

## Comparison of VioStor NVR Series

Product Photo	VS-12164U-RP/12156U-RP/12148U-RP/12140U-RP Pro	VS-8148U-RP/8140U-RP/8132U-RP/8124U-RP Pro	VS-8148/8140/8132/8124 Pro+	VS-6020/6016/6012 Pro
Operation System	Linux-embedded	Linux-embedded	Linux-embedded	Linux-embedded
Max. number of supported IP cameras/channels (recording)	64/56/48/40	48/40/32/24	48/40/32/24	20/16/12
Video server support	Yes	Yes	Yes	Yes
High-definition local display	Yes	Yes	Yes	Yes
Multi-server monitoring	Yes (up to 128 channels)			
Video compression (IP camera)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)
Max. network throughput tested (1)	N/A	360 Mbps	360 Mbps	176 Mbps
Megapixel recording	Yes (up to 10-megapixel)			
Multi-view playback	16-view	16-view	16-view	16-view
Intelligent video analytics (IVA)	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion
Advanced event management	Yes	Yes	Yes	Yes
Max. number of hard drives supported (2)	12 x 3.5-inch SATA, 2.5-inch SATA, SSD	8 x 3.5-inch SATA, 2.5-inch SATA, SSD	8 x 3.5-inch SATA, 2.5-inch SATA, SSD	6 x 3.5-inch SATA, 2.5-inch SATA, SSD
Max. raw capacity	36TB (12 x 3TB hard drives)	24TB (8 x 3TB hard drives)	24TB (8 x 3TB hard drives)	18TB (6 x 3TB hard drives)
RAID	RAID 0, 1, 5, 5+hot spare, 6, 6+hot spare	RAID 0, 1, 5, 5+hot spare, 6, 6+hot spare	RAID 0, 1, 5, 5+hot spare, 6, 6+hot spare	RAID 0, 1, 5, 5+hot spare, 6, 6+hot spare
Processor	Intel® processor	Intel® Core™ i3 3.3GHz	Intel® Core™ i3 3.3GHz	Dual-core Intel® Atom™
LCD panel	---	Yes	Yes	---
Number of Gigabit LAN ports	TBD	2	2	2
Number of USB ports	2 x USB 3.0 4 x USB 2.0	2 x USB 3.0 4 x USB 2.0	2 x USB 3.0 4 x USB 2.0	5 x USB 2.0
Redundant power supply	Yes	Yes	---	---
Hardware dimensions (HxWxD)	88 x 439 x 520 mm/ 3.46 x 17.28 x 20.47 inch	88 x 439 x 520 mm/ 3.46 x 17.28 x 20.47 inch	217.5 x 327 x 321.2 mm/ 8.59 x 12.8 x 12.65 inch	175 x 257 x 235 mm/ 6.89 x 10.12 x 9.25 inch
Gross weight	22.92kg/50.53lb	20.79kg/45.78lb	13.98kg/30.79lb	6.5kg/14.33lb

Product Photo	VS-4016U-RP/4012U-RP/4008U-RP Pro	VS-4016/4012/4008 Pro	VS-2012/2008/2004 Pro	VS-2008L/2004L
Operation System	Linux-embedded	Linux-embedded	Linux-embedded	Linux-embedded
Max. number of supported IP cameras/channels (recording)	16/12/8	16/12/8	12/8/4	8/4
Video server support	Yes	Yes	Yes	Yes
High-definition local display	Yes	Yes	Yes	---
Multi-server monitoring	Yes (up to 128 channels)			
Video compression (IP camera)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)	H.264, MPEG-4, M-JPEG & MPEPG (depending on the camera models)
Max. network throughput tested (1)	176 Mbps	176 Mbps	176 Mbps	28 Mbps
Megapixel recording	Yes (up to 10-megapixel)	Yes (up to 10-megapixel)	Yes (up to 10-megapixel)	Yes
Multi-view playback	16-view	16-view	16-view	16-view
Intelligent video analytics (IVA)	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion	Motion detection, missing object, foreign object, out of focus, and camera occlusion
Advanced event management	Yes	Yes	Yes	Yes
Max. number of hard drives supported (2)	4 x 3.5-inch SATA, 2.5-inch SATA, SSD	4 x 3.5-inch SATA, 2.5-inch SATA, SSD	2 x 3.5-inch SATA, 2.5-inch SATA, SSD	2 x 3.5-inch SATA
Max. raw capacity	12TB (4 x 3TB hard drives)	12TB (4 x 3TB hard drives)	6TB (2 x 3TB hard drives)	6TB (2 x 3TB hard drives)
RAID	RAID 0, 1, 5, 5+hot spare, 6	RAID 0, 1, 5, 5+hot spare, 6	RAID 0, 1	RAID 0, 1
Processor	Dual-core Intel® Atom™	Dual-core Intel® Atom™	Dual-core Intel® Atom™	Marvell 1.2 GHz
LCD panel	---	Yes	---	---
Number of Gigabit LAN ports	2	2	2	1
Number of USB ports	5 x USB 2.0	5 x USB 2.0	5 x USB 2.0	3 x USB 2.0
Redundant power supply	Yes	---	---	---
Hardware dimensions (HxWxD)	44 x 439 x 499 mm/ 1.73 x 16.97 x 19.65 inch	177 x 180 x 235 mm/ 6.97 x 7.09 x 9.25 inch	150 x 102 x 216 mm/ 5.91 x 4.02 x 8.5 inch	165.5 x 85 x 218.4 mm/ 6.52 x 3.35 x 8.60 inch
Gross weight	12.06kg/26.59lb	4.65kg/10.24lb	2.92kg/6.44lb	1.9kg/4.19 lb

(1) Based on QNAP's laboratory tests. Actual performance may vary depending on the network environments.  
(2) The standard system is shipped without hard disk drives.

## QNAP Central Management System (CMS)

### CMS Professional

- Comprehensive centralized management solution
- Supports high-definition video surveillance and playback
- Intuitive and friendly user interface for effective operation
- Real-time alarm list for immediate management
- Turnkey solutions guarantee performance of integrated systems



## Comprehensive CMS Features

The real-time monitoring interface of the CMS Professional is very flexible as well as user friendly. The user-defined camera views feature allows the administrator to customize and manage onscreen views for different surveillance operators. The multi-layered electronic map (E-map) feature gives users the ability to upload E-maps so as to indicate the exact locations of the IP cameras and the alarm devices. An instant alarm will be shown on the E-map to alert the users when an event occurs.

The CMS Professional reserves the capability for future expansion of the surveillance system installed. Multiple NVR servers can be added to the system anytime. Up to 256 channels from more than 48 IP camera brands can be added and monitored collectively. In addition, the CMS client software offers a multilingual user interface. Pairing up CMS Professional along with QNAP NVR servers will bring the convenience of boundless surveillance and system management on the network.

### Cloud Centralized Management Solution

- High compatibility with all QNAP VioStor NVR series
- Supports SSL connection to secure remote access

## NVR VioStor



### Intuitive and Friendly User Interface

- Supports multi-screen display to optimize operating efficiency
- Trouble-free VioStor NVR server configuration
- Flexible user defined live video monitoring layout
- Customizable E-maps to indicate IP cameras location
- Prompt event notification on monitoring screen
- PTZ speed dome cameras and preset points control
- Powerful alarm list for real-time alarm image and event handling



### High-definition Video Surveillance and Playback

- Compatible with more than 1,100 IP cameras and video servers from 48 popular brands
- Search video from multiple cameras/ servers simultaneously
- Synchronized playback of multiple cameras



### Comprehensive Event Management

- Flexible event handling settings
- Real-time event display
- Customizable E-maps to indicate IP cameras location
- Show live video by clicking on the camera icons
- Indicate the locations of the IP cameras when the alarm occurs



### Industry-leading Turnkey Video Wall Solution (Optional)

- Turnkey solutions guarantee performance of integrated systems
- Real time dynamic control of display layout and content via remote control station

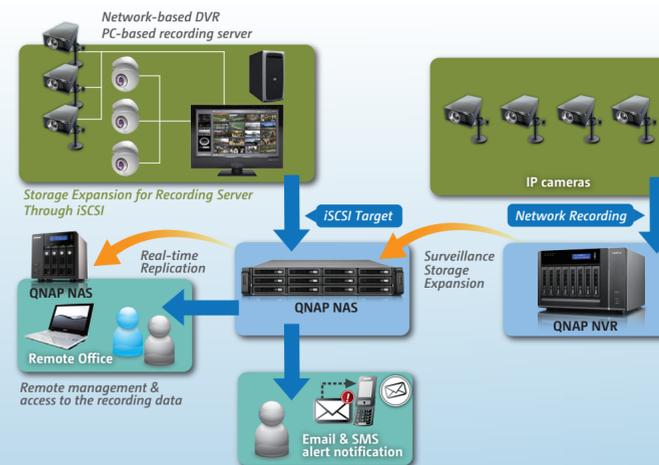


### Powerful Client Station

- Supports maximum four monitors for independent playback and display control
- Up to 64 IP cameras can be viewed on one monitor
- Unique video management interface which supports single-channel display, multi-channel display in sequential mode, and E-map in each view



## QNAP Network Attached Storage (NAS) Solution for Surveillance Applications



## High Capacity, Reliability, and Availability Storage Solutions for Video Recording

### Turbo NAS Series for Recording Storage Expansion

- 2, 4, 5, 6, 8, and 10 drive tower models and 4-bay 1U, 8-bay 2U, 12-bay 2U rackmount models
- Secure, reliable, scalable iSCSI and virtualization deployment with high capability/price value



### Local Backup

- Storage expansion for PC-based DVR
- Video backup from a NAS to another NAS on the local network
- Real-time or scheduled data backup



### Remote Replication

- Real-time Remote Replication (RTRR) provides real-time or scheduled data replication/backup to a remote QNAP NAS, an FTP server, or an external drive
- Remote replication to an rsync server
- Encrypted Remote Replication by Rsync



## TurboNAS

### Total Storage Solution for Surveillance Applications



### System Management Tools

- Comprehensive event logs
- Email, SMS, and Instant Messaging alert
- SNMP (Simple Network Management Protocol)
- S.M.A.R.T. & Advanced Hard Drive Health Scan (HHS)
- Touch-N-Go PC-less installation
- Scheduled power on/off
- Wake on LAN



### High Reliability and Smart Features

- RAID 0, 1, 5, 6, 10, 5+hot spare, 6+hot spare, 10+hot spare, JBOD
- Online RAID capacity expansion & online RAID level migration
- Dual Gigabit LAN for network fail-over or load-balancing
- Redundant Power Supply (for rackmount models)
- Linux-embedded DOM-based architecture



### Storage Expansion for Video Recording

- iSCSI target for storage expansion of video recording server
- Real-time remote replication to back up new and modified files immediately to a remote NAS
- Surveillance storage expansion onto multiple Turbo NAS servers

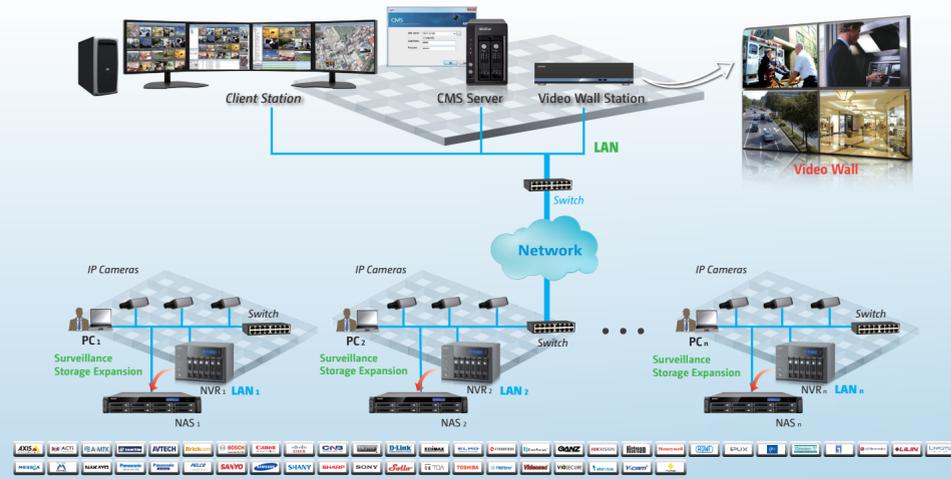


# Innovative Network Video Recorder and Total Surveillance Solution

- VioStor NVR
- CMS, TV Wall Station, Client Station
- Turbo NAS for NVR storage expansion & backup



## QNAP Surveillance Solution



## QNAP VioStor NVR

### NVR Innovative Network Video Recorder

#### VS-12164U-RP/12156U-RP/12148U-RP/12140U-RP Pro

- 12-bay, 36TB, 2U chassis, 64/56/48/40-channel
- Intel® processor
- Redundant power supply available
- High quality megapixel recording



### NVR Innovative Network Video Recorder

#### VS-8148U-RP/8140U-RP/8132U-RP/8124U-RP Pro

- 8-bay, 24TB, 2U chassis, 48/40/32/24-channel
- Intel® Core™ 3.3GHz CPU, 2GB DDR3 memory
- Redundant power supply available
- PC-less network surveillance by high definition (HD) local display
- High quality megapixel recording
- Max network throughput: 360 Mbps\*



### NVR Innovative Network Video Recorder

#### VS-8148/8140/8132/8124 Pro+

- 8-bay, 24TB, 48/40/32/24-channel
- Intel® Core™ 3.3GHz CPU, 2GB DDR3 memory
- PC-less network surveillance by HDMI or VGA local display
- High quality megapixel recording
- Max network throughput: 360 Mbps\*



### NVR Innovative Network Video Recorder

#### VS-6020/6016/6012 Pro

- 6-bay, 18TB, 20/16/12-channel
- Dual-core Intel® Atom™ CPU, 1GB memory
- PC-less network surveillance by high definition (HD) local display
- High quality megapixel recording
- Max network throughput: 176 Mbps\*



### NVR Innovative Network Video Recorder

#### VS-4016U-RP/4012U-RP/4008U-RP Pro

- 4-bay, 12TB, 1U chassis, 16/12/8-channel
- Dual-core Intel® Atom™ CPU, 1GB memory
- Redundant power supply available
- PC-less network surveillance by high definition (HD) local display
- High quality megapixel recording
- Max network throughput: 176 Mbps\*



### NVR Innovative Network Video Recorder

#### VS-4016/4012/4008 Pro

- 4-bay, 12TB, 16/12/8-channel
- Dual-core Intel® Atom™ CPU, 1GB memory
- PC-less network surveillance by high definition (HD) local display
- High quality megapixel recording
- Max network throughput: 176 Mbps\*
- Power-saving design, consumes only 35W



### NVR Innovative Network Video Recorder

#### VS-2012/2008/2004 Pro

- 2-bay, 6TB, 12/8/4-channel
- Dual-core Intel® Atom™ CPU, 1GB memory
- PC-less network surveillance by high definition (HD) local display
- High quality megapixel recording
- Max network throughput: 176 Mbps\*
- Power-saving design, consumes only 25W



### NVR Innovative Network Video Recorder

#### VS-2008L/2004L

- 2-bay, 6TB, 8/4-channel
- Marvell® 1.2 GHz CPU, 256MB DDR2 memory
- Max network throughput: 28 Mbps\*
- Power-saving design, consumes only 13W



QNAP is a member of ONVIF and PSIA

\* The standard system is shipped without hard drives. Based on QNAP's laboratory tests. Actual performance may vary depending on the network environment.

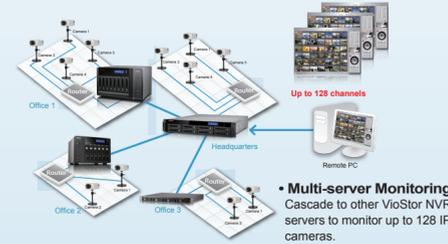
## Powerful NVR Features

### Why QNAP NVR

QNAP VioStor NVR (Network Video Recorder) is designed for high quality megapixel recording, and high performance real-time monitoring. It is a reliable standalone NVR with powerful surveillance features and mass storage capacity. Based on Linux OS, the NVR supports H.264, MPEG-4, M-JPEG and MxPEG recording from over 1,100 network camera models from popular brands. With QNAP's unique multi-server monitoring feature, multiple VioStor NVRs can be cascaded together for central monitoring of up to 128 channels of video surveillance. The VioStor NVR is an ideal solution for small, medium, and large facilities that integrate IP cameras, advanced intelligent video analytics and RAID storage technologies to help companies provide a safe environment for employees and protect company assets.



### Real-time Remote Monitoring



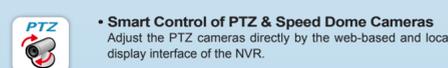
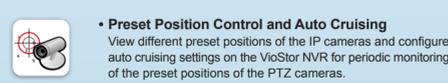
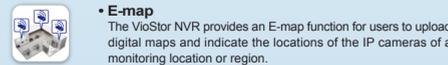
### Multi-server Monitoring

Cascade to other VioStor NVR servers to monitor up to 128 IP cameras.



### Diversified Remote Monitoring Modes

Multiple display modes  
Sequential display mode  
Dual display mode



\* For VioStor Pro series NVR only.

### Mobile Surveillance

The VMobile app is a mobile surveillance application for users to monitor the IP cameras configured on the VioStor NVR remotely by iPhone, iPad, iPod touch, Android phones, or Windows PDA. The users will be notified by instant SMS when specified events are triggered at the monitored areas.



### High-definition (HD) Local Display

**Intuitive Local Display Interface**  
Configure the NVR, monitor the IP cameras and play the video conveniently via a USB mouse and a full HD (1920 x 1080) VGA monitor connected to VioStor NVR.

### Complete Recording Functions

**High Quality H.264, MPEG-4, M-JPEG, and MxPEG Recording**  
Simultaneous multi-channel H.264, MPEG-4, M-JPEG, and MxPEG video recording of IP cameras.

**Various Recording Functions**  
- Continuous, manual, and scheduled recording  
- Alarm recording (by multiple alarm events)  
- Multiple alarm recording schedules  
- Pre-alarm and post-alarm recording  
- Audio recording

**High Performance Megapixel Recording**  
The VioStor NVR supports high performance megapixel recording (up to 10-megapixel cameras supported) from various IP cameras.

**Auto Snapshot**  
Create maximum 15 schedules for automatic snapshot taking or configure the NVR to take snapshots (max 60) of an IP camera automatically every hour.

**ONVIF and PSIA-conformant Cameras Support**  
Connect to ONVIF and PSIA network devices for monitoring, video recording, and playback on the NVR.

### Innovative Storage Expansion & Video Backup Solution



**Scheduled Remote Replication**  
The VioStor NVR supports scheduled remote replication for secure recording backup to a remote NAS on LAN.

**Video Backup to External USB Storage\***  
Configure and press the one touch auto video backup button to copy the recording data instantly from the NVR to an external storage device via the front USB interface.

**Recording**  
When an event is triggered, the VioStor NVR starts recording one or more channels at the same time.

**Camera Control**  
When an event occurs, the PTZ camera will be adjusted to the specified preset position for monitoring and recording. Use HTTP URL to activate further actions.

**Alarm Output**  
When an event occurs, the alarm output from the IP cameras will trigger other alert systems, such as lighting system, auto phone dialing system, security system and so on.

\* The VioStor NVR supports the alarm output of AXIS, Panasonic, SONY, ACTI, and VIVOTEK camera models.

### Advanced Event Management

Advanced event management can be divided into two parts:



**Events**  
The VioStor NVR supports different event types, including motion detection, alarm input, connection failure, recording failure, and user-defined event to trigger follow-up actions.

**Motion Detection**  
When the IP camera detects any movement, the defined actions will be activated.

**Alarm Input**  
When the VioStor NVR receives a signal from the IP camera's alarm input, the defined actions will be activated.

**Connection Failure**  
When the VioStor NVR fails to connect to the IP camera, the defined actions will be triggered.

**Recording Failure**  
When the VioStor NVR fails to record video due to hard drive failure or system crash, the defined actions will be triggered.

**User-defined Event\***  
The VioStor NVR supports user-defined events. The administrator can enter the CGI command in the browser to trigger the event, and the defined actions will be activated.

\* The administrator can enter the following URL in the browser to trigger the event:  
[http://NVR\\_IP/cgi-bin/logical\\_input.cgi?name=User-defined Event Name](http://NVR_IP/cgi-bin/logical_input.cgi?name=User-defined Event Name)

### Actions

The NVR supports different actions when an event is triggered. These actions include multi-channel recording, adjusting the PTZ camera to the preset position, alarm output, built-in buzzer, email & SMS alert, and user-defined action.

**Recording**  
When an event is triggered, the VioStor NVR starts recording one or more channels at the same time.

**Camera Control**  
When an event occurs, the PTZ camera will be adjusted to the specified preset position for monitoring and recording. Use HTTP URL to activate further actions.

**Alarm Output**  
When an event occurs, the alarm output from the IP cameras will trigger other alert systems, such as lighting system, auto phone dialing system, security system and so on.

\* The VioStor NVR supports the alarm output of AXIS, Panasonic, SONY, ACTI, and VIVOTEK camera models.

**SMS**  
The VioStor NVR sends an SMS message to inform the specified recipients when an event occurs.

**Email**  
When an event occurs, the VioStor NVR sends an email with snapshot to notify the specified recipients.

**Buzzer**  
The buzzer of the VioStor NVR will sound when an event occurs.

**User-defined Action**  
The VioStor NVR supports user-defined actions. Enter the HTTP URL from the other surveillance systems. When an alert occurs, the NVR will activate other systems, such as extinguishing system, electronic control system, and air conditioning control system.

### Playback Features

**Multi-view Playback**  
Use the multi-view playback feature to divide a video equally into multiple sessions for playback in a multi-view window, or play the videos of multiple IP cameras simultaneously.

**Real-time Digital Watermarking**  
The VioStor NVR supports digital watermarking to protect the videos from unauthorized modification.

**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, event, and intelligent video analytics (IVA), including motion detection, foreign object, missing object, out of focus, and camera occlusion.

**Motion Detection:**  
Detects movement in the video. The moving objects of the search area are highlighted in red brackets.

**Foreign Object:**  
Detects a new object in the video. The foreign objects of the search area are highlighted in yellow brackets.

**Missing Object:**  
Detects a missing object in the video. The missing objects of the search 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

**Intelligent Auto Power on after Power Recovery**  
The VioStor NVR turns on automatically when the power recovers after an outage.

**UPS Support for 24/7 Service**  
The VioStor NVR supports APC, CyberPower, MGE, and YEC UPS devices to enable stable and continuous recording 24/7.

**Advanced RAID Management**  
The VioStor NVR supports RAID 0, 1, 5, 6, 5+hot spare, 6+hot spare, single, and JBOD disk configurations.  
\* The RAID levels supported depend on the NVR models and number of hard drives installed.

**Online RAID Capacity Expansion**  
The storage capacity of a RAID disk volume of the NVR can be expanded by replacing the hard drives with larger ones.

**Online RAID Level Migration**  
Upgrade the disk configuration of the NVR to a higher RAID level with the data retained. There is no need to turn off the server during the process.

**S.M.A.R.T. & Advanced HDD Health Scanning (HHS)**  
S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) helps monitor the hard disk drives status. The VioStor NVR supports HHS (Hard Disk Drive Health Scan) for disk checking and bad blocks scanning.

## NVR Software Specifications

### Recording

**Video Compression:**  
• H.264, MPEG-4, M-JPEG, MxPEG (options available depend on the IPcameras)

**Recording Mode:**  
• Continuous, manual, and scheduled recording  
• Alarm recording, multiple alarm recording schedule  
• Pre-alarm and post-alarm recording  
• Auto snapshot (scheduled or hourly snapshot)  
• Real-time digital watermarking

**Recording Performance: (\*)**  
• Supports megapixel cameras  
• Up to 30 fps at HD (720P) for each channel  
\* Actual performance may vary depending on the environment and individual settings.

**Recording Settings:**  
• Video compression, resolution, frame rate, quality, and audio recording

**File Format:**  
AVI (QNAP codec is required for playback)

**Local Display (\*)**  
• 1, 4, 6, 8, 9, 10, 12-channel display, sequential display mode

**Advanced Monitoring Features:**  
• Full screen display, event notification, PTZ control, and digital zoom

**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 Channel:**  
• Maximum 16-view playback from multiple NVR servers simultaneously

**Playback Mode:**  
• Play, pause, stop, reverse play, next/previous video file, and speed control

**Advanced Playback Features:**  
• Full screen display, video snapshot, digital zoom, and digital watermarking

**Export:**  
• Multiple files export to an AVI file

**Download:**  
• Video files and snapshots can be accessed by Web File Manager (HTTP), FTP, or SMB/CIFS

### Remote Monitoring

**Multi-server Monitoring:**  
• Up to 128 channels monitoring from multiple VioStor NVR servers

**Display Mode:**  
• 1, 4, 6, 8, 9, 10, 12, 16, 20, 25, 36, 42-channel display, sequential mode, dual display mode

**Advanced Monitoring Features:**  
• Full screen display, video snapshot, manual recording, event notification, PTZ control, and digital zoom

**E-map:** Upload digital maps and indicate the locations of the IP cameras of a monitoring location or region.

**Remote Playback**

**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 Channel:**  
• Maximum 16-view playback from multiple NVR servers simultaneously

**Playback Mode:**  
• Play, pause, stop, reverse play, next/previous video file, and speed control

**Advanced Playback Features:**  
• Full screen display, video snapshot, digital zoom, and digital watermarking

**Export:**  
• Multiple files export to an AVI file

**Download:**  
• Video files and snapshots can be accessed by Web File Manager (HTTP), FTP, or SMB/CIFS

## Network Services

**Dual Gigabit LAN Ports for Failover, Load Balancing, or Multi-IP Settings\***

\* VS-2008L and VS-2004L support one Gigabit RJ-45 Ethernet port only.

**Failover**  
Failover allows the VioStor NVR to sustain the failure of one network port to provide continuous services.

**Load Balancing**  
Bandwidth aggregation is supported to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured).

**Multi-IP Settings**  
Two IP settings can be configured on the NVR to allow network access from two different subnets.

## Green NVR Solution

The Linux-based VioStor NVR is more power-saving than PC-based surveillance solutions.



Environmentally Friendly & Power-saving

**Power Consumption**

VS-2008L/2004L  
VS-2012/2008/2004 Pro  
VS-4016/4012/4008 Pro  
VS-4016U/4012U/4008U-RP Pro  
VS-6020/6016/6012 Pro  
VS-8148/8140/8132/8124 Pro+  
VS-8148U/8140U/8132U/8124U-RP Pro  
VS-12164U/12156U/12148U/12140U-RP Pro  
PC-based server solution

### Languages

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

### Client PC Requirements

(Suggested system requirements)  
**Operation System:** Microsoft Windows 7, Vista, or XP

**Web Browser:** Internet Explorer 6.0 or later (32-bit)

**Network Interface:** 10/100/1000 Mbps

**Display Resolution:**  
• Suggested 1024 x 768 pixels or above  
\* For higher surveillance performance, please select more advanced PC models.

**File Format:**  
AVI (QNAP codec is required for playback)

**Local Display (\*)**  
• 1, 4, 6, 8, 9, 10, 12-channel display, sequential display mode

**Advanced Monitoring Features:**  
• Full screen display, event notification, PTZ control, and digital zoom

**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 Channel:**  
• Maximum 16-view playback from multiple NVR servers simultaneously

**Playback Mode:**  
• Play, pause, stop, reverse play, next/previous video file, and speed control

**Advanced Playback Features:**  
• Full screen display, video snapshot, digital zoom, and digital watermarking

**Export:**  
• Multiple files export to an AVI file

**Download:**  
• Video files and snapshots can be accessed by Web File Manager (HTTP), FTP, or SMB/CIFS

**Event Logs:** Detailed event logs