NVR

Network Surveillance System for IP Cameras
Innovative Network Video Recorder

VioStor Pro Series

QNAP SECURITY

Environment Friendly

Local Display VGA: 1920 x 1080

intel Atom inside™

Complete Recording Functions
· High quality H.264, MPEG-4, M-JPEG, and MxPEG recording
· Continuous/manual/schedule recording
· Alarm recording/alarm recording schedule
· High performance megapixel recording
· Audio recording (depending on the IP camera models)

Powerful Surveillance Features
· PC-less network surveillance by high-definition local display
· Multi-server monitoring (up to 120 channels)
· Diversified monitoring modes
· Smart control of PTZ cameras and auto cruising
· Multi-view playback from multiple NVR servers
· Video search by date and time, timeline, event, and Intelligent Video Analytics (motion detection, foreign object, missing object, out of focus, and camera occlusion)
· Advanced event management
· Scheduled remote replication
· Digital watermarking

Easy Configuration and Management
· Trouble-free installation
· System management by local display and web-based user interface
· Smart search of IP cameras for quick settings

High Reliability and Smart Features
· Dual core Intel® Atom™ processor and 1GB memory
· Linux-embedded system, low power consumption
· Advanced RAID with hot-swap design
· UPS support for 24/7 service
· Automatic system startup after power recovery
· Dual Gigabit LAN ports for failover, load-balancing, or multi-IP setting
· Large storage capacity for long-term recording
· Convenient video backup to external USB storage by one-touch-auto-video-backup button

MJPEG MPEG4 H.264 MxPEG | Mega pixel | Local Display | Dual Display | Intelligent Video Analytics | Watermark Support | Advanced Event Management | SMS Support | Winsows PDA phone | Linux Embedded | Hot Swappable | RAID 0/1/5/3+Spare 6/6+Spare/JBOD | Online RAID expansion | Online RAID migration | Dual Gigabit Ethernet | Failover | Load Balancing | HDD S.M.A.R.T. | 2.5" & 3.5" HDD support | UPS Support | LCD Configuration

VioStor Pro Series

Secure Life, Secure Property

High Performance Network Surveillance System

VioStor Pro Series NVR is the world's first Linux-based network video recorder which supports high-definition local display for PC-less network surveillance. The members include 2-drive VS-2012 Pro/2008 Pro/2004 Pro, 4-drive desktop VS-4016 Pro/4012 Pro/4008 Pro and rack mount VS-4016U-RP Pro/4012U-RP Pro/4008U-RP Pro, and 6-drive VS-6020 Pro/6016 Pro/6012 Pro. VioStor NVR supports multi-channel H.264, MPEG-4, M-JPEG, and MxPEG recording. It works well with over 800 IP cameras and video servers from **AXIS, ACTi, A-MTK, Arecont Vision, AVTECH, Brickcom, Canon, Cisco, CNB, 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, and Y-CAM**.

VioStor Pro Series NVR supports quick configuration, monitoring, and video playback by local display via a built-in VGA connector. It is capable of megapixel recording (up to 8 megapixels) and diversified recording modes such as scheduled recording, alarm recording by multiple events, pre-alarm, and post-alarm recordings. The NVR also offers multi-server monitoring to monitor up to 120 channels from multiple QNAP NVR servers without installing any other software, Intelligent Video Analytics (IVA) for faster video retrieval, and various event handling options for different kinds of events.

Other class-leading server features of VioStor NVR include advanced data protection by RAID configurations, online RAID capacity expansion, online RAID level migration, dual Giga LAN ports for network failover, load-balancing, and multi-IP setting, etc. VioStor NVR is an excellent option for central monitoring and recording of numerous network cameras in a large-scale surveillance system.

Powerful Surveillance Features

PC-less Network Surveillance by HD Local Display via VGA Connector

- **Diversified Monitoring Modes**
  - 1/4/6/8/9/10/12-channel display mode
  - Sequential display mode

- **High Resolution Local Display**
  VioStor NVR supports widescreen VGA monitor or TV of different resolutions, up to 1920 x 1080.

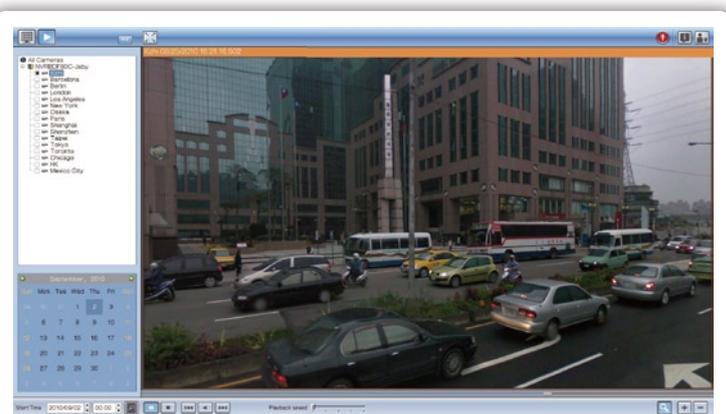- **Convenient Control of PTZ and Speed Dome Cameras**
  You can adjust the PTZ cameras directly and view the preset positions of the IP cameras on the local display interface of VioStor NVR.

- **Digital Zoom**
  You can zoom in or zoom out the video image on the monitoring and playback interfaces.

- **On-screen Event Alert**
  When an event occurs, an alert icon will be shown instantly on local monitoring page. You can click the icon to view the alert details.

- **Video Search**
  VioStor NVR supports convenient video search by date and time on the local playback interface.

- **Local Video Playback on VGA Monitor or TV**
  VioStor NVR supports video playback on a VGA monitor or TV.

- **Quick System Setup**
  You can set up VioStor NVR in simple steps on the local display interface.
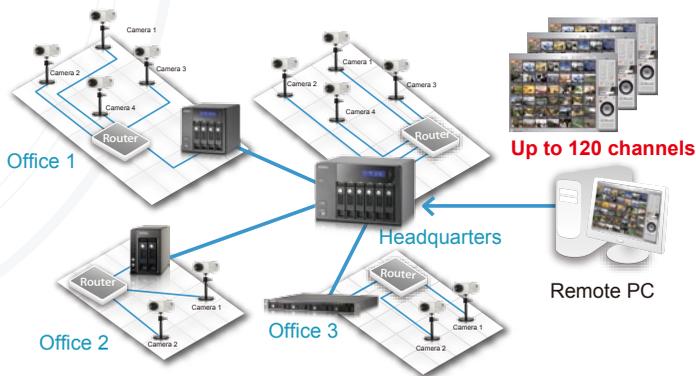
- **Intuitive Local Display Interface**
  All quick configurations, monitoring, and playback can be managed by the local display via a USB mouse, a USB keyboard, and a monitor connected to VioStor NVR via the VGA connector.

Real-time Remote Monitoring

• Multi-server Monitoring

You can connect to one VioStor NVR and monitor up to 120 channels from other VioStor NVR servers over LAN or WAN by an IE browser.

Up to 120 channels

• Diversified Remote Monitoring Modes

· 1/4/6/8/9/10/12/16/20/25/36/42-channel display mode
· Sequential display mode
· Exclusive Picture-in-Picture mode
· Dual display mode

Dual Display

• Drag and Drop Function on Monitoring

VioStor NVR supports drag and drop function to change the display order of the monitoring channels.

• Smart Control of PTZ and Speed Dome Cameras

You can adjust the PTZ cameras directly by the web user interface of VioStor NVR.

• Preset Position Control and Auto Cruising

You can view the preset positions of an IP camera by clicking the corresponding 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.

• Digital Zoom

You can zoom in or zoom out the video image on the monitoring and playback interfaces.

• Instant Event Notification

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

• E-map

VioStor NVR provides E-map function for users to upload the pictures of the monitoring locations.

Complete Recording Functions

• All-in-one Recording Functions

· High quality H.264, MPEG-4, M-JPEG, and MxPEG recording (depending on the camera models)
· Continuous/manual/scheduled recording
· Alarm recording/multiple alarm recording schedules
· Up to 30fps at D1 or VGA for each camera
· High performance megapixel recording
· Audio recording (depending on the camera models)

• Generic IP Cameras Support

VioStor NVR provides an interface for the users to enter the JPEG CGI command of their IP cameras to retrieve the video and audio data from the IP cameras.

Remote Video Playback

• Multi-view Playback

You can 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 in the multi-view window simultaneously.

• Digital Watermarking

VioStor NVR supports digital watermarking to protect the exported videos and snapshots from unauthorized modification. You can use the Watermark Proof utility to verify whether or not the videos and snapshots are original.

• Video Search by Date and Time, Timeline, Event, Intelligent Video Analytics (IVA)

VVioStor NVR supports quick video search 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:
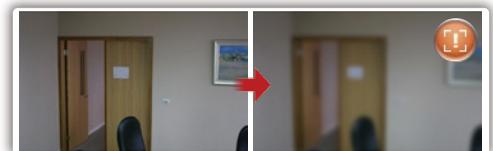The moving objects of the searching area are highlighted in red brackets.

Foreign Object:
The foreign objects of the searching area are highlighted in yellow brackets.

Missing Object:
The missing objects of the searching 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.

Event Management

VioStor NVR supports various event handling options for different kinds of events.
· 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.

Events → Actions

Convenient Backup Solution

• **Scheduled Remote Replication**
VioStor NVR supports scheduled remote replication for secure data backup to a remote QNAP NAS on the local network.

• **One-Touch-Auto-Video-Backup**
You can configure the one-touch-auto-video-backup button on the front of the NVR to copy the data from the NVR to an external storage device when the button is pressed.

Security Control

• **Authority Management**
You can create multiple users on VioStor NVR. The users created on the NVR can be assigned to different user groups (administrator/system manager/user) with different rights of monitoring, playback, PTZ control, and audio monitoring.

• **Auto Logoff**
VioStor 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.

• **Host Access Control**
You can specify the host or IP connections to be allowed and denied to access the NVR.

• **Detailed Event Logs**
VioStor NVR provides detailed event logs of system warning, hard disk error, network disconnection, UPS status, and users' networking services and recordings access record.

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

Network Services

• **Dual Gigabit LAN Ports**
  • **Failover**
    This mode allows VioStor NVR to sustain the failure of one network port to provide continuous services.
  • **Load-balancing**
    This mode provides bandwidth aggregation to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured).
  · **Multi-IP Setting**
    Two IP settings can be configured on the NVR to allow network access from two different subnets.

• **Built-in DDNS Service & NTP Server**
VioStor NVR supports dynamic DNS (DDNS). You can register a unique domain name from a DDNS service provider and assign it to your NVR. The NTP server feature allows the connected IP cameras to synchronize their date and time settings with the NVR.

High Reliability and Smart Features

• **Advanced RAID Management with Hot-swap Design***
  * The RAID configurations available depend on the product models and the number of hard disk drives installed.

• **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**
    You can upgrade the disk configuration to higher RAID level with the data retained without turning off the server.

• **S.M.A.R.T. & Advanced HDD Health Scanning (HHS)**
• **Automatic System Startup after Power Recovery**
• **UPS Support for 24/7 Service**
• **DOM Architecture with Embedded Fail-safe Dual OS for Enhanced Reliability**

Excellent Hardware Design

• **Dual-core Intel® Atom™ Processor and 1GB Memory**
• **Linux-embedded System with Low Power Consumption**
VioStor NVR is a Linux-embedded system which is more power-saving and less vulnerable to virus attack compared to PC-based surveillance solutions.

Power Consumption

QNAP VS-2012/2008/2004 Pro VioStor NVR (in Operation)	25W
QNAP VS-4016/4012/4008 Pro VioStor NVR (in Operation)	35W
QNAP VS-4016U/4012U/4008U-RP Pro VioStor NVR (in Operation)	62W
QNAP VS-6020/6016/6012 Pro VioStor NVR (in Operation)	43W
PC-based NVR solution (in Operation)	400W

Applications: Live Monitoring, Recording, and Video Playback over the Internet Anytime, Anywhere

• **Business Services**
  • Live production line monitoring for quality and security control
  • Department store/ mall monitoring
  • Shipping process recording

  • Crime prevention, e.g. shoplifting
  • Parking lot monitoring
  • Construction site monitoring
  • Convenience store security
  • Campus security

  • Server room security
  • Gas station security
  • Hotel security
  • Multiple remote offices/ factory sites live monitoring

• **Office Management**
  • Real-time office monitoring from remote locations
  • In-house office monitoring
  • Office security fortification
  • False alarm identification

• **Home Care**
  • Home surveillance to secure life and property
  • Enhanced protection for kids, elders, and pets
  • Crime prevention
  • Evidence or aid to police investigation

VioStor Pro Series Comparison Chart

Product Photo	VS-4016U-RP/ 4012U-RP/4008U-RP Pro	VS-6020 Pro/ 6016 Pro/6012 Pro	VS-4016 Pro/ 4012 Pro/4008 Pro	VS-2004 Pro/ VS-2012 Pro/2008 Pro
NVR Model	VS-4016U-RP/ 4012U-RP/4008U-RP Pro	VS-6020 Pro/ 6016 Pro/6012 Pro	VS-4016 Pro/ 4012 Pro/4008 Pro	VS-2004 Pro/ VS-2012 Pro/2008 Pro
Operation System	Linux-embedded			
Number of Channels (Recording)	Up to 16/12/8	Up to 20/16/12	Up to 16/12/8	Up to 12/8
HD Local Display	Yes			
Multi-server Monitoring	Yes (up to 120 channels)			
Compression Format	H.264, MPEG-4, M-JPEG, and MxPEG (depending on the camera models)			
Recording Performance	Up to 30fps at D1 or VGA for each channel			
Megapixel Recording	Yes (up to 8-megapixel)			
Multi-view Playback	4-view			
Intelligent Video Analytics (Playback)	Motion detection, missing object, foreign object, out of focus, and camera occlusion			
Digital Watermarking	Yes			
Advanced Event Management	Yes			
Remote Replication*	Yes			
Disk Capacity**	Up to 8TB (4 x 3.5-inch SATA/2.5-inch SATA/SSD)	Up to 12TB (6x 3.5-inch SATA/2.5-inch SATA/SSD)	Up to 8TB (4 x 3.5-inch SATA/2.5-inch SATA/SSD)	Up to 4TB (2 x 3.5-inch SATA/2.5-inch SATA/SSD)
RAID Protection	RAID 0, 1, 5, 5+ hot spare, 6, and JBOD/Linear	RAID 0, 1, 5, 5+ hot spare, 6, 6+ hot spare, and JBOD/Linear	RAID 0, 1, 5, 5+ hot spare, 6, and JBOD/Linear	RAID 0, 1, JBOD/Linear
Processor	Dual-core Intel® Atom™ processor			
LCD Panel	-	Yes	Yes	-
Gigabit LAN Port	2			
Redundant Power Supply	Yes	-	-	-
Hardware Dimensions	44(H) x 439(W) x 499(D) mm 1.73(H) x 16.97(W) x 19.65(D) inch	175(H) x 257(W) x 235(D) mm 6.89(H) x 10.12(W) x 9.25(D) inch	177(H) x 180(W) x 235(D) mm 6.97(H) x 7.09(W) x 9.25(D) inch	150(H) x 102(W) x 216(D) mm 5.91(H) x 4.02(W) x 8.5(D) inch
Color Box Shipping Weight	12.06Kg/26.59 lb	6.5Kg/14.33 lb	4.65Kg/10.24 lb	2.92 Kg/6.44 lb

* Remote replication is supported within the same LAN only.
** The standard system is shipped without hard disk drives.
► Designs and specifications are subject to change without notice. For more detailed information, please visit QNAP Security website: http://www.qnapsecurity.com/

Network Camera Compatibility List

Brand	Models
AXIS	2100/ 2110/ 206/ 206M/ 207/ 207W/ 207M/ 207MW/ 209FD(-R)/ 209MFD(-R)/ 210/ 210A/ 211A/ 211/ 211W/ 211M/ 212 PTZ(-V)/ 213 PTZ/ 214 PTZ/ 215 PTZ/ 216FD(-V)/ 216MFD(-V)/ 221/ 223M/ 225FD/ 231D+/ 232D+/ 233D/ M1011(-W)/ M1031-W/ M1054/ M1113/ M1114/ M3011/ M3014/ M3203(-V)/ M3204(-V)/ P1311/ P1343/ P1344/ P1346/ P3301(-V)/ P3343/ P3344/ P5534/ Q1755/ Q6032-E/ 241S/ 241SA/ 241Q/ 241QA/ 243SA/ 247S/ M7001/ Q7401/ Q7404
ACTi	ACM-1011/ ACM-1231/ ACM-1232/ ACM-1311/ ACM-1431/ ACM-1432/ ACM-1511/ ACM-3001/ ACM-3011/ ACM-3211/ ACM-3311/ ACM-3401/ ACM-3411/ ACM-3511/ ACM-3601/ ACM-3603/ ACM-3701/ ACM-3703/ ACM-4000/ ACM-4001/ ACM-4100/ ACM-4200/ ACM-4201/ ACM-5001/ ACM-5601/ ACM-5611/ ACM-5711/ ACM-7411/ ACM-7511/ ACM-8201/ ACM-8211/ ACM-8511/ CAM-5201/ CAM-5221/ CAM-5301/ CAM-5321/ CAM-6510/ CAM-6610/ CAM-6620/ CAM-6630/ CAM-7300/ CAM-7301/ CAM-7321/ CAM-7322/ TCM-4101/ TCM-4301/ TCM-5311/ TCM-5312/ TCM-7411/ ACD-2000Q/ ACD-2100/ ACD-2200/ ACD-2300/ ACD-2400/ SED-2120/ SED-2140/ TCD-2500
A-MTK	AM9060M/ AM9120M/ AM9130M/ AM9260M/ AM9539/ AM9730/ AM6221
Arecont Vision	AV1300/ AV1305/ AV1355/ AV2100/ AV2105/ AV2155/ AV3130/ AV3100/ AV3105/ AV3135/ AV3155/ AV5100/ AV5105/ AV5155/ AV8180/ AV8185/ AV8360/ AV8365
AVTECH	AVI201/ AVI202/ AVI203/ AVI204/ AVI322/ AVN211/ AVN212/ AVN252
Brickcom	CB-100Ae/ CB-100Ap/ FB-100Ae/ FB-100Ap/ FD-100Ae/ FD-100Ap/ WCB-100Ae/ WCB-100AP/ WFB-100Ae/ WFB-100Ap
Canon	VB-C300/ VB-C300B/ VB-C50iR/ VB-C50i/ VB-C50FSi/ VB-C50Fi/ VB-C500D/ VB-C60
Cisco	CIVS-IPC-2500(W)/ PVC-300/ WVC-210/ PVC-2300/ WVC-2300
CNB	IDC4000T/ IDP4000VR/ IDP4030VR/ IGP1030/ INS2000/ IVP4000VR/ IVP4030VR/ ISMC1063X
DIGITUS	DN16050/ DN16051/ DN16052/ DN16055
D-Link	DCS-900(A)/ DCS-900(B1)/ DCS-900(B2)/ DCS-910/ DCS-920/ DCS-2102/ DCS-2120/ DCS-2121/ DCS-3110/ DCS-3220(G)/ DCS-3410/ DCS-3420/ DCS-5220/ DCS-5300(G)/ DCS-6620(G)
EDIMAX	IC-1510/ IC-1510WG/ IC-3010/ IC-3010WG/ IC-7000PT/ IC-7000PTN
ELMO	PTC-401C-IP/ PTC-402C-IP/ SN2230-IP2/ SN2230-IPW/ SN2232 IP/ TD4112-IP/ TD4114-IP2
Etrovision	EV6130/ EV6150/ EV6250A/ EV6332/ EV6356A/ EV6530/ EV6531A/ EV6551A/ EV6552A/ EV8150/ EV3130A/ EV3131A/ EV3151(A)/ EV3830H
GANZ	ZN-D2024/ ZN-PT304L/ ZN-PT304WL/ ZN-YH305/ ZV-S306
Hikvision	DS-2CD732F-E/ DS-2CD752MF-E/ DS-2CD752MF-FB/ DS-2CD762MF-FB/ DS-2CD792PF-E/ DS-2CD802PF-E/ DS-2CD852MF-E/ DS-2CD892PF-E/ DS-6101HFI-IP-A
iPUX	ICS-1001/ ICS-1011/ ICS-1003/ ICS-1013/ ICS-1100/ ICS-1110/ ICS-1300/ ICS-1310/ ICS-130A/ ICS-131A/ ICS-1600/ ICS-1700/ ICS-6000
IQeye	IQ040SI/ IQD40SI/ IQ041SI/ IQD41SI/ IQ042SI/ IQD42SI/ IQ510/ IQ511/ IQ701/ IQ702/ IQ703/ IQ705/ IQ710/ IQ711/ IQ712/ IQ732/ IQ751/ IQ752/ IQ753/ IQ755/ IQ802/ IQ803/ IQ805/ IQ811/IQ851/ IQ852/ IQ853/ IQ855/ IQA10S/ IQA11S/ IQA11N/ IQA12S/ IQA12N/ IQA13S/ IQA13N/ IQA15S/ IQA15N/ IQA20S/ IQA20N/ IQA21S/ IQA21N/ IQA22S/ IQA22N/ IQA23S/ IQA23N/ IQA25S/ IQA25N/ IQD31SI

Brand	Models
LevelOne	FCS-0010/ WCS-0010/ FCS-0020/ WCS-0020/ FCS-1010/ WCS-2010/ FCS-1030/ WCS-2030/ FCS-1040/ WCS-2040/ FCS-1060/ WCS-2060/ FCS-1070/ WCS-2070/ FCS-109X/ WCS-109X/ FCS-3000/ FCS-3021/ FCS-5030/ FCS-5011
Linksys	PVC-2300/ WVC-2300/ PVC-300/ WVC-200/ WVC-210/ WVC54GCA
MESSOA	NCB855/ NCR875/ NDF820/ NDR890/ NDZ860/ NIC835/ NIC836
MOBOTIX	D12Di-IT/ D12Di-Sec/ D22M-Basic/ D22M-IT/ D22M-Sec/ D24M-IT/ D24M-Sec/ M10D-Night/ M12-DevKit-Board/ M12D-IT-Dnight/ M12D-Sec/ M12M-IT/ M12M-Sec/ M12M-Web/ M22M-IT/ M22M-Night/ M22M-Sec/ M24M-Sec/ M24M-Sec-Night/ Q22M-Basic/ Q22M-Sec/ Q24M-Basic/ Q24M-Sec
NAKAYO	IPCAMDH
Panasonic	BB-HCM100/ BB-HCM110/ BB-HCM311/ BB-HCM331/ BB-HCM371/ BB-HCM381/ BB-HCM403/ BBHCM481/ BB-HCM511/ BB-HCM531/ BB-HCM515/ BB-HCM527/ BB-HCM547/ BB-HCM580/ BB-HCM581/ BB-HCM701/ BB-HCM705/ BB-HCM715/ BB-HCM735/ KX-HCM280/ KX-HCM180/ BL-C1/ BL-C10/ BL-C11/ BL-C101/ BL-C111/ BL-C131/ BL-C20/ BL-C30(K1)/ BL-C31
Panasonic i-Pro	NF282/ NF284/ NF302/ NP1000/ NP1004/ NP240/ NP244/ NP304(V)/ NP502/ NS202(A)/ NS950/ NS954/ NW484(S)/ NW960/ NW964
SANYO	VCC-400N/ VCC-9600/ VCC-9800/ VCC-HD2500/ VDC-HD3100/ VCC-HD3300/ VDC-HD3300/ VCC-3500/ VDC-3500/ VCC-HD4000/ VCC-HD4600/ VCC-N6695/ VCC-P450/ VCC-P470/ VCC-PT490/ VCC-PT500
SHANY	SNC-1010/ SNC-1030DN/ SNC-2150/ SNC-LM1043/ SNC-MR1010DN/ SNC-MR2110DN
SONY	SNC-CM120/ SNC-CH140/ SNC-CH240/ SNC-CS10/ SNC-CS11/ SNC-CS20/ SNC-CS50/ SNC-DH140(T)/ SNC-DH180/ SNC-DF40/ SNC-DF50/ SNC-DF70/ SNC-DF80/ SNC-DF85/ SNC-DS10/ SNC-DS60/ SNC-DM110/ SNC-DM160/ SNT-EP154/ SNT-EX154/ SNC-P1/ SNC-P5/ NCRX530/ SNC-RX550/ SNC-RX570/ SNC-RZ25/ SNC-RZ30/ SNC-RZ50/ SNC-Z20/ SNT V704/ SNC-RH124/ SNC-RH164/ SNT-EX104
TOA	N-CC2561/ N-VT-2010/ N-CC-2360
TOSHIBA	CI8110-D/ CI8210-D/ IK-WB12/ IK-WB21
TRENDnet	TV-IP212/ TV-IP212W/ TV-IP312/ TV-IP312W/ TV-IP410/ TV-IP410W/ TV-IP422/ TV-IP422W
VIOSECURE	AC930M/ AC3530HQIP/ EV241X/ VFD150HQIP
VIVOTEK	IP3111/ IP3121/ IP3112/ IP3122/ IP3132/ IP3135/ IP3137/ PT3112/ PT3122/ PT3117/ PT3127/ FD6111V/ FD6121V/ FD6112V/ FD6122V/ IP6112/ IP6122/ IP6117/ IP6127/ PZ6112/ PZ6122/ PZ6114/ PZ6124/ SD6112V/ FD7130/ FD7131/ FD7132/ FD7141/ FD7160/ FD8134/ IP7130/ IP7131/ IP7132/ IP7133/ IP7134/ IP7135/ IP7137/ IP7138/ IP7139/ IP7142/ IP7151/ IP7152/ IP7153/ IP7154/ IP7161/ IP7251/ IP7330/ IP7361/ IZ7151/ PZ71X1/ PZ71X2/ PZ7131/ PZ7132/ PT7135/ PT7137/ PZ7151/ PZ7152/ SD6122V/ SD7151/ SD73X3/ FD8134/ FD8161/ FD8361/ IP8161/ IP8330/ IP8332/ SD8111/SD8121/ VS3100P/ VS3102/ VS7100/ VS8102
Y-CAM	Y-Cam White/ Y-Cam Black

► For the latest information of the supported cameras, please visit QNAP Security website: http://www.qnapsecurity.com/pro_compatibility_camera.asp
► All the trademarks mentioned herein are the property of their respective companies.
► Designs and specifications are subject to change without notice.

Hardware Specifications

System
- **CPU:** Dual-core Intel® Atom™ processor
- **Memory:** 1GB RAM, 512MB Flash (DOM)

Hard Disk Drive (HDD)
- **Supported HDD:** 3.5-inch SATA/2.5-inch SATA/SSD*
  For the HDD compatibility list, please visit
  http://www.qnap.com/pro_compatibility.asp
  * The standard system is shipped without HDD
- **HDD Tray:** Hot-swappable and lockable tray

Network
- **LAN:** Gigabit RJ-45 Ethernet port x 2

USB
- **USB 2.0 Port:** Supports pen drive, USB mouse, USB keyboard, USB speaker, and USB UPS etc.

VGA
- **VGA Connector:** 1 (for local display)
- **Suggested Video Output Resolution:**
  1920 x 1080 (Full HD)

Buttons
- Power button, one-touch-auto-video-backup button, and reset button

LCD Panel (*1)
- Mono-LCD display with backlight, enter button, and select button for configuration

Dimensions and Weight
- The dimensions and weight may be different depending on the NVR models. Please refer to the VioStor Pro Series Comparison Chart.

Operation Environment
- Temperature: 0–40˚C/32–104°F
- Humidity: 0–95% R.H.

Security Design
- K-lock security slot for theft prevention

(*1) Depends on the NVR models

Software Specifications

Recording
- **Supported Camera Models:** Please visit
  http://www.qnapsecurity.com/pro_compatibility_camera.asp
- **Video Compression:** H.264/MPEG-4/M-JPEG/MxPEG
  (depending on the camera models)
- **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 30fps at D1 or VGA for each camera
  * Real performance may vary in different environment
- **Megapixel Recording:** Supports megapixel cameras
- **Recording Settings:** Video compression, resolution, frame rate, quality, audio recording
- **File format:** AVI (QNAP codec is required for playback)

Local Display
- **Display Mode:** 1/4/6/8/9/10/12-channel display mode(*1), sequential display mode
- **Advanced Monitoring Features:** Full screen display, event notification, PTZ control, digital zoom
- **Local Playback:** Single view playback from local NVR
- **Search Mode:** By date & time
- **Playback Control:** Play, pause, stop, reverse play, next/previous video file, different speed control
- **Advanced Playback Features:** Full screen display, digital zoom

Remote Monitoring (by IE Browser)
- **Display Mode:** 1/4/6/8/9/10/12/16/20/25/36/42-channel display, Picture-in-Picture mode, sequential mode, dual display mode
- **Multi-server Monitoring:** Up to 120-channel monitoring from multiple VioStor NVR servers
- **Advanced Monitoring Features:** Full screen display, video snapshot, manual recording, event notification, PTZ control, digital zoom
- **E-map:** Upload E-map (JPEG)

Remote Playback
- **Playback Channel:** Maximum 4-view playback from multiple NVR servers simultaneously
- **Search Mode:** By date and time, timeline, event, and intelligent video analytics (IVA)
- **Intelligent Video Analytics (IVA):** Motion detection, foreign object, missing object, out of focus, and camera occlusion

- **Playback Control:** Play, pause, stop, reverse play, next/previous frame, next/previous video file, different speed control
- **Advanced Playback Features:** Full screen display, video snapshot, digital zoom, digital watermarking
- **Export:** Convert multiple recording files to one AVI file
- **Download:** Download recordings via the web-based interface

Event Management
- **Advanced Event Management:** Supports various handling options for different kinds of events.
  - 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
- **Scheduled Remote Replication:** Scheduled video data backup to a QNAP NAS on the local network
- **Video Backup to External USB Storage by One-Touch-Auto-Video-Backup Button:** Instant video backup to an external storage by the one-touch-auto-video-backup button

Security Control
- **Authority Management:** Multiple accounts creation with different rights of monitoring, playback, PTZ control, and audio monitoring
- **Host Access Control:** Control of allowed and denied access to the NVR
- **Auto Logoff:** Automatic user logoff from idling configuration pages
- **Event Logs:** Detailed event logs
- **On-line Users List:** Logon status of active users and logon history
- **Digital Watermarking:** Verify whether or not the videos and snapshots are original

Reliability
- **Operation System:** Linux-embedded system
- **Disk Management:**
  - Single disk, RAID 0, RAID 1, RAID 5, RAID 5+ hot spare, RAID 6, RAID 6+ hot spare, and JBOD/Linear(*1)
  - Online RAID capacity expansion, online RAID level migration
  - HDD S.M.A.R.T., bad blocks scan
- **UPS:** APC/CyberPower/MGE (USB UPS)
- **Automatic System Startup after Power Recovery**

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

LCD Panel (*1)
- PC-less first time setup and RAID configuration
- Check or configure the IP settings, physical disk info, volume info, system info, shut down or reboot the NVR etc.

Language Support
- 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
- **Operation System:** Microsoft Windows 7, Vista, XP
- **Web Browser:** Internet Explorer 6.0 or later
- **Network Interface:** 10/100/1000 Mbps
- **Display Resolution:** 1024 x 768 pixels or above

Utilities
- **QNAP Finder:** A tool for discovery and quick setup of VioStor NVR
- **VioStor Player:** A tool to play the recording files of VioStor NVR on Windows PC
- **Watermark Proof:** A tool to verify if the exported videos and snapshots of VioStor NVR are original
- **VSMobile:** An application for Windows PDA phone users to monitor the IP cameras connected to VioStor NVR

(*1) Depends on the NVR models

* Designs and specifications are subject to change without notice.