



## VS-4112U-RP Pro+

### Hardware Spec.

|                         |                                                                                                                                                                                                                                                                                                    |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processor</b>        | Dual-core Intel® processor                                                                                                                                                                                                                                                                         |
| <b>Memory</b>           | 4GB RAM                                                                                                                                                                                                                                                                                            |
| <b>HDD Capacity</b>     | 4x 3.5-inch SATA 6Gb/s, SATA 3Gb/s hard drive<br><br><b>NOTE:</b><br><br>1. The standard system is shipped without HDD.<br><br>For the HDD compatibility list, please visit :<br><a href="http://www.qnapsecurity.com/pro_compatibility.asp">http://www.qnapsecurity.com/pro_compatibility.asp</a> |
| <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>   | USB, Status, HDD1-4, LAN                                                                                                                                                                                                                                                                           |
| <b>USB</b>              | 2 x USB 3.0 port (Back: 2)<br>3x USB 2.0 port (Front: 1; Back: 2)<br>Support 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>Alarm Buzzer</b>     | System warning                                                                                                                                                                                                                                                                                     |
| <b>Audio</b>            | Audio In/Out (reserved)                                                                                                                                                                                                                                                                            |
| <b>Series Interface</b> | RS-232 interface *1(reserved) , RS-485*1 interface (reserved)                                                                                                                                                                                                                                      |
| <b>Alarm In</b>         | Alarm In *8 (reserved)                                                                                                                                                                                                                                                                             |
| <b>Alarm Out</b>        | Alarm Out*2(reserved)                                                                                                                                                                                                                                                                              |
| <b>Video Output</b>     | 1x HDMI<br><br>Suggested video output resolution: 1920 x 1080 (Full HD)                                                                                                                                                                                                                            |
| <b>Form Factor</b>      | 1U rackmount                                                                                                                                                                                                                                                                                       |
| <b>Dimensions</b>       | 44(H) x 439(W) x 499(D) mm<br>1.73(H) x 16.97(W) x 19.65(D) inch                                                                                                                                                                                                                                   |

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

Design and specifications are subject to change without notice.

## Software Spec.

| Recording                                                    |                                                                                                                                                                                    |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supported Camera Models                                      | Please visit <a href="http://www.qnap.com/NVR/CompatibilityX01.html">http://www.qnap.com/NVR/CompatibilityX01.html</a>                                                             |
| Number of Channels Supported<br>(Recording)                  | Up to 12                                                                                                                                                                           |
| 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"> <li>• Continuous/ manual/ schedule recording</li> <li>• Alarm recording/ multiple alarm recording schedules</li> <li>• Auto snapshot</li> </ul> |
| Buffer Storage for Alarm Images<br>(before and after events) | <ul style="list-style-type: none"> <li>• Pre-recording: Up to 300 sec</li> <li>• Post-recording: Up to 300 sec</li> </ul>                                                          |
| Recording Performance                                        | Up to 30 fps at 1080P, 720P, VGA for each channel<br>* 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<br><br>* Please visit <a href="http://www.qnap.com/NVR/CompatibilityX01.html">http://www.qnap.com/NVR/CompatibilityX01.html</a> to get the compatibility list |

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<br>*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                                                                                                                         |
| <b>QNAP Surveillance Client for Mac</b>                                    |                                                                                                                                                         |
| 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                                                                                                |
| <b>Advanced Event Management</b>                                           |                                                                                                                                                         |
| 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                                              |
| <b>Backup</b>                                                              |                                                                                                                                                         |
| 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. |
| <b>Security Control</b>                                                    |                                                                                                                                                         |
| 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                                                                                             |
| <b>Reliability</b>                                                         |                                                                                                                                                         |

|                  |                                                                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation System | Linux-embedded system, free from PC crash and virus attack                                                                                                                                                                                            |
| Disk Management  | <ul style="list-style-type: none"> <li>· Single disk, RAID 0, RAID 1, RAID 5, RAID 5+ hot spare, RAID 6, and JBOD/Linear</li> <li>· Online RAID Capacity Expansion, Online RAID Level Migration</li> <li>· HDD S.M.A.R.T., bad blocks scan</li> </ul> |
| 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 |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Remote Surveillance

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Client PC                        | Google Chrome, Internet Explorer, Mozilla Firefox (Browser-based)<br>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              | <ul style="list-style-type: none"> <li>· M-JPEG format (up to 12 channels):</li> <li>Dual core CPU 2.4 GHz or above</li> <li>· MPEG-4/ H.264/MxPEG format (up to 12 channels):</li> <li>Quad core CPU 2.33 GHz or above</li> </ul> <p>* * For higher surveillance performance, please select more advanced PC models.</p> |
| 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)<br>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.