



VS-4116U-RP Pro+

Hardware Spec.

Processor	Dual-core Intel® processor
Memory	4GB RAM
HDD Capacity	4x 3.5-inch SATA 6Gb/s, SATA 3Gb/s hard drive NOTE: 1. The standard system is shipped without HDD. For the HDD compatibility list, please visit : http://www.qnapsecurity.com/pro_compatibility.asp
HDD Tray	4 x hot-swappable and lockable tray
LAN Port	2 x Gigabit RJ-45 Ethernet port
LED Indicators	USB, Status, HDD1-4, LAN
USB	2 x USB 3.0 port (Back: 2) 3x USB 2.0 port (Front: 1; Back: 2) Support USB mouse, USB keyboard, USB sound card, and USB UPS etc
Buttons	Power button, One-touch-auto-video-backup button, Reset button
Alarm Buzzer	System warning
Audio	Audio In/Out (reserved)
Series Interface	RS-232 interface *1(reserved) , RS-485*1 interface (reserved)
Alarm In	Alarm In *8 (reserved)
Alarm Out	Alarm Out*2(reserved)
Video Output	1x HDMI Suggested video output resolution: 1920 x 1080 (Full HD)
Form Factor	1U rackmount
Dimensions	44(H) x 439(W) x 499(D) mm 1.73(H) x 16.97(W) x 19.65(D) inch

Weight	Net weight: 7.63 kg/ 16.82 lb Gross weight: 12.1 kg/ 26.68 lb
Power Consumption	80W (with 4 x 2TB HDD installed)
Operation Environment	Temperature 0~40°C Humidity 0~95% R.H.
Power Supply	Input: 100-240V AC, 50/60Hz, Output: 250W
Fan	3 x cooling fan (4 cm, 12V DC; internal)
Certification	CE, FCC, VCCI, BSMI

Design and specifications are subject to change without notice.

Software Spec.

Recording

Supported Camera Models	Please visit http://www.qnap.com/NVR/CompatibilityX01.html
Number of Channels Supported (Recording)	Up to 16
Video Compression	H.264/ MPEG-4/ M-JPEG/ MxPEG (depending on the camera models)
Video Setting	Video compression, resolution, quality, frame rate, audio
Recording Mode	<ul style="list-style-type: none"> • Continuous/ manual/ schedule recording • Alarm recording/ multiple alarm recording schedules • Auto snapshot
Buffer Storage for Alarm Images (before and after events)	<ul style="list-style-type: none"> • Pre-recording: Up to 300 sec • Post-recording: Up to 300 sec
Recording Performance	Up to 30 fps at 1080P, 720P, VGA for each channel * Real performance may vary in different environment
Megapixel Recording	Supports megapixel cameras (up to 10-megapixel)
Network Throughput	250 Mbps
File Format	AVI (QNAP codec is required for playback)
Recording Enhancement	Real-time digital watermarking

Application

Fisheye Dewarping	Support the specific fisheye IP Cameras on remote monitoring/playback and local display interface * Please visit http://www.qnap.com/NVR/CompatibilityX01.html to get the compatibility list
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360° Panomorph Video Support the specific IP camera with panomorph lens on remote monitoring/playback and local display interface (certified by ImmerVision Enables)

Local Display

Display Mode	1, 4, 6, 8, 9, 10, 12 or 16-channel display mode, sequential display mode (depends on NVR model)
Hardware Decode	Full HD 1080P 200FPS *The NVR will auto detect H.264 stream format and activate hardware decoder for 8 CH live view.
Local Monitoring Enhancement	Full screen display, event notification, PTZ control, digital zoom
Local Playback	Single view playback from local NVR server
Search Mode for Local Playback	By date & time
Playback Control	Play, pause, stop, reverse play, next/ previous video file, different speed control
Local Playback Enhancement	Full screen display, digital zoom
Export	Convert multiple recording files to the external USB device instantly
System Administration	Quick configuration, administration password, network settings, time settings, disk volume configuration, camera settings

Remote Monitoring (Windows)

Display Mode	1, 4, 6, 8, 9, 10, 12, 16, 20, 25, 36,42 or 64-channel display, sequential mode
Dual-display mode	Up to 2 monitors
Multi-server Monitoring	Up to 128-channel monitoring from multiple VioStor NVR servers (Browser-based)
Monitoring Enhancement	Full screen display, video snapshot, manual recording, event notification, PTZ control, digital zoom
E-map	Uploading the digital maps and indicating the locations of the IP cameras of a monitoring location or region

Remote Playback (Windows)

Display Mode	1, 4, 6, 8, 9, 10, 12 or 16-channel display
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 Mode	Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control
Playback Enhancement	Full screen display, video snapshot, digital zoom, digital watermarking
Export	Convert multiple recording files to client PC instantly
Download	Download recordings via the web

QNAP Surveillance Client for Mac

Display Mode	1, 4, 6, 8, 9, 10, 12, or 16-channel display mode, sequential display mode
Monitoring Enhancement	Full screen display, event notification, PTZ control, digital zoom
Playback	Single view playback
Search Mode for Playback	By date & time
Playback Control	Play, pause, stop, reverse play, next/ previous video file, different speed control
Playback Enhancement	Full screen display, digital zoom
Export	Convert multiple recording files to Mac device instantly

Advanced Event Management

Events	Motion detection, alarm input, connection failure, recording failure, and user-defined event
Actions	Video recording, email alert, SMS alert, buzzer, PTZ camera control, alarm output, and user-defined action

Backup

Schedule Remote Replication	Schedule video data backup to a NAS on the local network
Video Backup to External USB Storage by One-Touch-Auto-Video-Backup Button	Press and hold the one-touch-auto-video-backup button for 3 seconds. The recording data on VioStor will be copied to the external USB device instantly.

Security Control

Authority Management	Different user groups and rights can be assigned to different users
Host Access Control	Specify the connections to be allowed and denied to access the VioStor NVR
Auto Logoff	Automatic user logoff from idling configuration pages
Event Logs	Detailed event logs
On-line Users List	Record of the users currently logged on and previously logged on to the VioStor NVR
Digital Watermarking	Verify whether or not the videos and snapshots are original

Reliability

Operation System	Linux-embedded system, free from PC crash and virus attack
Disk Management	· Single disk, RAID 0, RAID 1, RAID 5, RAID 5+ hot spare, RAID 6, and JBOD/Linear · Online RAID Capacity Expansion, Online RAID Level Migration · HDD S.M.A.R.T., bad blocks scan
UPS	APC/ CyberPower/ Epson/ MGE/ YEC (USB UPS)

Network Services

Support	HTTP, HTTPS, TCP/IP, SMTP, DHCP, Static IP, DNS, DDNS, FTP, NTP, UPnP, failover, load-balancing, multi-IP setting
Dual Gigabit LAN	Failover/ load-balancing/ multi-IP setting
Services	Web File Manager, FTP, SMB/CIFS

Language Support

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

Client PC	Google Chrome, Internet Explorer, Mozilla Firefox (Browser-based) QNAP Surveillance Client for Windows
Mac	QNAP Surveillance Client for Mac
Android Tablet, phone	VMobile
iPad, iPhone, iPod Touch	VMobile
Windows Mobile (6.1, 6.5) Device	VMobile

Client PC Requirement (Suggested system requirement for better video performance)

CPU	· M-JPEG format (up to 16 channels): Dual core CPU 2.4 GHz or above · MPEG-4/ H.264/MxPEG format (up to 16 channels): Quad core CPU 2.33 GHz or above * * For higher surveillance performance, please select more advanced PC models.
Memory	4 GB or above
Operation System	Microsoft Windows Vista/ 7/ 8 or Mac OS X 10.7.x, 10.8.x
Web Browser	Microsoft Internet Explorer 8/9/10 (Windows PC, desktop mode, 32-bit)

Google Chrome 24.0.1312.57 m (Windows PC)

Mozilla Firefox 18.0.2 (Windows PC)

Network Interface 10/100/1000 Mbps

Display Resolution 1280 x 800 pixels or higher for better user experience

Utility Software

QNAP Finder The client application to discovery and quick setup of the VioStor NVR

QNAP Surveillance Client For Windows The client application used to remotely access QNAP NVR servers for performing video monitoring and playback functions on client PC.

QNAP Surveillance Client For Mac The client application used to remotely access QNAP NVR servers for performing video monitoring and playback functions on Mac.

QNAP Codec The video codec to play the recording files on Windows Media Player.

VMobile The Mobile App to monitor the network cameras on the VioStor NVR by the Android phone, Android tablet, iPhone, iPad, iPod touch, and Windows mobile (6.1, 6.5) device.