



## VS-4116 Pro+

### Hardware Spec.

<b>Processor</b>	Dual-core Intel® processor
<b>Memory</b>	4GB RAM
<b>HDD Capacity</b>	4 x 3.5-inch SATA 6Gb/s, SATA 3Gb/s hard drive  <b>NOTE:</b>  <ol style="list-style-type: none"> <li>1. The standard system is shipped without HDD.</li> <li>2. For the HDD compatibility list, please visit :  <a href="http://www.qnapsecurity.com/pro_compatibility.asp">http://www.qnapsecurity.com/pro_compatibility.asp</a></li> </ol>
<b>HDD Tray</b>	4 x Hot-swappable and lockable tray
<b>LAN Port</b>	2 x Gigabit RJ-45 Ethernet port
<b>LED Indicators</b>	Status, LAN, USB, HDD1-4
<b>LED Indicators</b>	2 x USB 3.0 port (Back: 2)  5 x USB 2.0 port (Front: 1; Back: 4)  Support pen drive, USB mouse, USB keyboard, USB sound card, and USB UPS etc.
<b>Buttons</b>	Power button, One-touch-auto-video-backup button, Reset button
<b>LCD Panel</b>	Mono-LCD display with backlight  Enter button, Select button for configuration
<b>Alarm Buzzer</b>	System warning
<b>Audio</b>	Audio In/Out (reserved)
<b>Form Factor</b>	Tower
<b>Dimensions</b>	185 (H) x 180 (W) x 235 (D) mm  7.28 (H) x 7.09 (W) x 9.25 (D) inch

<b>Weight</b>	Net weight: 4.6 kg (10.14 lbs) Gross weight: 5.9 kg (13.00 lbs)
<b>Operation Environment</b>	Temperature 0~40°C Humidity 0~95% R.H.
<b>Power Supply</b>	Input: 100-240V AC, 50/60Hz, Output: 250W
<b>Power Consumption</b>	In Operation: 62.7W (with 6 x 2TB HDD installed)
<b>Secure Design</b>	K-Lock security slot for theft prevention
<b>Video Output</b>	1x HDMI Suggested video output resolution: 1920 x 1080 (Full HD)
<b>Fan</b>	1 x quiet cooling fan (92 mm, 12V DC)
<b>Certification</b>	CE, FCC, VCCI, BSMI

## Software Spec.

### Recording

**Supported Camera Models** Please visit <http://www.qnap.com/NVR/CompatibilityX01.html>

#### Models

**Number of Channels** Up to 16

#### Supported (Recording)

**Recording Mode**

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

**Buffer Storage for Alarm Images (before and after events)**

- 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

#### Throughput

<b>File Format</b>	AVI (QNAP codec is required for playback)
<b>Recording</b>	Real-time digital watermarking, auto snapshot
<b>Enhancement</b>	

#### Application

<b>Dewarping</b>	Support the specific fisheye IP Cameras and IP camera with panomorph lens on remote monitoring/playback and local display interface  * Please visit <a href="http://www.qnapsecurity.com">http://www.qnapsecurity.com</a> to get the compatibility list
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#### Local Display

<b>Display Mode</b>	1, 4, 6, 8, 9, 10, 12, or 16-channel display mode, sequential display mode
<b>Hardware Decode</b>	Full HD 1080P 180FPS  *The NVR will auto detect H.264 stream format and activate hardware decoder for 6 CH live view.
<b>Local Monitoring Enhancement</b>	Full screen display, event notification, PTZ control, digital zoom
<b>Local Playback</b>	Single view playback from local NVR server
<b>Search Mode for Local Playback</b>	By date & time
<b>Playback Control</b>	Play, pause, stop, reverse play, next/ previous video file, different speed control
<b>Local Playback Enhancement</b>	Full screen display, digital zoom
<b>Export</b>	Convert multiple recording files to the external USB device instantly
<b>System Administration</b>	Quick configuration, administration password, network settings, time settings, disk volume configuration, camera settings

#### Remote Monitoring (Windows)

<b>Display Mode</b>	1, 4, 6, 8, 9, 10, 12, 16, 20, 25, 36,42 or 64-channel display, sequential mode, multi-display mode
<b>Video Compression</b>	H.264/ MPEG-4/ M-JPEG/ MxPEG (depending on the camera models)
<b>Video Setting</b>	Resolution, quality, frame rate
<b>Multi-server Monitoring</b>	Up to 128-channel monitoring from multiple VioStor NVR servers (browser-based)
<b>Monitoring</b>	Full screen display, video snapshot, manual recording, event notification, PTZ

<b>Enhancement</b>	control, digital zoom
<b>E-map</b>	Uploading the digital maps and indicating the locations of the IP cameras and GPI devices of a monitoring location or region

**Remote Playback (Windows)**

<b>Display Mode</b>	1, 4, 6, 8, 9, 10, 12 or 16-channel display
<b>Search Mode</b>	By date & time, timeline, event, and intelligent video analytics (IVA)
<b>Intelligent Video Analytics (IVA)</b>	Motion detection, missing object, foreign object, out of focus, and camera occlusion
<b>Playback Mode</b>	Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control
<b>Playback Enhancement</b>	Full screen display, video snapshot, digital zoom, digital watermarking
<b>Export</b>	Convert recording files to one avi file
<b>Download</b>	Download recordings via the web

**QNAP Surveillance Client for Mac**

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

**Advanced Event Management**

<b>Events</b>	Motion detection, alarm input, connection failure, recording failure, and user-defined event
<b>Actions</b>	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

## 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/ MGE/ YEC (USB UPS)

## Network Services

**Support** HTTP, 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

## Remote Surveillance

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

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

<b>CPU</b>	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.
<b>Memory</b>	2 GB or above
<b>Operation System</b>	Microsoft Windows Vista/ 7/ 8 or Mac OS X 10.7.x, 10.8.x
<b>Web Browser</b>	Microsoft Internet Explorer 8/9/10 (Windows PC, desktop mode, 32-bit) Google Chrome 23.0.1271.64 m (Windows PC) Mozilla Firefox 17.0.1 (Windows PC)
<b>Network Interface</b>	10/100/1000 Mbps
<b>Display Resolution</b>	1280 x 720 pixels or above

#### Utility Software

<b>QNAP Finder</b>	The client application to discovery and quick setup of the VioStor NVR
<b>QNAP Surveillance Client For Windows</b>	The client application used to remotely access QNAP NVR servers for performing video monitoring and playback functions on client PC.
<b>QNAP Surveillance Client For Mac</b>	The client application used to remotely access QNAP NVR servers for performing video monitoring and playback functions on Mac.
<b>QNAP Codec</b>	The video codec to play the recording files on Windows Media Player.
<b>VMobile</b>	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