   a. Under **If**, click **Add**.
      The **Add Event** screen appears.

   b. Complete the following information.

Field	Task
Name	Type a name for the event.
Type	Select an event type. For details, see Event Types. > **Tip** > You can also copy an existing event from the events list. > For details, see Events List.

Field	Task
Source	Select the camera, server, or other event source to be monitored for the specified events. 📘 **Note** The options vary depending on the selected event type.

    c. Click **OK**.
       You can add multiple events to one rule.

8. Add an action.

    a. Under **Then**, click **Add**.
       The **Add Action** screen appears.

    b. Complete the following information.

Field	Task
Name	Type a name for the action.
Type	Select an event type. For details, see Action Types. 💡 **Tip** You can also copy an existing action from the actions list. For details, see Actions List.
Target	Select the target that receives the specified actions. 📘 **Note** The options vary depending on the selected action type. You can choose to send the camera action to individual cameras or to all cameras on the selected server. You can also send an email or SMS message to the specified recipients.

    c. Click **OK**.
       You can add multiple actions to one rule.

  9. Optional: Select **All events must occur within the specified period**.

10. Click **Next**.

11. Click **Finish**.

Enabling or Disabling a Rule

Enable or disable rules as required. Disabling a rule does not delete it from the rule list. You can choose to enable a rule again at a later time.

💡 **Tip**
You can also enable or disable a rule from the **Edit Rule** screen.

  1. Open **Event Management** from the desktop or from the main menu.

2. Locate the rule from the list.

3. Under **Status**, perform one of the following steps.

Option	Task
Enable	Move the slider to the right.
Disable	Move the slider to the left.

Editing a Rule

Modify the rule information, events, and actions.

1. Open **Event Management** from the desktop or from the main menu.

2. Locate a rule from the list and then click **Edit** (✎).
   The **Edit Rule** screen appears.

3. Optional: Perform any of the following tasks.

   • Modify the rule name.

   • Modify the description.

   • Select or deselect **Enable rule**.

   • Modify the schedule.

   > **Tip**
   > You can also add, edit, or delete a schedule from this screen.

4. Modify the list of events and actions. For details, see Editing Events and Actions.

5. Click **Apply**.

Editing Events and Actions

1. Go to **Event Management** > **Edit** > **Events and Actions** .
   The **Events and Actions** tab appears.

2. Optional: Under **If**, you can perform any of the following tasks.

   • Click **Add** and then follow the steps for adding an event.

   • Click **Edit** (✎) and then modify the event details.

   • Click **Remove** (🗑) or select the event and then click **Remove**.

3. Optional: Under **Then**, you can perform any of the following tasks.

   • Click **Add** and then follow the steps for adding an action.

   • Click **Edit** (✎) and then modify the action details.

   • Click **Remove** (🗑) or select an action and then click **Remove**.

4. Click **Apply**.

Deleting a Rule

Delete a rule to remove it from the rule list.

1. Click **Event Management** from the desktop or from the main menu.

2. Locate a rule from the list and then click **Remove** (🗑).
   A confirmation message appears.

3. Click **OK**.
   The rule is deleted from the list.

Events

In QVR Pro, an event is a predefined behavior or activity that usually signals a problem. Each event triggers a corresponding action or set of actions.

Event Types

QVR Pro supports the following event types detected by the camera.

Camera

Event	Description
Motion Detection	Triggers the specified actions when a moving object is detected.
Alarm Input	Triggers the specified actions when the camera's alarm sensors go off.
Audio Detection	Triggers the specified actions when the audio exceeds the specified decibel level. You must configure the settings on the camera web page.
Cross Line	Triggers the specified actions when an object crosses the specified line. You must configure the settings on the camera web page.
Intrusion Detection	Triggers the specified actions when an object intrudes the specified area. You must configure the settings on the camera web page.
Tampering Detection	Triggers the specified actions when the camera is tampered with.
PIR Detection	Triggers the specified actions when the camera's embedded passive infrared sensor (PID) detects an object. You must configure the settings on the camera web page.
Connection Error	Triggers the specified actions when QVR Pro encounters issues connecting to a camera.
Reconnection	Triggers the specified actions when QVR Pro successfully reconnects to a camera after disconnection.

QVR Pro supports the following event types detected by the recording storage.

Recording Storage

Event	Description
Recording Space Error	Triggers the specified actions when a recording space error occurs.
Recording Space Warning	Triggers the specified actions when a recording space warning is displayed.

Event	Description
Recording Space Full	Triggers the specified actions when the recording space is full.
Recording Space Restored	Triggers the specified actions when the recording space has been restored after an error.

QVR Pro supports the following customized event types.

Customized Event

Event	Description
Event URL	Triggers the specified actions when QVR Pro receives an event notification from a third-party interface.

Events List

The **Events List** screen displays all events that are already in use. You can reuse and modify any event from the list without affecting the original event.

Actions

In QVR Pro, an action is a predefined response to an event. Each action is triggered by an event or set of events.

Action Types

QVR Pro supports the following action types.

Camera

Action	Description
Event Recording	Starts recording when the specified event or set of events is triggered
Alarm Output	Performs the specified alarm output type when the specified event or set of events is triggered For details on modifying the alarm output settings, see Event Settings.
Camera Control	Adjusts the PTZ (pan, tilt, zoom) camera to the specified preset position

Notification

Action	Description
Push Notification	Displays messages on a mobile device when a warning or error event occurs To use this feature, you must first set up myQNAPcloud.
Email	Sends an email to the predefined list of recipients You can take and attach event snapshots to emails from up to 16 channels.
SMS	Sends an SMS message to the predefined list of recipients

Custom

Action	Description
Action URL	Sends QVR Pro event notifications to third-party applications

Actions List

The **Actions List** screen displays all actions that are already in use. You can reuse and modify any action from the list without affecting the original action.

Motion Detection

Motion Detection enables you to detect moving objects or people in the monitored area. You can choose either QVR Pro or the camera itself as the detector (if the camera supports motion detection). This feature supports up to 2 camera channels.

Editing Motion Detection Settings

1. Open **Motion Detection** from the desktop or from the main menu.
   The **Motion Detection** screen appears.

2. Under **Detection Settings**, click **Edit**.

> **Note**
> **Edit** becomes **Completed** after the detection settings are configured.

   The **Motion Detection Settings** screen appears.

3. Select a motion detector.

   - Using the camera itself as the detector

     1. Select **Camera**.

     2. Optional: Click **Camera Settings**.

     3. Optional: Specify your username and password for the camera.

     4. Optional: Modify the settings.

   - Using QVR Pro as the detector

     1. Select **QVR Pro**.

     2. Specify the sensitivity.

     3. Select the minimum detectable movement.

     4. Specify the detection zone.
        Select **Full** to enable motion detection on the entire frame.
        Select **Regional** and click **Edit** to specify one or more detection zones. You can then create, resize, or delete detection zones.

> **Note**
> For cameras that do not support motion detection, QVR Pro is the only detector option.

4. Click **Apply**.

After detection settings are configured, motion detection can be used in event rules as an event that triggers specified actions. For details, see Rules.

License Management

The **License Management** screen displays the following information.

Column	Description
Number of channels	Displays the number of available channels and the number of channels that are currently used
Playback time	Displays the time range where recording playback is allowed in QVR Pro Client. For example, `Last 14 days` indicates that users can play back surveillance videos that were recorded in the last 14 days.
Privilege management	Displays the current level of support for privilege management **Note** QVR Pro may support privilege management for both local users and domain users or only local users, depending on whether QVR Pro Gold is activated.
License Name	Displays the license name
Type	Displays the license type
Status	Displays the current license status
Activation Date	Displays the date when the license becomes activated
Valid until	Displays the expiration date of the license

Viewing License Management

- Open **License Management** from any of the following locations.

  - Desktop

  - Main Menu

  - Plug-in Center

  The **License Management** screen appears.

QVR Pro Licenses

You can purchase licenses to add functionality to the QVR Pro server.

License Name	License Type	Description
QVR Pro Gold	Feature upgrade	Provides access to advanced QVR Pro features: • Additional camera channels • Unlimited recording playback • Enhanced central management • Domain privilege management **Note** You can only activate one QVR Pro Gold license on each QNAP NAS.
QVR Pro 1, 4, or 8 Channel(s)	Camera channel extension	Adds 1, 4, or 8 camera channel(s) to the QVR Pro server **Note** You must activate QVR Pro Gold before installing any camera channel extension licenses.

Tip

- For details on licenses, click **Learn More About Licenses**.

- To purchase the licenses, go to **QTS** > **Main Menu** > **License Center** > **License Store** .

Recovery Management

The **Recovery Management** screen displays the following information when edge recording is enabled.

Tab	Description
Recording Status	• Displays the list of cameras that have edge recording enabled • Displays the edge recording status
Recovery Status	Displays the recovery status of lost videos

Metadata Vault

The **Metadata Vault** screen includes the following tabs.

Tab	Possible User Actions
Data Source List	• Click **Add Data Source** to select a data source that will send metadata to QVR Pro. • Click **Camera Pairing** (⊞) beside a data source to configure camera pairing. • Click **OSD Settings** (▭) to configure the on-screen display (OSD) settings for the metadata. • Click **Edit** (✎) to modify the data source settings. • Click **Remove** (🗑) to delete a data source from the list. • Enable or disable the data source.
Metadata List	View the list of metadata from data sources connected to QVR Pro.

5. Privilege

Users

The following user types are supported:

User Type	Description
Local user	• User accounts created in QTS are synced to QVR Pro. • User accounts created in QVR Pro are synced to QTS. • Both QTS and QVR Pro store the account data. • QVR Pro authenticates users and assigns the surveillance privileges.
Domain user	• User accounts created on a domain controller are synced to QVR Pro. • QVR Pro authenticates users and assigns the surveillance privileges.

Creating a Local User

1. Go to **Control Panel** > **Privilege** > **Users** .
   The **Users** screen appears.

2. Click **Create**, and then select **Create a User**.
   The **Create a User** window opens.

3. Specify the following information:

Field	Description

Username	Specify a username that contains 1 to 32 characters from any of the following groups:
	
	  • Letters: A to Z, a to z
	
	  • Numbers: 0 to 9
	
	  • Multi-byte characters: Chinese, Japanese, Korean, and Russian
	
	  • Special characters: ~ ! @ # $ ^ & ( ) - _ . { }

Password	Specify a password that contains 1 to 64 ASCII characters.
Phone number (optional)	The information is for your reference and is not used by QVR Pro.
Email (optional)	QVR Pro sends a notification to this email address when the account password is going to expire. **Note** • **SMTP Server**: On QTS, go to **Control Panel** > **System** > **Notification** > **E-mail**

	• If the **SMTP Server** is not configured, QVR Pro does not use the information.
(Optional) Send a notification mail to the newly created user	When selected, QVR Pro sends a message that contains the following information to the specified email address. • URLs for connecting to the NAS • Username and password

4. Optional: Add the user to one or more user groups.

    a. Under **User Groups**, click **Select User Group**.

    b. Select one or more user groups.
        QVR Pro provides two default user groups.

User Group	Description
Administrators	Users in this group can configure settings, create users, and install applications.
Everyone	All users created from QVR Pro are automatically assigned to this group. By default, users in this group do not have access to QVR Pro settings.

> **Tip**
> You can click **Create User Group** to add a new user group.
> For details, see Creating a User Group.

    c. Click **OK**.

5. Optional: Specify the user privileges.

    a. Under **User Privileges**, click **Specify User Privileges**.

    b. Specify the features that the user can access.
        For details, see Editing User Privileges.

    c. Click **OK**.

6. Optional: Specify the user role.

    a. Under **Role**, click **Select User Role**.

    b. Select one or more roles.

> **Tip**
> • You can click **Preview User Privilege** to view the privileges currently granted to this user.
>
> • You can click **Create** to add a new role.
>   For details on creating a new role, see Creating a Role.

    c. Click **OK**.

7. Click **Create**.

QVR Pro creates and adds the user to the user list.

Creating Multiple Users

1. Go to **Control Panel** > **Privilege** > **Users** .
   The **Users** screen appears.

2. Click **Create** and then select **Create Multiple Users**.
   The **Create Multiple Users** window opens.

3. Specify the following information:

Field	Description
User Name Prefix	Specify the prefix that will be used for the user names.
User Name Start No.	Specify the start number. The numbers are automatically appended to the specified user name prefix.
Number of Users	Specify the number of users that you want to create.
Password	Specify a password that contains 1 to 64 ASCII characters.
Verify Password	Type the previously specified password.
Show password	When selected, QVR Pro displays the password.

4. Optional: Specify the user privileges.

   a. Under **User Privileges**, click **Edit**.

   b. Specify the features that the user can access.
      For details, see Editing User Privileges.

   c. Click **OK**.

5. Optional: Specify the user roles.

   a. Under **Role**, click **Edit**.

   b. Select one or more roles.

   > **Tip**
   >
   > • You can click **Preview User Privilege** to view the privileges currently granted to this user.
   >
   > • You can click **Create** to add a new role.
   >   For details on creating a new role, see Creating a Role.

   c. Click **OK**.

6. Click **Create**.

QVR Pro creates and adds the users to the user list.

Importing or Exporting Users

1. Go to **Control Panel** > **Privilege** > **Users** .
   The **Users** screen appears.

2. Click **Create** and then select **Import/Export Users**.
   The **Import/Export Users** window opens.

3. Perform one of the following tasks.

Task	Steps
Importing user and user group settings	a. Select **Import user and user group settings** b. Click [folder icon] and then select a TXT, CSV, or BIN file that contains the user information. c. Optional: Select **Overwrite duplicate users**. d. Click **Next**. A confirmation message appears. e. Click **Next**. f. Click **Finish**. QVR Pro imports the user and user group settings specified in the uploaded file.
Exporting user and user group settings	a. Select **Export user and user group settings**. b. Click **Next**. QVR Pro downloads a file that contains the user and user group settings on this server.

Editing User Privileges

1. Go to **Control Panel** > **Privilege** > **Users** .
   The **Users** screen appears.

2. Click **Edit User Privilege** ([icon]).

[Note icon] **Note**
You are not able to modify the user privileges of the admin account.

The **Edit User Privilege** screen appears.

3. Select **Allow** or **Deny** for each of the following privileges.

[Important icon] **Important**
Allow: grants users access to features or operations.
Deny: denies users access to features or operations.
When none of the options is selected, the privilege is not enabled.
The access rights of users depend on their user privileges, roles, and user groups. **Deny** permissions always override any other **Allow** permissions when conflicts arise between the settings.

Privilege	Description
System Management	Specify whether users are allowed to manage the following management settings. • System management • Surveillance management • E-map management

Camera	Specify whether users are allowed to access the following features on each camera. • Live view • Playback • Audio • PTZ control
E-maps	Specify the e-maps that users can access.
Views	Specify the layouts that users can access.

4. Click **OK**.

User Groups

Administrators can create user groups to manage permissions for multiple users.

Creating a User Group

1. Go to **Control Panel** > **Privilege** > **User Groups** .
   The **User Groups** screen appears.

2. Click **Create**.
   The **Create a User Group** window opens.

3. Specify the following information:

   • **User group name**: The name must contain 1 to 128 characters, and cannot include the following characters: ` * @ = + [ ] \ | ; : " , < > / ? % ' SPACE.

   • **Description**: The description must contain 1 to 128 ASCII characters.

4. Optional: Add users to the user group.

   a. Under **Assign users to this group**, click **Select Group Members**.

   b. Select one or more users.

   c. Click **Apply**.

5. Optional: Specify the group privileges.

   a. Under **Group Privilege**, click **Edit Group Privileges**.

   b. Specify the privileges for the user group.

   c. Click **Apply**.

6. Optional: Specify the group role.

   a. Under **Role**, click **Select Group Role**.

   b. Select one or more roles.

> 💡 **Tip**
>
> - You can click **Preview Group Privilege** to view the privileges currently granted to this user group.
>
> - You can click **Create** to add a new role.
>   For details on creating a new role, see Creating a Role.

    c. Click **Apply**.

7. Click **Create**.

QVR Pro creates and adds the user group to the group list.

Roles

Administrators can create roles to quickly assign privileges to different users.

Creating a Role

1. Go to **Control Panel** > **Privilege** > **Roles** .
The **Roles** screen appears.

2. Click **Create**.
The **Create Role** screen appears.

3. Specify the following information:

Field	Description

Role	Specify a role name that contains 1 to 32 characters from any of the following groups:
	
	    • Letters: A to Z, a to z
	
	    • Numbers: 0 to 9
	
	    • Special characters: ~ ! @ # $ ^ & ( ) - _ . { }

Description	The description must contain 1 to 128 ASCII characters.

4. Select **Allow** or **Deny** for each of the following privileges.

Privilege	Description

System Management	Specify whether users are allowed to manage the following management settings.
	
	    • System management
	
	    • Surveillance management
	
	    • E-map management
	
	    • View management
	
	    • Logs and Metadata Vault

Camera	Specify whether users are allowed to access the following features on each camera.

	• Live view
	• Playback
	• Audio
	• PTZ control
E-maps	Specify the e-maps that users can access.
Views	Specify the layouts that users can access.

5. Click **OK**.
   QVR Pro creates and adds the role to the role list.

Privilege Summary

QVR Pro provides privilege summaries for users, user groups, roles, cameras, e-maps, and views.

Generating a Privilege Summary

1. Go to **Control Panel** > **Privilege** > **Privilege Summary** .
   The **Privilege Summary** screen appears.

2. Specify the search criteria.

   Important
   The options vary depending on the selected information.

3. Click **OK**.
   QVR Pro generates the privilege summary.

4. Optional: Click **Export**.
   QVR Pro exports the report as an HTML file and then downloads a copy to your computer.

6. Helpdesk

QVR Pro provides a quick way to submit a ticket using Helpdesk.

Submitting a Helpdesk Ticket

Submit a Helpdesk ticket to receive support from QNAP.

1. Open Helpdesk using one of the following methods.

   • Click **Helpdesk** on the desktop.

   • Select **Helpdesk** on the main menu.

   • Click ⋮ and then select **Help Request**.

   The **Helpdesk** screen appears.

2. Complete the following information.

Field	Description
Name	Type your name.
Email address	Type a valid email address.
Issue(s)	Select one or more of the following categories as required. • System Settings • Playback • System Logs • Camera(s) • Privilege • Web Browser • Recording Storage • Event Management • QVR Pro Client • Other
Problem description	Type a short description for each issue.
Attachments	Upload screenshots or other related files. 💡 **Tip** You can upload up to eight attachments, including system logs. Each file must be less than 5MB.

3. Click **Submit**.
   QVR Pro sends the ticket to the Helpdesk portal.

💡 **Tip**
You can go to https://helpdesk.qnap.com/ to check the status of your ticket.

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