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

Intelligent *Video Analytics*
- Motion Detection
- Foreign Object
- Missing Object
- Out of Focus
- Camera Occlusion

Environment Friendly
- Quiet
- Power-saving

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 Motion-JPEG, MPEG-4, and H.264
- 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)

Linux Embedded   MJPEG MPEG4 H.264   **Intelligent** *Video Analytics*   **SMS** *Support*   **Watermark** *Support*   **Dual** *Display*

MOTION DETECTION   **SENSOR TRIGGERED** Alarm   **TIME STAMP** AM 10:00   **UPS** *Support* UPS Support APC   SATA I / II   **Gigabit** Ethernet

Real-time monitoring
over the Internet anytime, anywhere !

High Performance Network Surveillance System for SOHO and Home

The NVR-104 is an affordable and reliable network surveillance solution designed for the SMB and SOHO market. It features 4-channel M-JPEG, MPEG-4 and H.264 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**, **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

• Multi-server Monitoring
You can connect to the VioStor NVR and add other QNAP NVR servers to monitor up to 120 channels over LAN or WAN.

Office 1   Headquarters

Internet/ VPN

Router

Remote PC

Up to 120 channels

Office 2   Office 3

• 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

Dual Display

• Easy Drag and Drop Function on Monitoring
The VioStor 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 VioStor NVR for periodic monitoring of the preset positions of the PTZ cameras.

• Digital Zoom for Monitoring and Playback
The VioStor 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.

• 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

• 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 VioStor NVR. You can also view the record of users currently logged on and previously logged on to the VioStor NVR.

• Flexible Adjustment of the Length of Recording Files
You can flexibly adjust the length of the recording files.

• Schedule Remote Replication
The VioStor NVR supports schedule remote replication for secure data backup to a remote NAS.

• Advanced Event Logs
The VioStor 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 VioStor 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 recording files on VioStor NVR are modified to enhance the file security.

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

The VioStor 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-104 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-104 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 VioStor 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-104 is less vulnerable to virus attack and more energy-saving than PC-based surveillance solutions.

Power Consumption
QNAP NVR-104 — 18W
PC-based NVR solution — 350W

- ## Up to 1TB Storage Capacity, Expandable to 2TB through an External eSATA Device
  The NVR-104 is an excellent choice for long-term recording and storing large amount of recording data.

- ## Small-sized, Easy to Deploy
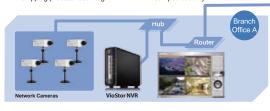 The NVR-104 occupies small space. It is easy to install and maintain.

Powerful Network Services

- ## Built-in NTP Server
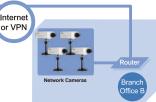- ## Built-in DDNS Support
- ## Convenient Data Access
  You can access the recording data on the NVR-104 by:
  Network Neighborhood (SMB/ CIFS)/ Web File Management (HTTP)/ FTP server.

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

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/ M1011/ M1011-W/ M1031-W/ M3011/ M7001/ 241Q/ 241QA/ 241S/ 241SA/ 243SA/ 247S	●	●
ACTi	ACM-1231/ ACM-1232/ ACM-1311/ ACM-1431/ ACM-1432/ ACM-1511/ ACM-3001/ ACM-3211/ ACM-3311/ ACM-3401/ ACM-3411/ ACM-4000/ ACM-4001/ ACM-4100/ ACM-4200/ 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	AV 1300/ AV 1305/ AV 1355/ AV 2100/ AV 2105/ AV 2155/ AV 3130/ AV 3100/ AV 3105/ AV 3155/ AV 5100/ AV 5105/ AV 5155/ AV 8180/ AV 8185/ AV 8360/ AV 8365	●	●
Canon	VB-C300/ VB-C300B/ VB-C50iR/ VB-C50i/ VB-C50FSi/ VB-C50Fi	●	
Cisco	CIVS-IPC-2500/ CIVS-IPC-2500W	●	●
D-Link	DCS-2120/ DCS-2121/ DCS-3220/ DCS-3220G/ DCS-3420/ DCS-5220/ DCS-5300/ DCS-5300G/ DCS-6620/ DCS-6620G/ DCS-900(A)/ DCS-900(B)/ DCS-900(B2)/ DCS-920		●
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	●	●
GANZ	ZN-D2024/ ZN-PT304L/ ZN-PT304WL/ ZN-YH305/ ZV-S306	●	●
iPUX	ICS 1001/ ICS 1011/ ICS 1003/ ICS 1013/ ICS 1300/ ICS 1310/ ICS 130A/ ICS 131A	●	●
IQeye	040S/ 041S/ 042S/ 510/ 511/ 701/ 702/ 703/ 705/ 710D/ 711D/ 712D/ 752/ 753/ 754/ 755/ 802/ 803/ 805/ 811/ 852/ 853/ 855	●	●
LevelOne	FCS-0010/ FCS-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	NDZ860 H2/ NIC835 HN5/ 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	●	●
Panasonic	BB-HCM580/ BB-HCM581/ BB-HCM527/ BB-HCM531/ BB-HCM515/ BB-HCM547/ BL-C1/ BL-C10/ BL-C111/ BL-C131/ BL-C20/ BL-C30/ BL-C30K1/ BB-HCM481/ BB-HCM403/ BB-HCM381/ BB-HCM371/ BB-HCM331/ BB-HCM311/ BB-HCM110/ BB-HCM100/ KX-HCM280/ KX-HCM180/ BL-C11/ BL-C31/ NF282/ NF284/ NP1000/ NP1004/ NP240/ NP244/ NS202(A)/ NS950/ NS954/ NW484/ NW960/ NW964/ WV-NF302/ WV-NP304/ WV-NP304V	●	
SANYO	VCC-400N/ VCC-P450/ VCC-P470/ VCC-PT490/ 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-DF85/ SNC-DS10/ SNC-DS60/ SNC-DM110/ SNC-DM160/ SNC-P1/ SNC-P5/ SNC-RX530/ SNC-RX550/ SNC-RX570/ SNC-RZ25/ SNC-RZ30/ SNC-RZ50/ SNC-Z20	●	
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/ IP3135/ IP3137/ PT3112/ PT3122/ PT3117/ PT3127/ FD6111V/ FD6121V/ FD6112V/ FD6122V/ IP6112/ IP6122/ IP6117/ IP6127/ PZ6122/ PZ6114/ PZ6124/ SD6112V/ FD7130/ FD7131/ FD7132/ FD7141/ IP7130/ IP7131/ IP7132/ IP7133/ IP7134/ IP7135/ IP7137/ IP7138/ IP7139/ IP7142/ IP7151/ IP7152/ IP7154/ IP7161/ IP7251/ IP7330/ IZ7151/ PZ7111/ PZ7121/ PZ7112/ PZ7122/ PZ7131/ PT7135/ PT7137/ PZ7151/ PZ7152/ SD6122V/ SD7151/ SD7313/ SD7323/ VS 3102/ VS 3100P/ VS 7100		●
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.

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 120 channels monitoring from multiple QNAP NVR servers

Compression Format:
- M-JPEG, MPEG-4 and H.264 (depend on IP camera)

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 (320x240) or CIF (320x240)
- Up to 40 frames at VGA (640x480)
- * 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

Playback Enhancement:
- Full screen display, video snapshot, digital zoom

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

Memory:
- 1 GB or above

Operation System:
- Windows XP/ Vista (32-bit)

Browser:
- Internet Explorer® 6.0 or later

Network Interface:
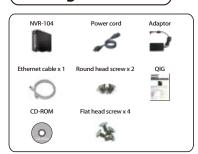- 10/100 Mbps or above

Display Resolution:
- 1024 x 768 pixels or above

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

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

Package Contents

- NVR-104
- Power cord
- Adaptor
- Ethernet cable x 1
- Round head screw x 2
- QIG
- CD-ROM
- Flat head screw x 4

Hardware Illustration

- One Touch Auto Video Backup Button
- USB 2.0
- USB
- Status
- HDD 1
- eSATA
- LAN
- Power
- LED Indicators
- Power Button
- USB 2.0 x 2
- eSATA
- Giga LAN
- K-Lock Security Slot
- Reset Button
- Power Connector
- Power Cord Hook

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

98/8

QNAP SECURITY