

QNAP NVR-104

Network Surveillance System for SOHO and Home
QNAP Network Video Recorder for IP Cameras

Live Monitoring, Recording, and Video Playback over the Internet Anytime, Anywhere
Secure Life, Secure Property



All-in-one Recording Functions

- Continuous/ schedule/ manual recording
- Alarm recording (by motion detection or sensor triggered)
- Multiple alarm recording schedules
- Up to 120 fps (4 channels) QVGA/ CIF recording
- Up to 40 fps (4 channels) VGA recording
- High quality recording in H.264, MPEG-4, and M-JPEG
- Audio recording (depends on camera)

High Reliability and Smart Features

- Advanced RAID (0/ 1/ JBOD)
 - * RAID function is enabled via an external eSATA device
- Convenient video backup to external USB storage by one touch auto video backup button
- Supports UPS (Uninterruptible Power Supply) for 24x7 service
- Intelligent automatic system startup when power resumes after power outage

Powerful Surveillance Features

- Diversified modes for live monitoring
- Smart control of PTZ cameras and auto cruising
- Event notification on monitoring
- Real-time SMS and email alert
- Multi-channel playback at different speed
- Easy data search by date & time, timeline, event, and intelligent video analytics (motion detection, foreign object, missing object, out of focus, and camera occlusion)
- Enhanced file security by digital watermark

Easy to Use

- Trouble-free 6-step installation
- Intuitive web-based user interface
- Drag and drop function on monitoring

Green NVR Solution

- Linux-embedded system with energy saving design (18W only)



**Real-time monitoring
over the Internet anytime, anywhere !**

NVR-104

Secure Life, Secure Property

High Performance Network Surveillance System for SOHO and Home

The NVR-104 is an affordable and reliable network surveillance solution designed for the SOHO and home market. It features 4-channel H.264, MPEG-4 and M-JPEG recording, up to 120 channels monitoring from multiple QNAP NVR servers, and is compatible with the IP cameras and video servers from **AXIS, ACTi, Arecont Vision, AVTECH, Canon, D-Link, EDIMAX, ELMO, EtroVision, GANZ, iPUX, IQeye, LevelOne, Messoa, MOBOTIX, Panasonic BB/ BL/ i-Pro, SANYO, SONY, TOSHIBA, TRENDnet, VIVOTEK, and Y-CAM.**

The NVR-104 is designed to house one SATA hard drive with maximum 1TB storage capacity. The Linux-embedded OS and standalone system design enhance the reliability and ease of maintenance of the NVR. The system can be set up by the IE browser in a few simple steps. No extra software is ever required.

Different live monitoring display options are available, e.g.

multi-channel display mode, sequential display mode, exclusive Picture-in-Picture mode, and dual display mode. A variety of recording modes is also provided, such as continuous recording, schedule recording, manual recording, motion-detection recording, event-triggered recording, pre-alarm and post-alarm recording. Moreover, the NVR supports **video search by intelligent video analytics (IVA), including motion detection, foreign object, missing object, out of focus, and camera occlusion.**

The NVR-104 is an energy-saving system with the power consumption of less than 18W. An extremely quiet fan is equipped that enables the system to operate without much noise. It is a highly competent network surveillance solution for monitoring at home, office, campus, parking lots, and chain stores, etc.

Powerful Surveillance Features



• Diversified Monitoring Modes

- 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20/ 25/ 36/ 42-channel display mode
- Sequential display mode
- Exclusive Picture-in-Picture mode
- Dual display mode



• Easy Drag and Drop Function on Monitoring

The NVR supports drag and drop function to change the display order of the monitoring channels.

• Smart Control of PTZ & Speed Dome Cameras

You can adjust the PTZ cameras directly by the web user interface.

• Preset Position Control and Auto Cruising

You can view different preset positions of the IP cameras by clicking the number buttons on the monitoring page. You can also configure auto cruising settings on the NVR for periodic monitoring of the preset positions of the PTZ cameras.

• Digital Zoom for Monitoring and Playback

The NVR supports digital zoom for more flexible monitoring and playback.

• Event Notification

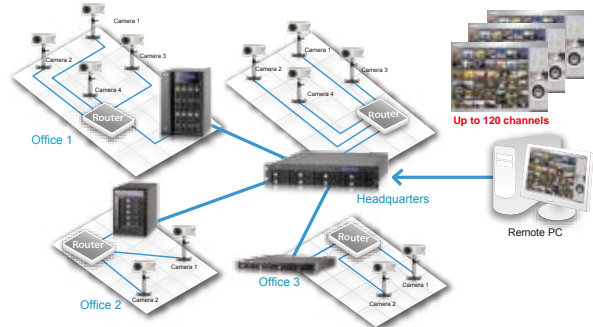
When alarm recording is enabled and an event occurs, you can click the alarm icon on monitoring page to view the alert details.

• Video Snapshot

The snapshot function is supported on monitoring and playback page.

• Multi-server Monitoring

You can connect to the NVR and add other QNAP NVR servers to monitor up to 120 channels over LAN or WAN.



• All-in-one Recording Functions

- Continuous/ schedule/ manual recording
- Alarm recording/ multiple alarm recording schedules
- High quality Motion-JPEG, MPEG-4, and H.264 recording
- High performance megapixel recording
- Audio recording (depends on the cameras)
- * Up to 15 schedules are supported for each camera

• Generic IP Cameras Support

QNAP NVR provides an interface for you to enter the JPEG CGI command of IP cameras in order to monitor, record, and playback the video of the IP cameras on the NVR.

• Real-time SMS and Email Alert

The NVR sends SMS and e-mail alert to the administrator immediately in case of system error or emergent events.



• Authority Management

You can configure the monitoring and playback authority of specified cameras for up to 32 users.

• On-line User List and Host Access Control

You can specify the connections to be allowed and denied to access the NVR. You can also view the record of users currently logged on and previously logged on to the NVR.

• Schedule Remote Replication

The NVR supports schedule remote replication for secure data backup to a remote NAS in the local network.

• Advanced Event Logs

The NVR provides detailed event logs of system warning, hard disk error, network disconnection, UPS status, users' networking services, and recordings access record.



• Multi-channel Playback at Different Speed

The NVR provides Express Quad View Playback that you can either divide the selected time equally into four playback views or play the video of four cameras at the same time.

• Enhanced File Security by Digital Watermark

The digital watermark technology allows you to check if the exported videos and snapshots of NVR are modified to enhance the file security.



• Data Search by Date & Time, Timeline, Event and Intelligent Video Analytics (IVA)

The NVR supports quick search of recording data by date and time, timeline, and events, and intelligent video analytics, including **motion detection, foreign object, missing object, out of focus, and camera occlusion.**

Motion Detection:

The moving objects of the searching area are highlighted in red brackets.



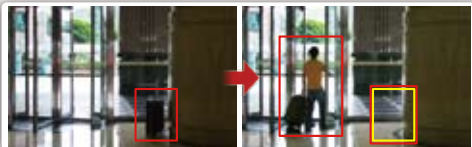
Foreign Object:

The foreign objects of the searching area are highlighted in yellow brackets.



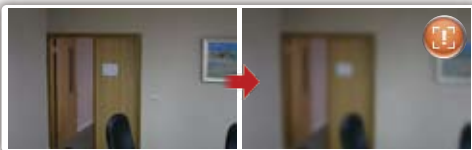
Missing Object:

The missing objects of the searching area are highlighted in yellow brackets.



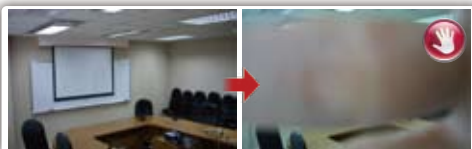
Out of Focus:

Detects if the IP camera is out of focus.



Camera Occlusion:

Detects if the IP camera is obstructed.



High Reliability and Smart Features

• Advanced RAID (0/ 1/ JBOD) (RAID function is enabled via an external eSATA device)

The NVR supports advanced RAID 1 mirroring for secure data protection by connecting to an external enclosure.

• Auto Logoff

The administrator can set the timeout period to log off the users when the idling time has reached in order to enhance secure management of the NVR.

• Intelligent Automatic System Startup

The NVR supports intelligent power-on support. When enabled, the NVR turns on automatically when the power resumes after power outage.

• Supports UPS System for 24x7 Service

• Convenient Video Backup by One Touch Auto Video Backup Button

The video data can be exported to an external storage device by the one touch auto video backup button for ease of archiving.

Easy to Use

• Easy System Setup in 6 Steps

The NVR provides quick setup for users to complete installation in 6 simple steps.

• Intuitive Web-based User Interface

All system configurations, monitoring, and playback can be finished by the web-based interface.

• Smart Search of IP Camera for Quick Settings

QNAP provides an intelligent software utility Finder for quick IP camera search and system settings.

• Convenient Quick Link Buttons of Network Camera

Besides configuring the network cameras by the administration interface of NVR, users can make use of the quick link buttons to access the management interface of the network cameras to configure the cameras.

Excellent Hardware Design

• Embedded System with Low Power Consumption

Built on Linux OS, the NVR is less vulnerable to virus attack and more energy-saving than PC-based surveillance solutions.

Power Consumption

QNAP NVR-104

PC-based NVR solution

18W

350W

• Up to 1TB Storage Capacity, Expandable to 2TB through an External eSATA Device

The NVR is an excellent choice for long-term recording and storing large amount of recording data.

• Small-sized, Easy to Deploy

The NVR occupies small space. It is easy to install and maintain.

Powerful Network Services

• Built-in NTP Server

• Built-in DDNS Support

• Convenient Data Access

You can access the recording data on the NVR by:

Network Neighborhood (SMB/ CIFS)/ Web File Management (HTTP) FTP server.

Application: Live Monitoring, Recording, and Video Playback over the Internet Anytime, Anywhere

• Business Service

- Live production line monitoring for quality and security control
- Department store/ mall monitoring
- Shipping process recording

- Crime prevention, e.g. shoplifting
- Parking lot monitoring
- Construction site monitoring
- Convenience store security
- Campus security

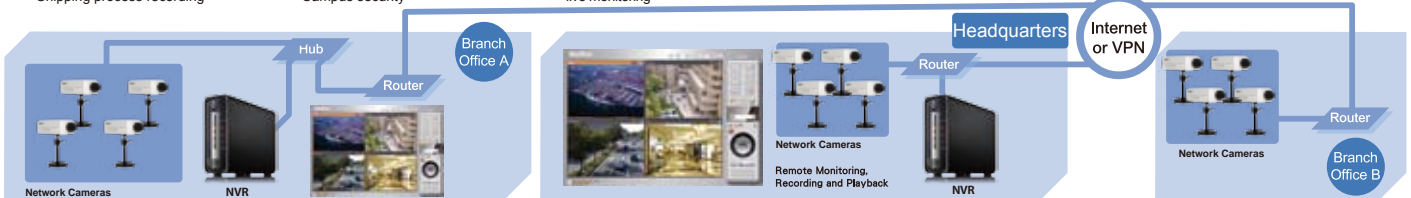
- Server room security
- Gas station security
- Hotel security
- Multiple remote offices/ factory sites live monitoring

• Office Management

- Real-time office monitoring from remote locations
- In-house office monitoring
- Office security fortification
- False alarm identification

• Home Care

- Home surveillance to secure life and property
- Enhanced protection for kids, elders, and pets
- Crime prevention
- Evidence or aid to police investigations



Hardware Specifications

HDD:

- Supports 1 x 3.5" SATA I/II HDD, up to 1TB storage capacity, expandable to 2TB via eSATA (the HDD is not included)

LAN Port:

- 1 x Gigabit RJ-45 Ethernet port

LED Indicators:

- Power, USB, status, LAN, hard disk

USB:

- 3 x USB; for USB storage device (One Touch Auto Video Backup) and UPS device

eSATA:

- 1 x eSATA port

Buttons:

- One touch auto video backup, power, reset

Form Factor:

- Portable desktop

Hardware Dimensions:

- 165.5 (H) x 60 (W) x 218.4 (D) mm
- 6.52 (H) x 2.36 (W) x 8.6 (D) inch

Hardware Net Weight:

- 0.71 kg/ 1.57 lb (without HDD)

Color Box Shipping Weight:

- 1.57 kg/ 3.46 lb (without HDD)

Operation Environment:

- Temperature: 0~40°C/ 32~104°F
- Humidity: 0~85% R.H.

Power Supply:

- External power adaptor, 36W, 100~240V

Energy-saving Design:

- Low power consumption

Thermal Solution:

- Low noise fan

Secure Design:

- K-Lock security slot for theft prevention
- Power cord hook for kicking-off prevention

Certification:

- CE, FCC, VCCI, BSMI

Software Specifications

Video

Display Mode:

- 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20/ 25 / 36/ 42-channel display, Picture-in-Picture mode, sequential mode, dual display mode

Recording Connection:

- Up to 4

Multi-server Monitoring:

- Up to 129 channels monitoring from multiple QNAP NVR servers

Compression Format:

- H.264, MPEG-4, and M-JPEG (vary by camera models)

Video Setting:

- Resolution, quality, frame rate

E-map:

- Upload E-map

Recording

Recording Mode:

- Continuous/ schedule/ manual recording
- Alarm recording/ multiple alarm recording schedules

Buffer Storage for Alarm Images (before & after events):

- Pre-recording: up to 300 sec; post-recording: up to 300 sec (total 600 sec/ 10 min)

Recording Performance:

- Up to 120 frames at QVGA or CIF
- Up to 40 frames at VGA

* Real performance may vary in different environment

File format:

- AVI (QNAP codec is needed for playback)

Playback

Playback Channel:

- Max 4-channel playback at the same time

Playback Mode:

- Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control

Search Mode:

- By date & time, timeline, event, and intelligent video analytics (IVA)

Playback Enhancement:

- Full screen display, video snapshot, digital zoom, digital watermark

Download:

- Download recordings via the web

Network

Support:

- HTTP, TCP/IP, SMTP, DHCP, Static IP, DNS, DDNS, FTP, NTP, UPnP

Security

Operation System:

- Linux-embedded, free from PC crash and virus attack

Authority Management:

- Configure different authority of specified cameras for max 32 users

On-line Users List:

- Record of users currently logged on and previously logged on to the NVR

Host Access Control:

- Specify the connections to be allowed and denied to access NVR

Alert Notification:

- Buzzer, event notification, SMS, e-mail alert

Auto Logout:

- The administrator can set the timeout period to log off the users when the idling time has reached

Digital Watermark:

- Enhanced file security by digital watermark

UPS:

- Supports APC (USB type UPS)

Event Logs:

- Detailed record of all events

Storage

Disk Mode:

- Single, RAID 0, RAID 1, JBOD/ Linear

Services:

- Web File Manager, FTP, SMB/CIFS

Client PC Requirements (Suggested system requirements for better video performance)

CPU:

- M-JPEG format (up to 4-channel): Intel® Pentium® 4 CPU 2.0 GHz or above
- H.264/ MPEG-4 format (up to 4-channel): Dual core CPU 2.0 GHz or above

Memory:

- 1 GB or above

Operation System:

- Windows XP/ Vista

Browser:

- Internet Explorer® 6.0 or later

Network Interface:

- 10/100 Mbps or above

Display Resolution:

- 1024 x 768 pixels or above

Language Support

- Danish/ Dutch/ English/ French/ Finnish/ German/ Hungarian/ Italian/ Japanese/ Korean/ Norwegian/ Polish/ Portuguese/ Russian/ Spanish/ Swedish/ Simplified Chinese/ Traditional Chinese

Utility Software

QNAP Finder:

- QNAP Finder is provided for quick server setup and NVR discovery in LAN

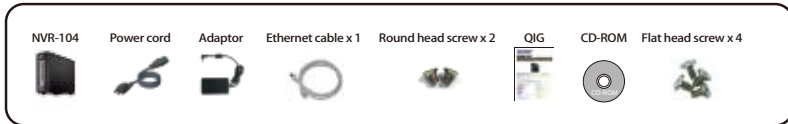
VioStor Player:

- Play the recording files on your Windows computer easily

Brand	Models	NVR-104P	NVR-104V
		4 channels	4 channels
AXIS	206M/ 207/ 207W/ 207M/ 207MW/ 209FD-(R)/ 209MFD-(R)/ 210/ 210A/ 211A/ 211/ 211W/ 211M/ 212/ 213/ 214/ 215/ 216FD/ 216MFD/ 221/ 223M/ 225FD/ 231/ 232/ 233D/ P1311/ P3011/ P3301/ P3343/ P3344/ Q1755/ Q7401/ Q7404/ M1011/ M1011-W/ M1031-W/ M3011/ M3014/ M7001/ 241Q/ 241QW/ 241S/ 241SA/ 243SA/ 247S	●	●
ACTI	ACM-1231/ ACM-1232/ ACM-1311/ ACM-1431/ ACM-1432/ ACM-1511/ ACM-3001/ ACM-3011/ ACM-3211/ ACM-3311/ ACM-3401/ ACM-3411/ ACM-4001/ ACM-4001/ ACM-4101/ ACM-4201/ ACM-5001/ ACM-5601/ ACM-5611/ ACM-5711/ ACM-7411/ ACM-8211/ ACM-8511/ CAM-5201/ CAM-5221/ CAM-5301/ CAM-5321/ CAM-6500/ CAM-6600/ CAM-6610/ CAM-6620/ CAM-6630/ CAM-7300/ CAM-7321/ CAM-7322/ ACD-2100/ ACD-2200/ ACD-2300/ ACD-2400/ ACD-2000Q/ SED-2140/ SED-2120/ TCM-4301/ TCM-5311	●	●
Arecont Vision	AV1300/ AV1305/ AV1355/ AV2100/ AV2105/ AV2155/ AV3130/ AV3100/ AV3105/ AV3155/ AV5100/ AV5105/ AV5155/ AV8180/ AV8185/ AV8360/ AV8365	●	●
AVTECH	AV2011/ AV202/ AV203/ AV1204/ AV1322	●	●
Canon	VB-C300/ VB-C300F/ VB-C50R/ VB-C50/ VB-C50F/ VB-C50FV/ VB-C50FV/ VB-C5000/ VB-C60	●	●
Cisco	CIVS-IPC-2500/ CIVS-IPC-2500W	●	●
D-Link	DCS-900(A)/ DCS-900(B1)/ DCS-900(B2)/ DCS-910/ DCS-920/ DCS-2102/ DCS-2120/ DCS-2121/ DCS-3220(G)/ DCS-3420/ DCS-5220/ DCS-5300(G)/ DCS-6620(G)	●	●
EDIMAX	IC-1510/ IC-1510WG/ IC-3010/ IC-3010WG/ IC-7000PT/ IC-7000PTN	●	●
ELMO	PTC-401C-IP/ PTC-402C-IP/ SN2230-IP2/ SN2230-IPW/ SN2232-IP/ TD4112-IP/ TD4114-IP2	●	●
EtroVision	EV3130/ EV3131/ EV3131A/ EV3830/ EV6130/ EV6332/ EV6530/ EV6531A/ EV6552A	●	●
GANZ	ZN-D2024/ ZN-PT304W/ ZN-PT304WU/ ZN-YH930/ ZV-S306	●	●
IPUX	ICS 1001/ ICS 1011/ ICS 1003/ ICS 1013/ ICS 1300/ ICS 1310/ ICS 130A/ ICS 131A	●	●
iQeye	IQ040S/ IQ040S1/ IQ041S/ IQ042S/ IQ042S1/ IQ051/ IQ071/ IQ072/ IQ073/ IQ075/ IQ0710/ IQ0711/ IQ0712/ IQ0751/ IQ0752/ IQ0753/ IQ0755/ IQ0802/ IQ0803/ IQ0805/ IQ0811/ IQ0851/ IQ0852/ IQ0853/ IQ0855/ IQA10S/ IQA10W/ IQA11S/ IQA11W/ IQA12S/ IQA12W/ IQA13S/ IQA13W/ IQA15S/ IQA15W/ IQA20S/ IQA20W/ IQA21S/ IQA21W/ IQA22S/ IQA22W/ IQA23S/ IQA23W/ IQA25S/ IQA25W	●	●
LevelOne	FCS-0010/ WCS-0010/ FCS-0020/ WCS-0020/ FCS-1010/ WCS-2010/ FCS-1030/ WCS-2030/ FCS-1040/ WCS-2040/ FCS-1060/ WCS-2060/ FCS-1070/ WCS-2070/ FCS-109X/ WCS-109X/ FCS-3000/ FCS-3021/ FCS-5030	●	●
Linksys	PVC-2300/ WVC-200/ WVC54GCA	●	●
MESSOA	ND2860 H2/ NIC835 HNS/ NIC836	●	●
MOBOTIX	D12D-IT/ D12D-Sec/ D22M-Basic/ D22M-IT/ D22M-Sec/ M10D-Night/ M12D-IT/ M12D-Sec/ M12M-IT/ M12M-Sec/ M12M-Web/ M22M-IT/ M22M-Night/ M22M-Sec/ Q22M-Basic/ Q22M-Sec/ Q24M-Sec	●	●
NAKAYO	IPCAMDH	●	●
Panasonic	BB-HCM100/ BB-HCM110/ BB-HCM311/ BB-HCM331/ BB-HCM371/ BB-HCM381/ BB-HCM403/ BB-HCM481/ BB-HCM511/ BB-HCM531/ BB-HCM551/ BB-HCM527/ BB-HCM547/ BB-HCM580/ BB-HCM581/ BB-HCM715/ BB-HCM735/ KX-HCM180/ KX-HCM180/ BL-C1/ BL-C10/ BL-C11/ BL-C11/ BL-C131/ BL-C20/ BL-C30(K1)/ BL-C31	●	●
Panasonic i-Pro	NF282/ NF284/ NF302/ NM100/ NP1000/ NP1004/ NP240/ NP244/ NP304(V)/ NP472/ NP502/ NS202(A)/ NS324/ NS950/ NS954/ NW484(S)/ NW960/ NW964	●	●
SANYO	VCC-400N/ VCC-P450/ VCC-P470/ VCC-P490/ VCC-PT500/ VCC-9600/ VCC-9800/ N6695/VCC-HD4000	●	●
SONY	SNC-CS10/ SNC-CS11/ SNC-CS20/ SNC-CS50/ SNC-CM120/ SNC-DF40/ SNC-DF50/ SNC-DF70/ SNC-DF80/ SNC-DF95/ SNC-D510/ SNC-D560/ SNC-DM110/ SNC-DM160/ SNC-P1/ SNC-P5/ SNC-RX530/ SNC-RX550/ SNC-RX570/ SNC-R225/ SNC-RZ30/ SNC-R250/ SNC-Z20/ SNT V704	●	●
TOA	N-CC2561/ N-VT-2010/ N-CC-2360	●	●
TOSHIBA	CI8110-D/ CI8210-D/ IK-WB12/ IK-WB21	●	●
TRENDnet	TV-IP212/ TV-IP212W/ TV-IP312/ TV-IP312W/ TV-IP410/ TV-IP410W/ TV-IP422/ TV-IP422W	●	●
VIVOTEK	IP3111/ IP3121/ IP3112/ IP3122/ IP3132/ IP3133/ IP3137/ PT3112/ PT3122/ PT3117/ PT3127/ FD611W/ FD6121W/ FD6112W/ FD6122W/ IP6112/ IP6122/ IP6117/ IP6127/ P26112/ P26122/ P26114/ P26124/ SD6112W/ FD7130/ FD7131/ FD7132/ FD7141/ FD7160/ IP7130/ IP7131/ IP7132/ IP7133/ IP7134/ IP7135/ IP7137/ IP7138/ IP7139/ IP7142/ IP7151/ IP7152/ IP7153/ IP7154/ IP7161/ IP7251/ IP7330/ IZ7151/ PZ71X1/ PZ71X2/ PZ7131/ PZ7132/ PZ7135/ PZ7137/ PZ7151/ PZ7152/ SD6122W/ SD7151/ SD73X3/ IP8161/ VS3100P/ VS3102/ VS7100	●	●
Y-CAM	Y-Cam White/ Y-Cam Black	●	●

*For the latest information of the supported cameras, please visit QNAP Security website: http://www.qnapsecurity.com/pro_compatibility_camera.asp
 **All the other trademarks mentioned herein are the property of their respective companies.
 ***Designs and specifications are subject to change without notice.

Package Contents



Hardware Illustration



*Designs and specifications are subject to change without notice. Please contact QNAP for updated information.

QNAP Systems, Inc.

TEL: 886-2-8698 2000 FAX: 886-2-8698 2270

Address: 21F, No. 77, Sec. 1, Xintai 5th Rd, Xizhi City, Taipei County, 221, Taiwan

For more detailed information, please visit QNAP website: <http://www.qnapsecurity.com/>

E-mail: nvr@qnap.com

QNAP is a registered trademark of QNAP Systems, Inc. Microsoft and Windows are either registered trademarks of Microsoft® Corporation in the United States and other countries.

