VS-8040U-RP VioStor NVR

Features

QNAP VS-8040U-RP VioStor NVR (Network Video Recorder) is the high-end 8-bay, 2U chassis network surveillance system designed for high quality megapixel recording, mass storage capacity and high performance real-time monitoring. The VS-8040U-RP VioStor NVR is a highly reliable standalone NVR with powerful surveillance features. Based on Linux OS, the NVR supports 40-channel H.264, MxPEG, MPEG-4 and M-JPEG recording from over 800 network camera models from 36 popular brands, e.g. AXIS, ACTi, A-MTK, Arecont Vision, AVTECH, Canon, Cisco, CNB, Brickcom, DIGITUS, D-Link, EDIMAX, ELMO, EtroVision, GANZ, Hikvision, iPUX, IPX, IQeye, LevelOne, Linksys, Messoa, MOBOTIX, NAKAYO, Panasonic BB/ BL/ i-Pro, SANYO, SHANY, SONY, TOA, TOSHIBA, TRENDnet, Videosec, VIOSECURE, VIVOTEK & Y-CAM. The NVR can be also cascaded to other QNAP NVR servers to monitor up to 128 IP cameras.

The VS-8040U-RP VioStor NVR adopts Linux-embedded OS, Intel® Core™ 2 Duo 2.8GHz CPU, and 2GB DDRII memory to deliver high system reliability. It supports hot-swap hard drive design and redundant power supply against system downtime caused by hard drive failure or power outage. Besides, the NVR supports diversified recording features and video search by intelligent video analytics (IVA), e.g. motion detection, foreign object, missing object, out of focus, and camera occlusion, etc. An intuitive user interface is provided for the users to view the monitoring screens, connection status, recording status, and network bandwidth.

Other class-leading server features of the VS-8040U-RP VioStor NVR include advanced data protection by RAID 0/ 1/ 5/ 5 + hot spare/ 6/6 + hot spare/ JBOD, Online RAID Capacity Expansion, Online RAID Level Migration, two Giga LAN ports for network failover, load-balancing, and multi-LAN setting, etc. Moreover, the VS-8040U-RP VioStor NVR can be easily set up by the handy LCD panel or in 6 simple steps by the web-based GUI using the IE browser. It is an excellent option for central monitoring and recording of numerous network cameras in a large-scale surveillance system.

Powerful Features of VS-8040U-RP VioStor NVR (Network Video Recorder):

- Exclusive Linux-embedded system, Intel® Core™2 Duo 2.8GHz CPU and 2GB DDRII memory
- Real-time monitoring and recording (video/ audio) from multiple network cameras

(up to 40 channels)
- Supports streaming from network cameras and servers
- High quality H.264, MxPEG, MPEG-4 and M-JPEG recording (varied by camera models)
- Supports megapixel recording (up to 8-megapixel)
- Complete recording features: schedule recording, alarm recording, alarm recording schedule, motion-detection recording, pre-alarm, and post-alarm recordings, etc.
- Up to 16TB storage capacity for long-term recording
- Multi-server monitoring: Supports monitoring of up to 128 channels
- Easy Data Search by Date & Time, Timeline, Event, Intelligent Video Analytics (IVA)
- Remote management: access and playback recordings by web browser, FTP, and Network Neighborhood anytime, anywhere
- Trouble-free 6-step installation
- Smart search of IP cameras for quick configuration
- Centralized monitoring with "Click-to-Go" PTZ control and adjustable display mode
- Digital zoom for monitoring and playback
- The display order of the monitoring channels can be changed by drag and drop
- Event notification on monitoring screen
- Real-time SMS and email alert
- Detailed event and system logs (include users' networking services and recording data access record)
- Schedule remote replication to NAS (Network Attached Storage) for video backup
- Unique online user list function and access authority control
- Multi-channel playback at different speed
- Enhanced file security by digital watermarking
- Automatic system startup when the power resumes after power outage
- Redundant Power Supply
- Ultra-high-end RAID (RAID 0/ 1/ 5/ 5+ hot spare / 6/ 6+ hot spare / JBOD) to protect all the important recordings in the most secure way
- Hot-swap hard drive design
- Online RAID Capacity Expansion and Online RAID Level Migration
- Two Gigabit LAN ports for failover, load-balancing, or multi-IP setting
- Supports UPS (Uninterruptible Power Supply) for 24x7 service

Surveillance Features

Remote Live Monitoring, Recording and Playback
The VioStor NVR is a standalone surveillance system that supports professional grade video recording and real-time remote monitoring and playback.

High Quality H.264, MxPEG, MPEG-4 and M-JPEG Recording (varied by camera models)

All-in-one Recording Functions

- Continuous/ manual/ schedule recording
- Alarm recording (by motion detection or sensor triggered)

- Alarm recording schedule

You can set different recording schedules for different cameras. Up to 15 schedules are supported for each camera.

Variety Live Video Monitoring

- 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20/ 25/ 36/ 42-channel and sequential display mode
- Exclusive Picture-in-Picture mode
- Multi-display Mode

Digital Zoom for Monitoring and Playback
The VioStor NVR supports digital zoom function for more flexible monitoring and playback. It is a powerful function for megapixel IP cameras.

Multi-server Monitoring
You can connect to the VioStor NVR and add other QNAP NVR servers to monitor up to 128 channels from a remote PC over LAN or WAN.

Supports Streaming from Network Cameras and Servers

- **Stream from the network camera**
  The monitoring screens are streamed from the network cameras. When your network surveillance system (VioStor NVR), IP cameras, and PC are installed behind the router, virtual server, or firewall, you will have to configure port forwarding (port mapping) for some of the IP cameras. Please refer to http://www.qnapsecurity.com/Applications_nvrig.asp
- **Stream from the server**
  The monitoring screens are streamed from the NVR server. There is no need to configure port mapping. However, the VioStor NVR performance may be affected. You may have to adjust the recording settings according to the real performance.

Change the Display Order of the Monitoring Channels
You can switch to display the monitoring channels by selecting the IP cameras on the drop down menu or by drag and drop.

Generic IP Cameras Support
QNAP NVR provides an interface for the users to enter the JPEG CGI command of IP cameras in order to receive the video and audio streaming data from the IP cameras and monitor, record, and playback the video of the IP cameras on the NVR. This feature largely enhances the compatibility and expandability of the NVR.

Audio Recording
The VioStor NVR supports audio recording (varied by camera models).

High Performance Megapixel Recording (up to 8-megapixel)
The VioStor NVR supports high performance megapixel recording (up to 8-megapixel) from various IP cameras.

Smart Control of PTZ & Speed Dome Cameras
The VioStor NVR enables the users to adjust the PTZ cameras directly by the web user interface.

Preset Position Control and [Auto Cruising](#)
You can view different preset positions of the camera by clicking the number buttons on the monitoring page. You can also choose the preset positions and configure the time interval on the PTZ cameras for periodic monitoring.

Event Notification on Monitoring
When alarm recording is enabled and an event occurs, an alarm icon is shown instantly on monitoring page. You can click the icon to view the alert details.

Pre-alarm and Post-alarm Recording
The VioStor NVR supports pre-alarm and post-alarm recording, which is used to record additional details before and after an event occurs.

[Advanced Event Management](#)
The compatibility between the NVR and the surveillance devices are strengthened to provide more event handling options when events are detected or alarms are triggered on the IP cameras.

- Events: The NVR supports more event types, e.g. motion detection and alarm input to trigger the follow-up actions.
- Actions: More actions can be defined when an alarm is triggered, such as recording, adjusting the IP camera to the preset monitoring point, alarm output, email or SMS alert.

[Real-time SMS and Email Alert](#)
The VioStor NVR sends SMS and alert e-mails to the administrator immediately in case of system error or emergent events.

E-map for Easy Preview of the Camera Location
The VioStor NVR provides exclusive E-map function for users to upload the pictures of the monitoring locations.

Video Snapshot
The VioStor NVR provides real-time monitoring as well as real-time snapshot. Users can

take a snapshot of the monitoring screen anytime.

Multi-channel Playback at Different Speed
The VioStor NVR supports playback of the recording data from different monitoring channels. It also provides the Express Quad View Playback that you can either divide the selected time equally into four playback views or load four consecutive cameras to play.

Easy Data Search by Date & Time, Timeline, Event, Intelligent Video Analytics (IVA)
The VioStor NVR supports quick search of recording data by date and time, timeline, event and intelligent video analytics, e.g. motion detection, missing object, foreign object, out of focus, camera occlusion, etc..
How to use intelligent video analytics on playback

Enhanced File Security by Digital Watermark
The digital watermark technology allows you to check if the recording files on VioStor NVR are modified or not. Therefore the file security is enhanced.

Recordings can be Played by Windows Media Player
Users can play the files by Windows Media Player. There is no need to install unique program or convert the files to other formats.

Flexible Adjustment of the Length of Recording Files
The VioStor NVR enables the users to flexibly adjust the length of the recording files.

Powerful Schedule Remote Replication
The VioStor NVR supports schedule remote replication for secure data backup to a remote NAS in the local network.

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.

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

Intel® Core™2 Duo 2.8GHz CPU and 2GB DDRII Memory for Superior System Performance
The VioStor NVR is an ideal & powerful network video surveillance system designed for SMB and Enterprise. Powered by Intel 2.8GHz CPU and 2GB DDRII memory, it delivers superior performance for surveillance applications.

Redundant Power Supply
The VS-8040U-RP is equipped with two power supply units, each of which is capable of supplying the power for the entire VioStor NVR independently. If one of the units fails, the other one will take over to supply the power to ensure continuous operation of the VioStor NVR. You can replace the failed power supply unit without turning off the server.

Linux Embedded System
The Linux-based NVR is more power-saving and less vulnerable to virus attack compared to PC-based surveillance solution.

Touch-N-Go PC-less Installation by LCD Display
The handy LCD display on the VioStor NVR provides a speedy and easy approach to initialize the NVR and set up the RAID configuration without using any computer. You can use the handy LCD to finish the first time installation in 3 simple steps. The NVR will automatically complete the hard disk formatting and RAID building. When the system is ready, users can check or configure the IP settings, physical disk info, volume info, system info, shut down or reboot the NVR etc.

Smart Fan
The fan rotation speed is automatically adjusted according to the server's temperature. You can also define the system temperatures to trigger high speed or low speed rotation of the fan.

Dual Gigabit LAN Ports

Failover
The dual LAN ports can be configured as failover which allows the VioStor NVR server to

sustain the failure of one network port to provide continuous services.

Load-balancing
The two LAN ports of the VioStor NVR can be configured as load balancing mode for bandwidth aggregation to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured).

Multi-IP Setting
The VioStor NVR can be deployed with two IP settings for sharing among different workgroups in two different subnets.

Support 8 High-speed SATA Hard Drives
SATA hard drives are faster than IDE hard drives, which enhance recording and playback performance.

Up to 16TB Storage Capacity for Long-term Recording
The VioStor NVR is an excellent choice for long-term recording and saving large amount of recording data.

Lockable HDD Tray
The VioStor NVR provides lockable HDD trays to protect the physical hard drives.

High Reliability and Smart Features

Advanced RAID (1/ 5/ 6) with Hot-swap Design
The VioStor NVR offers advanced RAID 0, 1, 5, 6, 5+spare, 6+spare, single, and JBOD disk configurations. It also supports hot-swap design that a failed drive can be replaced by hot swapping without turning off the server. Besides, the best-in-class RAID on the VioStor NVR brings users a higher level of data security by allowing one more hard drive failure than other NVR of the same level.

Online RAID Capacity Expansion and Online RAID Level Migration

Online RAID Capacity Expansion
The storage capacity of a RAID configuration can be expanded by replacing the hard drives with larger ones. All the data will be kept and seamlessly moved to the newly installed hard drives. There is no need to turn off the server during the process.

Online RAID Level Migration
Users can upgrade the disk configuration to higher RAID level with the data retained. There is no need to turnoff the server during the process.

S.M.A.R.T. & Advanced HDD Health Scanning (HHS)
The VioStor NVR supports Hard Disk Drive S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) for monitoring the hard drive status. The VioStor NVR is embedded with HHS Technology which supports disk checking and bad blocks scanning.

Intelligent Automatic System Startup when Power Recovery
The VioStor NVR supports intelligent power-on support. When enabled, the system turns

on automatically when power resumes after power outage.

Support UPS System for 24x7 Service
The VioStor NVR supports both APC and MGE UPS devices to enable stable and continuous recording 24x7. With UPS, the system can function normally in case of power outage or unstable power supply.

Powerful Security Control and Network Services

Powerful Authority Management
To improve the security of the VioStor NVR, the user access control feature is strengthened. The users can be assigned to different user groups (administrator/ system manager/ user). Different rights of monitoring, playback, PTZ control and audio monitoring can be assigned to individual user.

Auto logoff
QNAP NVR supports automatic user logoff from idling configuration pages. 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.

Powerful Host Access Control
The administrator can specify the connections to be allowed and denied to access VioStor NVR.

Provide On-line User List
You can view the record of users currently logged on and previously logged on to the VioStor NVR.

Built-in DDNS Support
The VioStor NVR supports dynamic DNS (DDNS). You can register a unique domain name from a DDNS service provider and assign it to your NVR.

Built-in NTP Server
The date and time of the network cameras can be synchronized with the VioStor NVR.

Convenient Data Access
Users can access the recording data on the VioStor NVR by the following ways, multiple network resource sharing mechanisms are provided for users to access, maintain and play the recording files:

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

Hardware Spec.

Processor	Intel Core 2 Duo 2.8GHz processor
Memory	2GB DDRII RAM, 128MB flash (DOM)
HDD Capacity	8 x 3.5" or 2.5" SATA I/II HDD **NOTE:** 1. The system is shipped without HDD. 2. For the HDD compatibility list, please visit here
HDD Tray	8 x hot-swappable and lockable tray
LAN Port	2 x Gigabit RJ-45 Ethernet port
LED Indicators	Status, LAN, USB, HDD 1, HDD 2, HDD 3, HDD 4, HDD 5, HDD6, HDD7, HDD8
USB	4x USB 2.0 port Supports USB UPS device
Buttons	Power, reset
LCD Panel	LCD display with backlight Enter button, Select button for configuration
Alarm Buzzer	System warning
Form Factor	2U rack mount
Dimensions	88.9(H) x 482.6(W) x 531.5(D) mm 3.5(H) x 19(W) x 20.93(D) inch
Weight	Net weight: 12.15Kg/ 26.79 lbs Gross weight: 16.7Kg/ 36.82 lbs
Operation Environment	Temperature 0~40°C/ 32~104°F Humidity 0~95% R.H.
Power Supply	Input: 100-240V AC, 47-63Hz, Output: 350W
Power Consumption	101W Write/Read
VGA	Reserved
Fan	3 x 8 cm smart cooling fan
Certification	CE, FCC, VCCI, BSMI

Design and specifications are subject to change without notice.

Software Spec.

Video	
Display Mode	1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20/ 25/ 36/ 42-channel display, Picture-in-Picture, sequential mode, multi-display mode
Number of Channels Supported (Recording)	Up to 40
Compression Format	H.264/ MxPEG/ MPEG-4/ M-JPEG (vary by camera models)
Video Setting	Resolution, Quality, Frame Rate
E-map	Upload E-map (JPEG)
Recording	
Recording Mode	Continuous/ manual/ schedule recording Alarm recording/ multiple alarm recording schedules *Up to 15 schedules are supported for each camera
Buffer Storage for Alarm Images (before and after Events)	Pre-recording: up to 300 sec/ post−recording: up to 300 sec (Total 600 sec/ 10 min)
Recording Performance	Up to 30 fps at D1 or VGA for each channel
Megapixel Recording	Supports megapixel cameras (up to 8-megapixel)
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
Display Mode	Single playback view, 4 playback views
Search Mode	By date & time, timeline, event, and intelligent video analytics (IVA)
Intelligent Video analytics (IVA)	Motion detection, missing object, foreign object, out of focus, and camera occlusion
Playback Enhancement	Full screen display, video snapshot, digital zoom, digital watermark
Export	Convert multiple recording files to one avi file
Download	Download recordings via the web
Storage	
Disk Management	• Single disk, RAID 0 (Disk Striping), RAID 1 (Disk Mirroring), RAID 5, RAID 5+ hot spare, RAID 6, RAID 6+ hot spare, and JBOD (Linear Disk Volume) • Online RAID Capacity Expansion • Online RAID Level Migration

- HDD S.M.A.R.T.
- Bad blocks scan
- Support PC-less RAID setup via LCD panel for the first time installation
- Services: Web File Manager, FTP, SMB/CIFS

LCD Panel

- PC-less RAID configuration for the first time setup
- When the system is ready, users can check or configure the IP settings, physical disk info, volume info, system info, shut down or reboot the NVR etc.

Network

Support	HTTP, TCP/IP, SMTP, DHCP, Static IP, DNS, DDNS, FTP, NTP, UPnP, Failover, Load-balancing, Multi-IP setting
Camera IP Address & Port	Allow setting LAN/WAN IP address of each camera
Dual Gigabit LAN	- Failover: In case one of the LAN network fails, the packets sent to the NVR will be handled by the other LAN interface - Load-balancing: Link aggregation is supported to increase the transfer speed - Multi-IP setting: The NVR can serve different network groups in two different subnets

Security

Operation System	Linux-embedded, free from PC crash and virus attack
On-line Users List	Record of the 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
User Management	The right to monitor and playback each camera can be separately defined for each user (up to 32 users)
Alert Notification	E-mail, buzzer, event logs
UPS	Support APC/ MGE (USB type UPS)
Event Logs	Detailed event logs of system warning, hard disk error, network disconnection, UPS status, and users' networking services, and data access

Language Support

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

Client PC Requirement	
CPU	• M-JPEG format (up to 40 channels): Quad core CPU 2.33GHz or above • MPEG-4/ MxPEG/ H.264 format (up to 40 channels): Core i7 CPU 2.8GHz or above * For higher surveillance performance, please select more advanced PC models.
Memory	2 GB or above
Operation System	Windows XP/ Vista/ 7
Web Browser	Internet Explorer 6.0 or later
Network Interface	10/100 Mbps or above
View Resolution	Suggested 1024 x 768 pixels or above
Utility Software	
QNAP Finder	Discovery and quick setup for NVR
VioStor Player	Play the recording files on your Windows computer easily
Watermark Proof	Check if the recording files on VioStor NVR are modified or not

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