

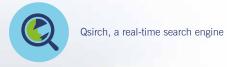
# **TS-531P**

# 5 - Bay Turbo NAS

Powered by Annapurna Labs Alpine quad-core 1.4 GHz AL-314 processor, 10 GbE-ready, and energy-efficient



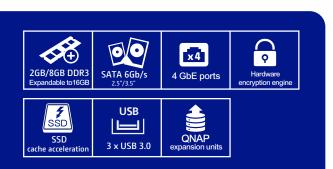






- A low-power NAS designed for file management, sharing, and backup for businesses
- Support for high-speed 10GbE SFP+ or 10GBASE-T networking
- Effortlessly build a professional IP camera surveillance system
- Scale up to 21 drives with QNAP UX-800P/ UX-500P expansion enclosures









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## Qsirch 2.0

Full-text, real-time search engine



#### Search for everything on your QNAP NAS

A QNAP NAS is a mega information storage medium, which is tasked with not only storing a large amount of files, but also with providing users with the tools to find their required data. Qsirch 2.0 is equipped with QNAP exclusive technology TF-IDF ( Term frequency - Inverse document frequency), Near Real-Time search engine and real-time suggestions so that you can sort through files faster and more precisely. In addition, Qsirch supports full-text search with more than six thousand different file types and dynamic results display to enhance productivity greatly.



#### Content preview and sharing

Qsirch 2.0 displays previews of photo, videos, and PDF files from your search results. Save time and share the content of your search results, directly from the previews. It could not be easier!





Qsirch will be available by the end of 2015.

# Organization of results by type, and other attributes

Your search results can be filtered and organized by various types including photos, music, videos, and documents. This organization enables you to locate your desired results faster. Results can also be organized based on criteria such as date modified, file size, and many other standard file descriptors.



#### File indexing status

File indexing runs as a background task, enabling you to oversee the indexing progress and status. If you'd like to exclude specific folders, simply go to settings and select which folders to exclude from indexing.





## **Container Station**

## **Container Station**

The new era of virtualization and cloud computing



#### Integrated LXC and Docker® for efficient containerization on your QNAP NAS

Container Station provides an agile, ready-to-use development platform for developers and system administrators to rapidly develop and seamlessly deploy projects and applications across NAS, PCs, and public clouds.

#### Seven exclusive and industry - leading functions

### 1 One-click installation

Enjoy the benefits of software containers with one-click installation. Container Station will automatically download the application, detect the required settings, and complete the setup process.

### 2 Lightweight virtualization - LXC

LXC is built-in to Container Station and features the most common operating systems including Ubuntu<sup>®</sup>, Debian<sup>®</sup>, and Fedora<sup>®</sup>. Download any of the 14,000 applications including databases, web servers, programming tools and its entire development suites from the Docker<sup>®</sup> Hub Registry.

## 3 Automated deployment

Bypass the hassle of configuring a container. Container Station automatically detects the settings and configures the instruction set, making it easy for rapid deployment.



Docker and the Docker logo are trademarks or registered trademarks of Docker, Inc. in the United States and / or other countries. Docker, Inc. and other parties may also have trademark rights in other terms used herein. Linux<sup>®</sup> is the registered trademark of Linus Torvalds in the U.S. and other countries.

### 4 Containers on ARM - based NAS

TS-531P with QTS 4.2 and Container Station is the only containerization-ready, ARM® based NAS.

### 5 Operate containers via a web browser or terminal

Easy operation from creating a container to deploying a container. Use either a web browser or familiar CLI to control application containers.



### 6 Export / import software containers

Importing and exporting containers is simple with Container Station. Containers can be imported and exported to and from PC's and shared folders. This enables fast container backup and migration.





#### Online document preview and editing

QTS is built on the security-first principle and offers multiple protection mechanisms. Being able to directly view and edit files on the NAS helps minimize the risk of data breaches without uploading and downloading sensitive documents over the Internet

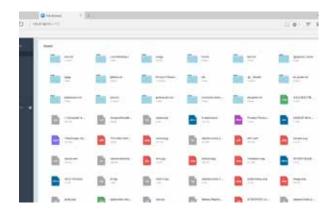


Container Station's Online Document function enables direct preview, editing, and saving ( Office documents, photos, and text files ) on the NAS from anywhere.



Online Document editing will be available by the end of 2015.

Directly view and edit files on the NAS through a web browser.



Support for a wide variety of file types used by LibreOffice, Pinta, Emacs, and MS Office.

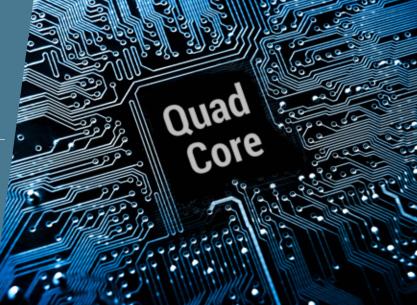






## Exceptional quality and ROI

Quad-core 1.4GHz CPU,10GbE networking support, and expansion opportunities



#### The energy - efficient, quad - core AL-314 processor:

Powered by an Annapurna Labs Alpine AL-314 quad-core Cortex®-A15 SoC with 2GB / 8GB DDR3 RAM (upgradable to 16GB), four inbuilt GbE ports, and three USB 3.0 ports, the TS-531P delivers up to 418 MB / s read throughput and supports SATA 6Gb / s transfer and SSD cache acceleration. The TS-531P empowers small and medium businesses to build private clouds suitable for high-speed networks and applicationintensive environments at a cost-competitive price.

### Test Environment:

OS: QTS 4.2.0

RAID type: RAID 5; 5 x Intel SSD DC S3500 240GB SSD; direct connection between a NAS and

Intel®Core™ i7-4770 3.40GHz CPU; DDR3L 1600Hz 16GB; WD 1TB WD10EZEX; Intel Gigabit CT( MTU 1500 ); Windows® 7 Professional 64bit SP1 IOMeter configuration: Continuously read from/write to a single 8GB file for 3 minutes. Block size

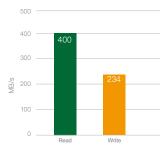
The results are from QNAP Labs. Figures may vary by environment.

#### Hardware - accelerated encryption

The TS-531P's hardware-accelerated encryption engine provides unmatched encryption performance in its class (up to 400 MB/s download throughput with AES-256 full NAS Volume encryption ), boosting system performance & security while ensuring the safety of sensitive business data.

#### Throughput (4 x GbE)

#### AES 256-bit Encrypted Transfer (4 x GbE)



TS-531P: Sequential read/write throughput (64KB)

#### Four built-in Ethernet ports to increase reliability and availability

The TS-531P supports several port trunking modes to incorporate network resilience and load balancing ensuring 24 / 7 continual uptime.

#### Four Gigabit LAN ports



### Flexible high-speed connectivity with 10GBASE-T or SFP+

TS-531P offers four inbuilt Gigabit Ethernet ports and supports 10 Gigabit high-speed networks with a 10GBASE-T or SFP+ expansion adapter, delivering required performance for high-volume users access, backup and recovery. It is suitable for bandwidth-demanding environments such as data centers and enterprise storage.

#### High throughput for large data transfers



#### Seamless capacity expansion

The TS-531P offers a high performance yet affordable storage solution to fulfill the needs of businesses for archiving rapidly-growing data and large files. The TS-531P supports capacity expansion by connecting multiple QNAP expansion enclosures. With the QNAP scale-up solution, the raw storage capacity can be expanded on demand, making the TS-531P an ideal file center for storage-intensive applications such as video surveillance, data archiving, TV broadcast storage, and more.

Turbo NAS Model	RAID Expansion Enclosure	No. of RAID Expansion Enclosure	Total HDD No. (NAS + Enclosure)	Max. Raw Capacity (TB)**
	UX-800P	2	21	168
TS-531P		1	13	104
12-2216	UX-500P	2	15	120
		1	10	80

<sup>\*</sup> To expand the storage space with a UX expansion enclosure, please create a separate static volume or storage pool on the UX expansion unit.

<sup>\*\*</sup> The maximum capacity is calculated using 8TB HDDs.



#### **QJBOD Express**

The new QJBOD Express enables quick back up or migration of large amounts of data to local or to remote sites without using any network bandwidth.

San Francisco to Los Angeles: Initial transfer costs for 50TB data					
Method Time	cost	Bandwidth cost			
100Mbps network	About 45 days	50TB			
QJBOD Express	In two days	0			

#### Back up 50TB data to a remote site

1 Back up data to UX-800P or UX-500P

Connect a UX-800P or UX-500P and create an independent RAID group for backup. You can "Safely Detach" the expansion unit after the backup job is completed.

2 Transportation

Transport the expansion unit to a remote site.

3 Finish the backup job

Connect and scan the expansion unit. Create the final incremental backup job.









The remote NAS must support JBOD expansion to use this feature.



# Experience a simple and perfect design



# Multitasking, multi - window, multi - desktop, and multi - display modes

The new QTS operating system dramatically improves your efficiency with multitasking, multi-window, multi-desktop, and multi-display modes enabling you to begin new tasks without waiting for the previous one to end. Minimize running apps to the task bar and switch between them in a similar fashion to a traditional PC environment. The multi-desktop design of QTS enables drag-and-drop shortcut icons from the Control Panel or Main Menu to the desired desktop to suit your preferences. Drag and drop a desktop icon on top of another to group them together to create a more efficient and personalized desktop.





#### Smart dashboard

Click on the upper-right corner of the desktop to get an immediate system status summary display. Open the smart dashboard to obtain a quick view of important information including system health, disk information and health, resource monitoring, storage space, scheduled tasks, device information, and firmware information. Drag and drop dashboard functions to the desktop to keep them readily available for ongoing monitoring. In the event of a critical failure ( hard disk corruption, etc. ) the smart dashboard will flash and prompt a system administrator and suggest immediate action to recover or prevent the loss of data.

### Recycle Bin

The Recycle Bin enables recovery of files that have been accidentally deleted. Right-click on the Recycle Bin on the desktop to empty it or open it to see the full range of functions available.



# Intelligent Storage Manager - Unified storage management

Storage Manager provides several tools and options for managing your storage with an intuitive graphical interface. From an overview of storage allocation in the Dashboard, to managing Volumes, Storage Pools, Disks, iSCSI storage, and the newly introduced Snapshot function. Storage Manager provides a centralized place to simplify hard drive management and to maximize storage usage.



#### Volume

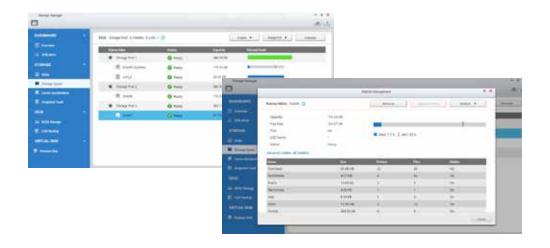
QTS 4.2 supports the creation of multiple volumes within a Storage Pool. View all available storage pools, volumes, and iSCSI LUNs on the same screen including multiple RAID groups. This enables the expansion or removal of current pools and volumes, setting of threshold values for capacity consumption alerts, and RAID group management. Data volumes and LUNs can also be extended without interrupting services.

#### Thin provisioning

Over-allocation enables a server to view more storage capacity than has been allocated in a storage pool. Further, the physical storage capacity is used only when files are written by the application, improving utilization rates.

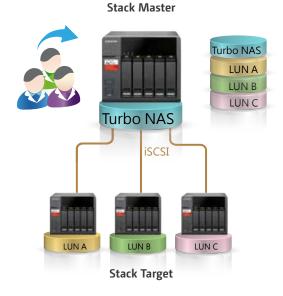
#### Thick provisioning

Physical storage capacity is dedicated during the initial allocation of the storage volume.



# Virtual Disk Drives increase storage expansion flexibility

Virtual disks provide a flexible way for IT administrators to expand storage. Use an iSCSI initiator to connect to the iSCSI target on the NAS and create a virtual disk on the local server. The NAS can act as a stack master to connect up to 8 virtual disks or stack targets aggregating storage space from multiple NAS servers. NAS users then only need to connect to a single target to access the storage space from all of the network storage devices. Every virtual disk on the local server will be seen as a single drive of arrayed disks.



### File Station: Manage all your data from a single management window

#### File or folder operations and management

Just like a file explorer on your PC, File Station lets you easily carry out common tasks operations such as rename, copy, move, delete and compress / uncompress. Move files from a local PC / Mac to File Station by drag-and-drop to upload the files to the NAS easily. In addition, instant thumbnail preview can display thumbnails of photos, album covers, and videos to aid in organizing multimedia files.

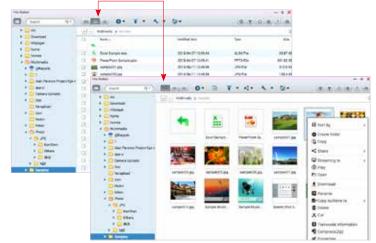
Three browsing modes are available: icons, list, and detailed list.

#### Folders in tree structure:

Presents data in an easy-to-read, familiar, and convenient format.

#### Remote connection:

View remote connections here



#### Preview for Microsoft Office® files:

Preview Microsoft Office files using a Chrome extension (used with the Office Editing for Docs, Sheets & Slides Chrome extension from the Chrome Web Store) in File Station. Also supports previewing Microsoft Office files with Office Online and Google Docs in File Station.

#### Multimedia streaming

File Station supports photos browsing and music playing, In addition, playback with the VLC™ player for online video streaming is now supported. Furthermore, background transcoding enables you to convert video into different resolutions and formats suitable for multiple devices and multiple networks.



#### Smart zonal streaming

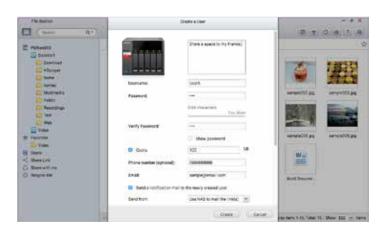
Stream multimedia files to different devices via  $Apple^{\it ®}$  TV,  $DLNA^{\it ®}$ , or  $Chromecast^{\it TM}$  from File Station.



#### Multiple sharing methods

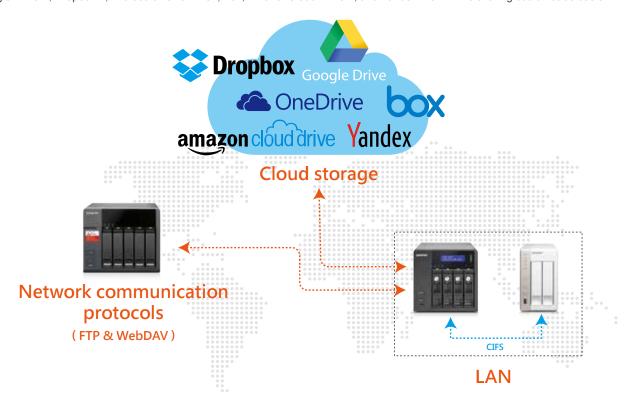
Choose your preferred way to share your files with others: Share files directly to selected NAS users, create and publish share links on social networks, set up mutual file sharing, or share download links via email. In addition, use CloudLink to share files from anywhere in lieu of complicated port forwarding. Simply log in to myQNAPcloud and create a share link with CloudLink, and then share the link with others.





#### Remote connection and several cloud services

File Station supports three remote device network protocols CIFS, FTP, and WebDAV. It also supports many popular cloud services including Google Drive™, Dropbox™, Microsoft® OneDrive®, Box, AmazonCloud Drive™, and Yandex Disk™. File sharing could not be easier!





Please install "Connect to Cloud Drive" from the App Center before connecting to cloud services.



## **Hybrid Backup Solutions**

Hybrid cloud for a consolidated backup solution



#### A comprehensive backup strategy from anywhere, anytime, on any device

The explosive growth of data brings challenges of data protection and management. Unless an organization has the necessary knowledge and a disaster recovery strategy to protect and recover data, data integrity and data security will continue to present a problem. Hybrid Backup Restore assists you in managing and planning backup strategies (including local, remote-site, and cloud backups) with its centralized management capability even in the most complex data environments.





The Hybrid Backup Restore App will be available in the App Center in Q3, 2015.

#### Backup from computer to NAS - PC backup

Windows users can install the free QNAP NetBak Replicator utility to back up files from Windows PC - entire disk drives, documents, pictures, music, videos, fonts, emails, and more - to one or multiple QNAP NAS. With a few clicks, you can set up real-time backup, scheduled backup and auto-backup. Mac users can use Time Machine to back up their files.

### 3rd party backup software

QTS is compatible with various renowned backup software such as Acronis<sup>®</sup> True Image and Symantec<sup>®</sup> Backup Exec. Users that have adopted such backup software can immediately back up data from other sources to the Turbo NAS.

#### **Local Backup**

Use the One Touch Copy button on the front panel of the NAS to quickly backup data to or from external USB devices or disks.



#### Remote - site Backup

With the RTRR service on the QNAP NAS, backing up data to your NAS is a simple and easy process. Your computer or your NAS can be the source, destination, or relay server during the backup process. Access or back up files with the "Remote Connection" function in File Station using Microsoft<sup>®</sup> file sharing ( CIFS / SMB ) or FTP to mount external folders as if they were local.



#### **Smart Version Control**

Real-Time Remote Replication (RTRR) version control enables saving backup files to time based versions. In case of an incident, files can be restored to earlier backed-up versions specified by time and date. Smart versioning enables you to create backup versions hourly, daily, weekly, or monthly. Alternatively, simple versioning keeps a fixed number of versions for a given period and automatically rotates stored versions.

#### Two-way shared folder synchronization

Use RTRR (Real-Time Remote Replication) service to set up real-time or scheduled synchronization of shared folders between two Turbo NAS units. With two-way synchronization, file backup consistency is improved and is especially helpful in synchronization and collaboration across departments and branch offices.



#### Cloud Backup

Protecting against potentially disastrous data loss is of paramount importance for all businesses regardless of size. A QNAP Turbo NAS is a comprehensive backup and recovery solution to back up not only files for all devices on the LAN, but also for remote-site NAS units and servers. Furthermore, QNAP Turbo NAS fully supports backup from the Turbo NAS to online cloud storage services (e.g. Amazon<sup>®</sup> S3, Amazon<sup>®</sup> Glacier, Microsoft<sup>®</sup> Azure, Google<sup>®</sup> Cloud Storage, IBM<sup>®</sup> SoftLayer, HP<sup>®</sup> Cloud, Rackspace<sup>®</sup>, and ElephantDrive<sup>®</sup>). The QTS powerful and comprehensive Backup Station makes backup and recovery simpler for all business's disaster recovery plan.

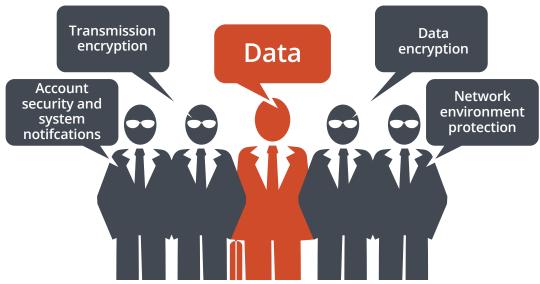




## **Data Security**

Secure your data with four protection mechanisms





## 1. Network environment protection

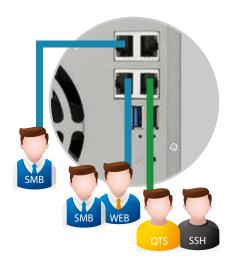
#### Connection management (black / white list)

Allow or deny specific IP addresses or subnets to connect to the NAS. This increases connection safety by creating lists of allowed and blocked IP addresses. For example, block an IP address from accessing the NAS for one hour, one day, or permanently based on the criteria that it has over five failed login attempts in the last minute. Servers of the blocked IP will be unable to connect to the NAS. Block a user who has stayed online for too long or logged in from suspicious IPs to enhance system security further.

### Service binding

QNAP NAS are equipped with multiple Ethernet ports, and can permit data access through every port. Service binding allows users to bind network interfaces with certain services (e.g. critical company data can be accessed only by specific personnel through specific protocol or allowed internal IPs) to enhance system security. In addition to security protection, service binding with LAN ports can ensure critical services get dedicated bandwidth.





## 2. Account security and system notifications

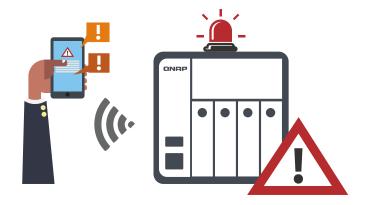
#### **Two-Step Verification**

The Two-Step Verification\* requires a user to log in to the QNAP NAS with both a password and a 6-digit one-time password (OTP) generated by an authenticator app. To simplify the log in process, trusted devices (e.g. home computer) can be "remembered" and only the password will be required from future log in attempts from that device.



#### Push service

In addition to email and SMS, you can get messages sent to your mobile devices in the event of a system failure or other warnings\*. This keeps you updated with the latest system status so that you can take immediate action to rectify the situation and reduce the risk of data loss.



## 3. Protection by transmission encryption

#### Network transmission encryption

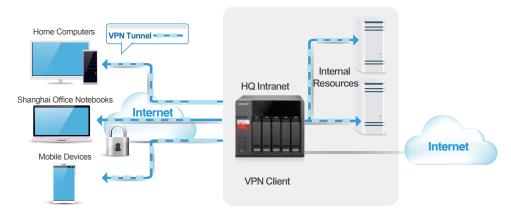
Advanced AES encryption ensures the security of shared folders. Without the key, no one can access the data in encrypted folders or files. Data transmitted over the Internet can also be encrypted to protect data security when using services such as FTP, WebDAV or in File Station. QNAP NAS provides SSL connectivity, and SSH encryption to secure data transmission and authentication. System administrators can restrict access to HTTPS (SSL over HTTP) encrypted connections. SFTP is also supported for transmission security and file access. The SSH encrypted connection provides another layer of protection for data transmission overpublic networks.



#### **VPN Server**

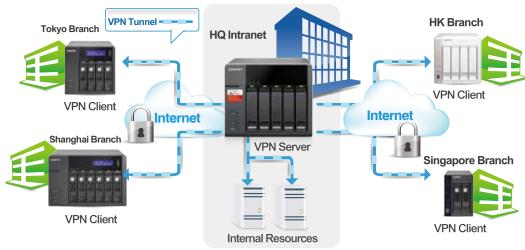
A Virtual private network (VPN) enables secure connections to access network resources and services across a public network. A VPN offers a convenient solution for NAS users to build end-to-end encrypted tunnels to your QNAP NAS. Whether you are an individual user or an IT administrator, you can use the built-in VPN server (L2TP / IPsec, PPTP, or OpenVPN) or VPN client (PPTP or OpenVPN) on the NAS for such purposes.

The VPN server also comes with user and connection management to help you manage VPN services. Furthermore, a VPN can help gain access to resources that may otherwise be restricted by your network environment.



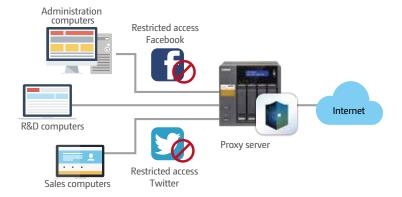
#### **VPN Client**

When the Turbo vNAS acts as a VPN client, VPN can better protect your data when you use services like BitTorrent™ and eMule™. By using this type of configuration, you can set up remote site backup with secure data transmission.



#### **Proxy Server**

The Proxy Server application provides an intuitive interface to simplify proxy server settings on your NAS, enabling you to operate your own proxy server in just a few clicks. The proxy server provides cache and connection controls for Internet services. For companies that need a boost to web response time and security, this application can be leveraged to make your NAS a web proxy server to protect other devices in your local network from Internet attacks.



### 4. Data encryption

#### Internal hard drive encryption for the entire system

QTS offers volume encryption to protect the data stored on the NAS. The system will ask for the encryption key when mounting the encrypted volume and the data is inaccessible without it. This function effectively protects data from being accessed if the entire NAS or individual drives are stolen.



#### External hard drive encryption

External storage devices are convenient for data migration. QTS also supports AES-256 encryption to protect against unauthorized access of external USB / eSATA drives.



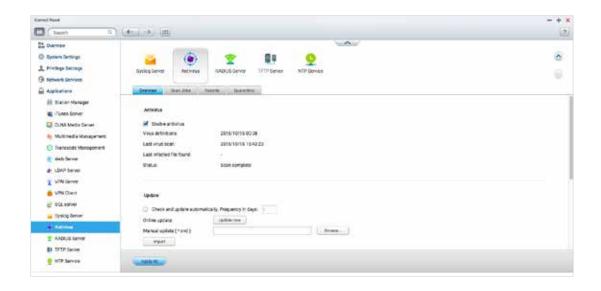
#### Folder encryption

Additionally, the NAS also offers folder encryption — to encrypt data in a specific folder to protect it from being accessed by unauthorized users.



#### Anti-Virus protection

QTS integrates the ClamAV™ antivirus toolkit to defend against the latest viruses, malware, worms, and Trojan horses with continuous free virus database updates, ensuring continuous business operation. Email notification upon task completion or virus detection is built-in.





**Surveillance Station** 

## Surveillance Station

Build a professional surveillance system



As surveillance technology evolves, the required system hardware and software have become increasingly affordable. For every environment (including homes, offices, schools and other organizations) QNAP offers comprehensive support and solutions that can flexibly meet your schedule and budget constraints. Supporting real-time monitoring, recording, playback, alarm notifications, Intelligent Video Analytics (IVA), and management, Surveillance Station safeguards your assets and property when used with supported IP cameras. Every QNAP NAS comes with a minimum of two free camera channels as standard, is ONVIF® and PSIA compliant, and is compatible with over 100 camera brands (and over 3000 camera channels) allowing you to easily build a professional video recording and monitoring system.

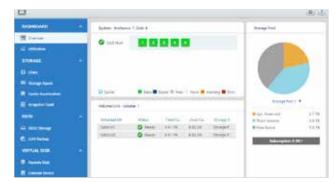


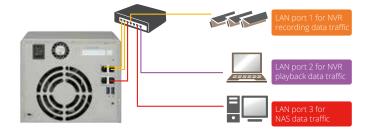
### Set Dedicated Storage Pools for NVR

Using Storage Manager, it is possible to set dedicated storage pools for Surveillance Station to isolate disk arrays to ensure that NAS and NVR operations are separate.

### **Network Tap**

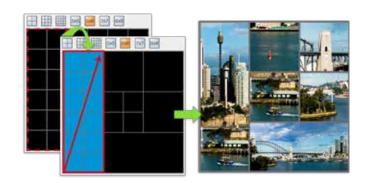
In addition to tiered storage, QNAP have also added a "network tap" capability to Surveillance Station. Enable this function on a QNAP NAS with more than one network port and easily reroute the monitoring network flow to other QNAP NAS network ports, optimizing the read / write performance for NAS and NVR traffic.





# Diverse layout choices for playback and monitoring

Surveillance Station 5.1 supports various monitoring modes to display 1, 2, 3, 4, 6, 8, 9, 10, 12, 16, 20, 25, 36, 49 and 64 channels on a single screen. Choose to display each channel sequentially, or use dual displays for a wider view.



#### Playback speed control with the shuttle bar

With the speed-control shuttle bar, users are able to fast forward and rewind playback by dragging the bar to find the desired capture quickly.



#### PTZ control (Pan / Tilt / Zoom)

Directly adjust the vertical tilt, left / right panning angles, and zoom on cameras with compatible PTZ (Pan / Tilt / Zoom) functions. The "Click Go" PTZ control feature greatly enhances the convenience of remote surveillance.

#### **QNAP Qdewarp**

Fisheye lenses are ideal for wide-angle scenes. With de-warping technology, users are able view detailed images without distortion. Qdewarp is compatible with every fisheye camera that QNAP supports, and enables users to de-warp images at any time point in a recording. Qdewarp supports real-time monitoring and recording playback, ensuring there are no blind spots.



#### Set alert and notifications

When cameras detect motion or alerts are triggered, Surveillance Station will automatically send notifications to up to 5 email addresses.



### Digital floor plan for camera locations

Uploading a floor plan to Surveillance Station enables users to map out where cameras are located. Based on alarm settings, the camera icons will then alert users to assist in decision making for appropriate action to be taken.





## **Productivity Tools**

Maximize the value of your QNAP NAS





### myQNAPcloud 2.0 cloud access service — Helps you easily create your NAS cloud

Cloud access is greatly simplified in QTS 4.2. Effortlessly create your personal or private cloud by following the setup wizard. Enjoy the services of your QNAP NAS safely, conveniently, any time, from anywhere with myQNAPcloud 2.0.

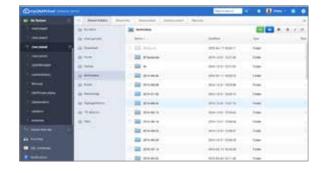


#### myQNAPcloud ID (QID)

Access your QNAP NAS by signing into your myQNAPcloud portal (www.myqnapcloud.com), mobile Apps, or the PC utility Qsync with "QID", a unique ID for you to access your NAS and securely share your private data and files

# Manage files and multiple NAS devices with your web browser

The myQNAPcloud web portal is a user-friendly interface that enables you to check available and connected NAS servers. Download, move, copy, and share files stored on your NAS from your web browser.



#### CloudLink

CloudLink is the remote access service provided by myQNAPcloud and enables you to connect to your device via the Internet using the myQNAPcloud website ( www.myqnapcloud.com ). No complicated port forwarding settings on the router are required: just sign in using your myQNAPcloud ID ( QID and access your data from the myQNAPcloud website. CloudLink will automatically select the best connection for you according to your network environment. In addition to the web-based connection, CloudLink also enables you to connect to your QNAP device with QNAP mobile apps Qfile and Qmanager as well as the PC utility Qsync.



#### Supports myQNAPcloud SSL authentication

myQNAPcloud SSL certificates are used to provide a secure connection between a QNAP NAS and web browsers, providing authorization as well as encrypting the connection to secure data and transactions.





#### Qsync Central Station 2.0 — Centrally manage and sync your files and devices

Large volumes of data are transmitted and used by businesses and between departments on a daily basis. While public cloud services like Dropbox TM can fulfill easy sync and sharing needs, their low data allowances and potential security and ownership issues can leave a lot to be desired. With Qsync, QNAP provides a complete file sync solution that allows businesses and organizations to ensure that team members always have the most up-to-date files for greater working efficiency.

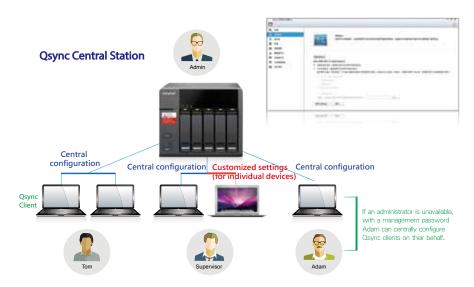
#### Synchronization as a better file management and collaboration approach

Qsync Central Station 2.0 supports file synchronization between multiple devices, and you can utilize a smart phone, tablet, computer or webpage to browse through synchronized files. When your computer is offline, you can edit the files offline or view the files on the local Qsync folder, and as soon as the network resumes, online, Qsynch will resume the data synchronization. You can also choose to keep the files stored on your QNAP NAS un-deleted to save the storage space of your local device.



#### Enhance management efficiency by monitoring equipment settings

The administrator can create default settings on Qsync Central Station 2.0 and also apply them to Qsync clients, which helps to not only save time and effort setting up individual clients, but also allows administrators to monitor user settings, thereby strengthening enterprise-wide IT management and file filtering control and avoiding the risk of deleting files on a QNAP NAS by mistake due to synchronization. Also, by using permission settings, administrators can flexibly adjust individual user's equipment settings, where it not only retains the above advantages, but further enhances the flexibility and convenience of the centralized management approach.



# Remotely delete shared folders to prevent data leaks

In the event where a computer / device is stolen or lost, the Qsync folder can be remotely erased\* to ensure that sensitive or confidential data is not accessed by unauthorized users or leaked. Once the computer / device is recovered, Qsync can easily restore the data that was deleted, ensuring the perfect balance between security and convenience.



The data will still be retained on the QNAP NAS.





#### Notes Station — A handy notepad on your private cloud

QNAP has leveraged its private cloud functionalities to introduce Notes Station. It provides the convenience of notetaking on cloud-based services but with the privacy and security of QNAP NAS. Users do not have to worry about risks from public storage, and are able to enjoy easier data access at all times.

#### Diverse backup styles

Notes Station offers several backup options. Users can choose to back up files to their PC or NAS. Additionally, system administrators can use the backup features of the NAS to periodically and remotely replicate everyone's notes.

#### Google Calendar Support

An event in the Notes Station Calendar links to the note you created it from. You can update the calendar from Notes Station to your Google Calendar with a single click, so you will be reminded for every event.



#### Protect notes with military - grade encryption

Notes Station can secure your notes using the highly-efficient AES 256-bit encryption specification. By encrypting your notes, you can rest easy knowing that only authorized users can access confidential and sensitive information.



#### Restore notes to a previous version

Notes Station features snapshots for version control, which can be used to retain different versions of notes at different time points. You can easily restore a note to a previous version whenever needed without worrying about frequent changes to notes.



#### Subscribe to RSS live feeds

Notes Station includes RSS support that helps gather subscribed online content from websites and blogs. All of the latest RSS contents are effortlessly centralized on the Notes Station for easy note-taking.

#### Restore notes to a previous version

Notes Station features snapshots for version control, which can be used to retain different versions of notes at different time points. You can easily restore a note to a previous version whenever needed without worrying about frequent changes to notes.







#### Signage Station

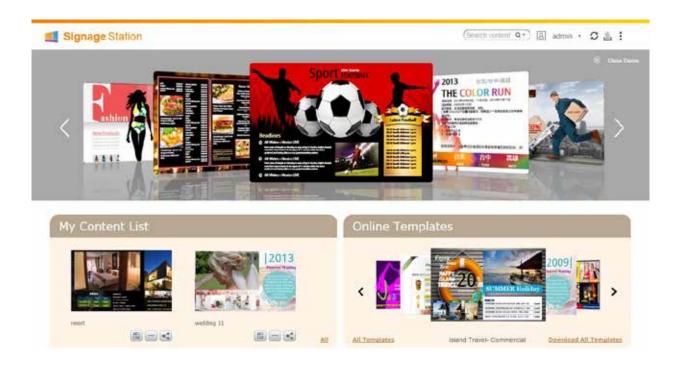
Signage Station is a free app for QNAP NAS enabling businesses to create attractive menu boards, advertising posters, and business profiles and easily publish them to monitors and tablet devices. Home users are able to create and edit their own multimedia content, and publish to Facebook and other websites. There are no complicated steps involved, and by using simple drag & drop operations you can create dynamic content and resumes with iArtist Lite and publish them using your QNAP NAS.

#### Drive business growth and increase revenue

Your content can be presented on a web browser and when on the go, and you can even show your profile, business card and product catalogs on mobile devices and share on Facebook. A QNAP NAS with Signage Station is the ideal tool to present creativity and drive business growth.

#### Absolutely easy-to-use

iArtist Lite provides a drag-and-drop interface that allows you to flexibly embed videos, marquees, pictures, and PowerPoint<sup>®</sup> slides on the canvas panel. With the layered playlist and timeline features, you can freely arrange the order of media objects. iArtist Lite also offers numerous templates for various scenarios, saving you lots of time & effort. Useful widgets such as audio, clock, RSS are also available to add to the designed content.



#### Easily create ad contents with iArtist Lite (For Windows PC):

You only need to drag and drop media files on the iArtist Lite canvas, where you can quickly produce professional content. First select the device to be displayed on ( tablet, TV, etc ) and then resolution and layout ( portrait or landscape ) depending on how the device will be placed.





## Multimedia Center

Enjoy home entertainment with cloud technology





#### QTS Photo Station 5.0

QTS Photo Station helps you archive, easily manage, and share your precious memories. The Photo Station functions as your private photo hub while safeguarding your memories with the very highest levels of protection.

#### Switch between Gallery and Management

Switch between Gallery and Management mode to view and organize your photos easily. Photo Station provides three quick configuration menus to adjust the look and feel of how your photos are displayed.





Switch between display modes, and select the photos to display.



Customize the background music in gallery mode. The background music can be chosen from playlists in the Music Station.



Play your selected photos in a slideshow.

# Centrally manage all your pictures on your NAS

Whether you upload your photos directly, or by synchronizing with the Qsync utility, using Photo Station to manage your photos (including very high-resolution photos) from multiple sources is a very effective way to organize massive volumes of photos.



#### Share with your preferences

Use the Sharing Cart to add and modify shared content as well as specify sharing settings such as a validity period. Share by email, social networks, or create a sharing link.





#### Video Station 2.3

It is your personal entertainment library that can organize, play and stream your videos via DLNA<sup>®</sup>, Airplay<sup>®</sup>, and Chromecast™ while providing greater convenience in searching for covers and subtitles online.

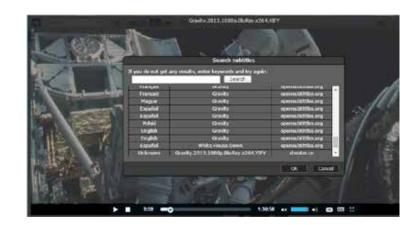
#### Automatically retrieve movie information

Video Station can automatically find and download movie posters and other movie information from the Internet ( genre, director, actors, etc ) to enrich your collections and enhance your viewing experiences.



#### Comprehensive subtitles support

Subtitles can now be uploaded from a computer or searched for and downloaded from an Internet database, enabling viewers to enjoy videos in their native language or a language they are studying.





Watch your movies without worrying about format incompatibility and display issues with the support for .srt, .ssa and .ass subtitles files, and even more languages.



Subtitles can also be embedded into videos when sharing with your friends.



#### Music Station 4.8 — Build your own music cloud

Build your very own music cloud for your home with Music Station. With the Qmusic mobile app, you can bring your favorite music with you wherever you go.

#### Your personal music cloud

Music Station enables you to play your music on your PC and your mobile devices over the Internet, acting as your personal music cloud. Enjoy all your music on your QNAP NAS from anywhere. Music Station offers a number of categories and browsing modes and enables you to create up to 200 playlists.



#### Share your taste of music

Simply choose the music to share, and enjoy the flexibility of being able to share it via email, a download link, or social networking sites such as  $Facebook^{TM}$ ,  $Google+^{TM}$ , and  $Twitter^{TM}$ .

#### Customized album covers

Album covers can be automatically found for your music, allowing you to organize your music better. If an appropriate cover cannot be found, you can also import your own image to use as the album cover.





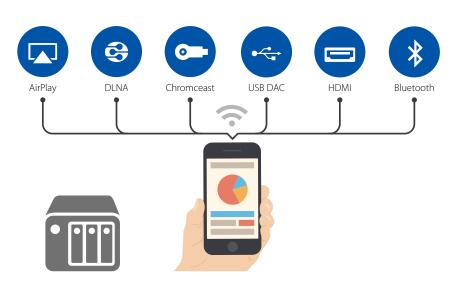
# One-to-multiple streaming playback — Unleash an intelligent home entertainment lifestyle

QNAP NAS supports multiple streaming playback protocols and modes, enabling users to easily stream files to various multimedia playback devices.



# Supports multiple playback devices:

Photos and videos: DLNA®, AirPlay®, and Chromecast™ devices.Music: Bluetooth® and USB speakers.You can utilize the browserbased File Station, Music Station, Photo Station or Video Station to directly play back a variety of multimedia, or stream the files via these stations to various devices. You can also utilize your smart phone or tablet to stream the playback.





The Media Streaming Add-On must first be installed from the App Center on the NAS.

#### Remotely control a QNAP NAS using smart devices

Installing QNAP mobile apps ( Qfile, Qmusic, Qphoto or Qvideo ) on your mobile devices can turn them into remote controls for direct controlling the NAS for multimedia playback to supported  $DLNA^{\$}$ ,  $AirPlay^{\$}$ , or  $Chromecast ^{TM}$  devices,  $Bluetooth^{\$}$  speakers, or USB speakers / DAC. Simply pick up your smart device and select the media to play.

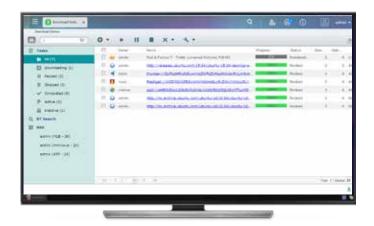


### Download Station 4.2 — Your 24 / 7 download center

Once you finish managing download tasks, just turn off the computer. The download tasks will keep going until they are finished. Easy, and power-saving.

# Built-in search engine with multi-language support for BitTorrent® sites

Download Station has a built-in torrent search engine and supports searching BitTorrent sites in a number of languages. This saves you the trouble searching for BiTorrent seeds on the Internet and you can directly search for files in Download Station.



#### Wide range of download types

Supports HTTP / HTTPS, FTP / FTPS, BitTorrent<sup>®</sup>, PT\*, Magnet Xunlei<sup>®</sup>, FlashGet<sup>®</sup>, qqdl as well as Baidu<sup>®</sup> Cloud downloads.

\* For PT download, supported client applications vary based on PT sites. If Download Station (libtorrent) is not in the client application list recommended by your PT sites, please search for an alternative one (ex. Transmission™) in the App Center.

# RSS subscription and automatic download

You can subscribe to RSS feeds, also set filters and download criteria, and Download Station will automatically download subjects that interest you, enabling you to grasp all of the latest information.

#### Sharing by multiple users

Under your control, you, as a system administrator, can grant the access of Download Station to NAS users\*, enabling all your friends and family members to enjoy the convenience brought by Download Station.



#### Online download settings and scheduling management

You can set the download / upload speed limits according to your personal needs with a flexible download schedule, allowing you to optimize your bandwidth distribution.

# App Center

Customize your QNAP NAS for endless possibilities



Extend the functionality of your QNAP NAS to enrich your work and home life. QTS App Center provides various install-on-demand apps for you to enjoy more applications and to increase the total value of the NAS.



#### Powerful and rich-in-content

The App Center provides more than 100 add-on apps, including backup / sync, business, content management, communications, developer tools, download, entertainment, surveillance and utilities.

#### Upgrade reminder

When your installed apps have an update, an upgrade reminder will show on the QTS desktop to help keep your NAS applications up-to-date.

#### 1-click Install on demand

Find what you need and install it immediately with just one click.

# **QNAP Mobile App**

Conveniently access your QNAP NAS from your mobile devices





#### Ofile 2.0

Remotely upload / download, share, manage, and stream files from your QNAP NAS and synchronize files between the NAS and your mobile device.



#### **Qmanager**

Monitor your system information, check backup tasks, system events, and manage services.



#### **Qphoto**

Browse your photo collection using a timeline, thumbnails, or a detailed list view.



#### **Qmusic**

Browse and play your music collection on your QNAP NAS by song, artist, album, or folder.



#### Qvideo

Download and play videos on the NAS or share your videos with other.



#### **Qnotes**

Jot down and share your ideas wherever you are



#### **Qget**

Conveniently review and manage all of your download tasks (including running, pausing and removing tasks).



#### Vmobile

Remotely connect to and manage your IP Camera and playback your recordings in Surveillance Station.



#### Vcam

With Vcam, you can directly record your surroundings using your mobile device's camera to your QNAP NAS anywhere you go without having to purchase professional IP cameras.



# Computer Utilities

**Boost your Productivity** 





#### **Qfinder Pro**

Qfinder Pro helps you find and access a QNAP NAS in the LAN and can be used to generate thumbnails for media files in advance of file upload, accelerating media file processing and saving NAS resources.



Available for Windows  $^{\! B}$  ,OS  $X^{\! B}$  , Linux  $^{\! B}$  , and the Google Chrome  $^{\rm TM}$  Browser.



If you're finding it difficult to connect your NAS to a Chromebook™, Qfinder for Google Chrome™ allows you to quickly find and connect to a QNAP NAS over LAN. Just download Qfinder from the Chrome™ Web Store and enjoy easy access to your QNAP NAS.



Qfinder for Google Chrome™ is for Chromebooks™ & Google Chrome™ only.

### Easily access the NAS by Storage Plug & Connect

The Windows<sup>®</sup> version of Qfinder provides a convenient way to connect to your QNAP NAS and map a network drive or a virtual disk. By creating a shared folder on the QNAP NAS and mapping it as a network drive, you can use it as an additional drive and store files on it as if it is a local drive on the computer.





#### **NetBak Replicator**

The QNAP NetBak Replicator is free for anyone with a QNAP NAS and helps you easily back up files from Windows<sup>®</sup> PC. Entire disk drives, documents, pictures, music, videos, fonts, emails, and more can be backed up to one or more QNAP NAS.



Available for Windows





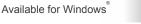


### myQNAPcloud Connect

myQNAPcloud Connect is a VPN application designed for all Windows users and supports all VPN options to connect to a QNAP NAS ( including L2TP / IPsec, PPTP and OpenVPN ). By installing and setting up myQNAPcloud Connect, you will be able to connect to the QNAP NAS and easily manage files with dragand drop actions.









#### **Qsync**

Qsync is a useful tool to synchronize files across multiple computers and supports Windows and Mac. It creates a specific "Qsync folder" in your devices that you can simply drop files in, and synchronizes the files to all your devices linked to the QNAP NAS.





Available for Windows® and Mac

#### More space and more economical than Dropbox

Not having enough space with Dropbox™? With Qsync, your QNAP NAS becomes a safe data center for file synchronization with huge storage. For people who travel frequently, access files using any device and never lose a file again. Or edit a file with teammates without emailing files back and forth. It also provides multiple ways of file synchronization and group file sharing, greatly enhancing the flexibility of collaboration.



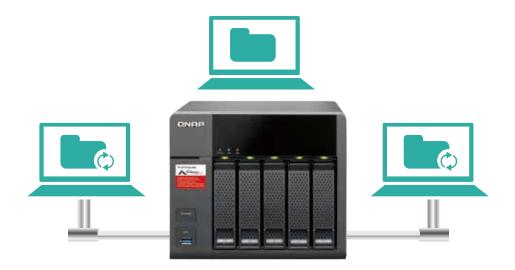
#### Sync selected files on your devices

Whenever you add, edit, delete or rename a file on one computer, the change applies to all others linked with the Turbo NAS, so you have exactly identical contents on all your devices.



#### Sync selective sub - folders

When synchronizing files, you can choose to only sync specific sub-folders within the Qsync folder, which is useful if your computers have limited storage.



#### Share team folders with different groups of people

Your life is connected with different groups of people. You can create sub-folders within the Qsync folder, and share them with different groups of Turbo NAS users as a file exchange center. Everyone having the privilege of the same sub-folder will have the most recent versions of the files.



#### Version control

With Qsync version control, all file revisions (up to 64 versions) are saved as a copy for future retrieval. With file versioning, there's no need to worry about files being overwritten or mistakenly deleted. Even the files that have been deleted from the recycle bin can be retrieved.





#### **Qsnap**

Qsnap is a handy utility assisting you to quickly capture screenshots on your PC, and easily edit, save, and share, enabling quick note-taking or productive communication in your work and leisure.









Available for Windows

# **Hardware Specifications**







2GB RAM

Maria	TO 504D 00	TO 504D 00		
Model	TS-531P-8G	TS-531P-2G		
CPU	Annapurna Labs Alpine AL-314 Quad-core 1.4 GHz Cortex-A15			
Floating Point Unit	$\checkmark$			
Hardware Encryption Engine	$\checkmark$			
System memory	8GB DDR3-1600 RAM (1 x 8GB)	2GB DDR3-1600 RAM (1 x 2GB)		
Memory expandable up to	16GB			
Total memory slots	2 ( SODIMM )			
Flash Memory	512MB			
Hard Disk Drive	5 x 3.5" or 2.5" SATA 6Gb / s, 3Gb / s HDD or SSD, hot swappable			
LAN Port	4 Gigabit RJ-45 Ethernet ports, supporting port trunking customizable with up to 2 x10GbE + 4 x GbE via PCle expansion			
PCIe Slot	1 (PCle Gen2 x4)			
LED Indicators	Status, USB, HDD 1-5			
USB	3 x USB 3.0 ports (front:1, rear:2) to support USB printers, external drive, and UPS, etc			
Buttons	Power, USB One-Touch-Copy, Reset			
Alarm Buzzer	System warning			
Form Factor	Desktop			
Dimensions	185 x 210.6 x 235.4 mm (HxWxD) 7.28 x 8.29 x 9.27 inch (HxWxD)			
Weight	Net weight: 4.4 kg (9.7 lbs) Gross weight: 5.8 kg (12.79 lbs)			
Power Consumption (W)	HDD standby:17.01W Typical operation: 29.31W (with 5 x 1 TB HDDs installed)			
Operating Temperature	0-40°C			
relative humidity	5~95% RH non-condensing, wet bulb: 27°C			
Power Supply	ATX 250W, 110-240V AC, 50-60Hz, 5A			
Secure Design	Kensington security slot for theft prevention			
Fan	1 x quiet cooling fan (12cm,12V DC)			

# Accessories

	Category	Order P / N	Description
Expansion units		UX-800P	QNAP 8-bay Expansion unit dimension & weight 185.2 x 298.2 x 235.4 mm ( H x W x D ),7.3 Kg
		UX-500P	QNAP 5-bay Expansion unit dimension & weight 185.2 x 210.6 x 235.4 mm ( H x W x D ),5.1Kg
LAN Card		LAN-10G1SR-D	Single-port 10 Gigabit SFP+ network expansion card
		LAN-10G1T-D	Single-port 10 Gigabit 10GBASE-T network expansion card
		LAN-10G2T-D	Dual-port 10 Gigabit 10GBASE-T Network Expansion Card
RAM	00.00	RAM-8GDR3-SO-1600	8GB DDR3 RAM, 1600 MHz, SO-DIMM
	0000	RAM-4GDR3-SO-1600	4GB DDR3 RAM, 1600 MHz, SO-DIMM
	00.00	RAM-2GDR3-SO-1600	2GB DDR3 RAM, 1600 MHz, SO-DIMM
Cable	9	CAB-DAC15M-SFPP	SFP+ Copper Twinax Direct-Attach ,1.5 m

## Software Specifications

Operating System
• QTS 4.2 (embedded Linux)

- Supported Client OS
   Windows 7 (32 / 64-bit), Windows 8 (32 / 64-bit), Windows Server 2003 / 2008 R2 / 2012 / 2012R2
- · Apple Mac OS X
- · Linux & UNIX

#### Supported Browsers

- Microsoft Internet Explorer 10+
- Mozilla Firefox 8+
- · Apple Safari 4+
- · Google Chrome

Multilingual Support
Chinese (Traditional & Simplified), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Romanian, Russian, Spanish, Swedish, Thai, Turkish

- File System
   Internal Hard Drive: EXT4
- · External Hard Drive: EXT3, EXT4, NTFS, FAT32, HFS+

- Networking
   TCP / IP (IPv4 & IPv6: Dual Stack)\*
- · 4 x Gigabit NICs with jumbo frame (failover, multi-IP settings, port trunking / NIC teaming)
- · Service binding based on network interfaces
- · Squid Proxy server
- · Proxy client
- DHCP client, DHCP server Protocols: CIFS / SMB, AFP (v3.3), NFS(v3), FTP, FTPS, SFTP, TFTP, HTTP(S), Telnet, SSH, iSCSI, SNMP, SMTP, and SMSC
- UPnP & Bonjour DiscoveryUSB Wi-Fi Adapter Support
- \* Not all services supports IPv6.

- · Network access protection with autoblocking: SSH, Telnet, HTTP(S), FTP, CIFS/
- · CIFS host access control for shared folders
- FIPS 140-2 validated AES 256-bit volume-
- based and shared folder data encryption\* · AES 256-bit external drive encryption\*
- Importable SSL certificates
- · Instant alert via E-mail, SMS, beep,and
- nush service
- · 2-step verification
- \* Data encryption functions may be unavailable in accordance with the legislative restrictions of some countries

#### Storage Management

- QNAP flexible Volume / LUN with thin provisioning and space reclaim
- RAID 0 / 1 / 5 / 6 / 10, + hot spare
- Supports storage pools
- Online volume expansion&storage pool
- · Online RAID capacity expansion and online RAID level migration
- · SMART data migration
- Storage expansion via max 2 QNAP UX-500P / UX-800P expansion units
- JBOD enclosure roaming
- · SSD read-only / read-write cache
- Bad block scan, recovery, and hard drive S.M.A.R.T.
- · RAID recovery
- · Bitmap support

#### Power Management

- · Wake on LAN
- · Internal hard drive standby mode
- · Scheduled power on / off Automatic power on after power recovery
- · USB and network UPS support with SNMP
- management

## Access Right Management • Batch user creation

- · Import / Export users · User quota management
- · Local user access control for CIFS, AFP, FTP, and WebDAV
- Application access control for Photo Station, Music Station, Video Station, and File Station
- Subfolder permissions support for CIFS / SMB, AFP, FTP, and File Station

### Domain Authentication Integration • Microsoft Active Directory (AD) & Domain

- Controller support
- · LDAP server, LDAP client
- · Domain users login via CIFS / SMB, AFP, FTP, and File Station

#### myQNAPcloud Service

- Private cloud storage and sharing
   Free host name registration (DDNS)
- · Supports myQNAPcloud SSL certificates (DDNS)
- · Auto router configuration (via UPnP)
- · Web-based file manager with HTTPS
- 2048 bit encryption
   CloudLink for remote access without any complicated router setup
- · myQNAPcloud connect for easy VPN connection (Windows VPN utility)

- Syncs files across multiple devices with SSL support
- · Selective synchronization for only syncing specific folders
- · Use team folders as a file center for greater team collaboration (maximum syn tasks:32)
- · Shares files by links via e-mail
- · Policy settings for conflicting files and file type filter support
- · Version control: up to 64 versions.
- Incremental synchronization for HDD space saving
- Unified privilege management Unified configuration management
- · Supports central configuration mode
- · Supports remote erase / restore · Supports shared folders sync
- · Supports Windows & Mac OS

#### Web Administration

- · Movable Icons and personalized desktop · Smart toolhar and dashboard for neat
- system status display
- · Smart fan Control
- · Dynamic DNS (DDNS)
- · Resource monitor
- Network recycle bin for file deletion via CIFS / SMB, AFP, and File Station
- Automatic Cleanup
- File Type Filter

  Comprehensive logs (events & connection)
- · Syslog client / server
- System settings backup and restore
   Restore to factory default
- Mobile app: Qmanager for remote system monitoring & management

#### File Server

- File sharing across Windows, Mac, and Linux / UNIX
- · Advanced folder permissions for CIFS / SMB,
- Shared folder aggregation (CIFS / SMB)

- FTP over SSL / TLS (Explicit)
- · FXP support
- · Passive ftp port range control

- · Supports mounting a Cloud Drive (such as Google Drive, Dropbox, Microsoft OneDrive, Amazon Cloud Drive, Yandex Disk and Box).
- Supports mounting remote shared folders through FTP, WebDAV or Microsoft networking (SMB / CIFS)
- Supports opening documents via Office

- Online, Google Docs or Chrome Extension (Edit Office files in Google Docs, Sheets, and Slides)
- Supports ISO Mounting (Up to 256 ISO Files)
- · Supports thumbnail display of multimedia
- · Supports sharing download links and upload links
- Supports sharing to other NAS users
- Drag-n-drop Files via Chrome and Firefox Browsers · Photo, music, and video preview and
- · File Compression (ZIP or 7z) Supports displaying subtitles (\*.SRT, UTF-8 format)
- · Supports slideshow playback in media
- · Mobile App: Qfile for file browsing and

#### Backup Station

- Remote replication server (over rsync)
- · Real-time remote replication (RTRR) to
- another QNAP NAS or FTP server · Works as both RTRR server & client with bandwidth control
- Real-time & scheduled backup
- Backup versioning for RTRR
   Snapshot support for RTRR / Rsync
- Encryption, compression, file filter, and transfer rate limitation
- · Encrypted replication between QNAP NAS
- · Desktop backup with QNAP NetBak
- Replicator for Windows Apple Time Machine backup support
- · Data backup to multiple external storage
- Synchronizes with cloud storage: Amazon S3, ElephantDrive, Symform, Dropbox, and
- Google Drive · Third party backup software support: Acronis True Image, Arcserve backup, emc retrospect, Symantec Backup Exec, etc.

- Container Station
- Supports LXC and Docker
   Supports CPU / Memory management · Download applications from the built-in
- Docker Hub Registry
   Supports one-click installation, container
- export / import & console mode Supports mounting NAS shared folders and
- data-only containers Supports auto port forwarding
- Supports auto-start containersSupports downloading Docker certificates

- Print Server
- · Max number of printers: 3
- · Supports Internet Printing Protocol
- Print job display and management · IP-based and domain name-based privilege control

· Audio and video sharing for Windows & Mac iTunes

AirPlay& Chromecast Streams videos, photos and music from NAS to Apple TV or Chromecastvia File Station, Music Station, Photo Station, Video Station or mobile app (Qfile, Qmusic,

Note: Media Streaming add-on app from the App Center is required

#### Storage Plug & Connect

- Creating and mapping shared folders by QNAP Windows Qfinder
- Creation of and connection to iSCSI target / LUN

#### iSCSI (IP SAN)

- · iSCSI target with multi-LUNs per target (Up to 256 targets / LUNs combined)
- · Supports LUN mapping & masking
- · Online LUN capacity expansion
- · Support for SPC-3 persistent reservation · Supports MPIO & MC / S
- · iSCSI LUN backup, one-time snapshot, and
- iSCSI connection and management by QNAP Windows Qfinder
- · Virtual disk drive (via iSCSI initiator) · Max No. of virtual disk drives: 8

- Surveillance Station
- Supports over 3,000 IP cameras
   Includes 2 free camera licenses, up to 30 camera channels via additional license
- purchase
- Instant playback to check recent events · Online editing to edit cameras during live
- · Visual aid by e-map · Playback and speed control using the
- shuttle bar · Video preview on playback timeline
- · Intelligent video analytics (IVA) for
- advanced video searching Surveillance client for Mac
- · Mobile surveillance app: Vmobile
- (iOS and Android) · Mobile recording app: Vcam (iOS and
- VPN Server
   Secure remote access: PPTP L2TP / IPsec&OpenVPN VPN services
- · Max number of clients: 30 VPN Client
- Supported VPN protocols: PPTP &OpenVPN services · PPTP Authentication: PAP. CHAP. MS-CHAP.
- MS-CHAPv2 · PPTP Encryption: None, AES 40 / 128 bit,
- AES 256 bit
- · OpenVPN Encryption: None, AES 40 / 128 bit, AES 256 bit
- · Transmission package monitor
- · OpenVPN port control · OpenVPN link compression

- DLNA Server
   Supports DLNA / UPnP TVs and players such
- as PlayStation 4 and Xbox One · Supported audio formats: AIFF, APE, DSD (DSF, DFF), FLAC, M4A, M4A Apple Lossless
- (ALAC), MP3, OggVorbis, WAV (PCM, LPCM), WMA, WMA PRO, WMA VBR\*

  Support CUE indexing file for APE, FLAC

### \*DRM-protected content is not supported.

App Center
• Official and community software add-ons such as Photo Station, Music Station, Video Station, Download Station, Signage Station and Notes Station, etc.

Designs and specifications are subject to change



## **QNAP** Systems, Inc.

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