QNAP SECURITY

NVR Innovative Network Video Recorder
VioStor-5012/ 5020

Network Surveillance System for SMB and Enterprise

QNAP Network Video Recorder for IP Cameras

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

Secure Life, Secure Property

Powerful All-in-one Recording Functions

- Continuous/ manual/ schedule recording
- Alarm recording (by motion detection or sensor triggered)
- Multiple alarm recording schedules
- High performance megapixel recording (up to 8 megapixels)
- High quality recordings in Motion-JPEG and MPEG-4
- Audio recording (depends on the cameras)

Powerful Surveillance Features

- Variety live video monitoring
- Multi-server monitoring (highly expandable for monitoring up to 120 channels from multiple QNAP NVR servers)
- Alarm notification on monitoring
- Smart control of PTZ & speed dome cameras on monitoring
- Digital zoom for monitoring and playback
- Multi-channel playback at different speed
- Search of recording data by date & time and recording type

Easy to Use

- Trouble-free 6-step installation
- Intuitive web-based user interface
- Smart search of IP camera for quick settings
- Touch-N-Go PC-less RAID setup via the LCD panel

High Reliability and Smart Features

- Intel 1.6GHz CPU and 1GB DDRII memory for superior system performance
- Advanced RAID(RAID 0/ 1/ 5/ 5+Hot spare/ 6/ 6+Hot spare/ JBOD) with hot-swap design
- Ultra large storage capacity (up to 10TB) for long-term recording
- Intelligent auto power on when power resumes after power outage
- Supports UPS for 24x7 service
- Two Gigabit LAN ports for load balancing, failover, or multi-LAN configuration
- Green NVR solution: Linux-embedded system with low power consumption

VioStor-5012/ 5020

Secure Life, Secure Property

High Performance Network Surveillance System for SMB and Enterprise

The VioStor-5012 and VioStor-5020 are professional standalone network video surveillance systems designed to meet the high security demand of the SMB and enterprises. The VioStor NVR is a Linux-embedded system which supports M-JPEG/ MPEG4 recording, megapixel (up to 8 megapixels) recording and up to 10TB for long-term recording from **AXIS**, **ACTi**, **Arecont**, **Canon**, **D-Link**, **EDIMAX**, **ELMO**, **EtroVision**, **GANZ**, **iPUX**, **IQeye**, **LevelOne**, **MOBOTIX**, **Panasonic BB/ BL/ i-Pro**, **SANYO**, **SONY**, **TOSHIBA**, **TRENDnet**, **VIVOTEK**, and **Y-CAM** IP-based security cameras.

The VioStor NVR addresses many of the shortcomings of traditional analog surveillance system and PC-based monitoring solutions which are expensive to install and maintain, and lack of remote management mechanism. As a standalone system, the VioStor NVR is highly stable, easy to use, less vulnerable to virus attack, and power-saving. Also, no extra software utility is ever required. The VioStor NVR can be easily set up in an Ethernet-ready environment without any complicated wiring.

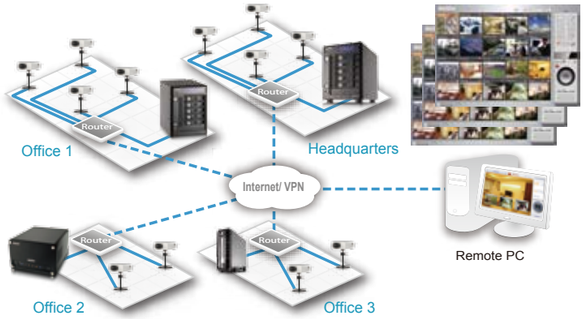
The VioStor NVR supports versatile recording functions, e.g. schedule recording, alarm recording, alarm recording schedule. In live monitoring, unique multi-server monitoring, variety display modes, easy drag and drop function, smart control of PTZ cameras, digital zoom, real-time snapshot, and E-map are supported. Other powerful functions include multi-channel playback at different speed, easy data search by date & time and alarm event, etc. All these functions can be performed through the web-based GUI by the IE browser.

The VioStor NVR enable secure recording data protection with advanced RAID, Online RAID Capacity Expansion, and Online RAID Level Migration. Moreover, dual Gigabit LAN ports are provided for network failover, load-balancing, and standalone configurations for efficient data transfer over the network. You can set up the surveillance system in a few minutes by the LCD panel or 6-step web-based installation. The VioStor NVR is a perfect video surveillance application for community, parking lot, retails stores, malls, banks, hospitals, offices, and factories, etc.

Powerful Surveillance Features

- **Variety Live Video Monitoring**
  - 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20-channel display mode
  - Sequential display mode
  - Exclusive Picture-in-Picture mode
- **Easy Drag and Drop Function on Monitoring**
  The VioStor NVR provides drag and drop function to change the display order of the monitoring channels.
- **Smart Control of PTZ & Speed Dome Cameras**
  You can adjust the PTZ cameras directly by the web user interface.
- **Monitoring Preset Position Control**
  You can view different preset positions of the camera by clicking the number buttons on the monitoring page.
- **Digital Zoom for Monitoring and Playback**
  The VioStor NVR supports digital zoom for more flexible monitoring and playback. It is a powerful function for megapixel IP cameras.
- **Video Snapshot**
  The snapshot function is supported on monitoring and playback page.
- **E-map for Easy Preview of the Camera Location**
  You can upload the pictures of the monitoring location.

- **Multi-server Monitoring**
  You can connect to the VioStor NVR and add other QNAP NVR servers for monitoring up to 120 channels over LAN or WAN.



- **All-in-one Recording Functions**
  - Continuous/ schedule/ manual recording
  - Alarm recording/ multiple alarm recording schedules
  - High quality recordings in Motion-JPEG and MPEG-4
  - VioStor-5012：Up to 360 fps D1/ VGA recording
    VioStor-5020：Up to 600 fps D1/ VGA recording
  - High performance megapixel recording (up to 8 megapixels)
  - Audio recording (depends on the cameras)

  * Up to 15 schedules are supported for each camera
- **Alarm Notification**
  When alarm recording is enabled and an event occurs, you can click the alarm icon on monitoring page to view the alert details.
- **Real-time Email Notification**
  Alert e-mails are sent to the administrator immediately in case of system error or emergent events.
- **Authority Management**
  You can configure the monitoring and playback authority of specified cameras for different users. The authority can be set for up to 32 users.
- **Host Access Control**
  You can specify the connections to be allowed and denied to access the VioStor NVR.
- **On-line User List**
  You can view the record of users currently logged on and previously logged on to the VioStor NVR.

- **Data Search by Date & Time and Recording Type**
  The VioStor NVR supports quick search of recording data by date and time, and recording type.

High Reliability and Smart Features

- **Advanced RAID (0/ 1/ 5/ 5+ Hot Spare/ 6/ 6+ Hot Spare/ JBOD) with Hot-Swap Design**

  The VioStor NVR offers advanced RAID 0, 1, 5, 5+spare, 6, 6+spare, single, and JBOD disk configurations. The VioStor NVR also supports hot-swap design that a failed drive can be replaced by hot swapping without turning off the server. Besides, the best-in-class RAID on the NVR to protect all the important recordings in the most secure way.
- **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 are 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. There is no need to turn off the server during the process.
- **S.M.A.R.T. & Advanced HDD Health Scanning (HHS)**
- **Intelligent Automatic System Startup when Power Resumes after Power Outage**
- **Support UPS for 24x7 Service**
- **Convenient Video Backup to External USB Storage by One Touch Auto Backup Button**

Powerful Network Services

- **Built-in DDNS Support**
- **Built-in NTP Server**
- **Convenient Data Access**

  You can access the recording data on the VioStor NVR by: Network Neighborhood (SMB/ CIFS) / Web File Management (HTTP) / FTP server

- **Multi-Channel Playback at Different Speed**
  The VioStor NVR supports playback of the recording data from different monitoring channels. It also provides Express Quad View Playback that you can either divide the selected time equally into four playback views or play the video of four cameras at the same time.
- **Recordings can be Played by Windows® Media Player**
  You can play the files by Windows Media Player®. There is no need to install unique program or convert the files to other formats.
- **Flexible Adjustment of the Length of Recording Files**
  You can flexibly adjust the length of the recording files.
- **Schedule Remote Replication**
  The VioStor NVR supports schedule remote replication for secure data backup to a remote NAS.
- **Detailed Event Logs**
  The VioStor NVR provides detailed event logs of system warning, hard disk error, network disconnection, UPS status, and users' networking services and recordings access record.

Excellent Hardware Design

- **Intel 1.6GHz CPU and 1GB DDRII Memory for Superior System Performance**
  Powered by Intel 1.6GHz CPU and 1GB DDRII memory, the VioStor NVR delivers superior performance for surveillance applictions.
- **Green NVR Solution: Linux-embedded System with Low Power Consumption**
  The Linux-based VioStor NVR is more power-saving and less vulnerable to virus attack compared to PC-based surveillance solution.

- **Touch-N-Go PC-Less Installation by LCD Panel**
  The handy LCD panel on the VioStor NVR provides a speedy and easy approach to initialize the NVR and set up the RAID configuration without using any computer.
- **Up to 10TB Storage Capacity for Long-Term Recording**
- **Two Gigabit LAN Ports for Load Balancing, Failover, or Multi-LAN Configuration**

  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 Setting
  The VioStor NVR can be deployed with two different IP settings for sharing among different workgroups in two different subnets.

Supports access of multiple IP from different LAN areas

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

- **Business Service**
  - 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 investigations

Hardware Specifications

Processor
• Intel Celeron Processor 1.6GHz

Memory
• 1GB DDRII RAM, 128MB flash (DOM)

HDD Capacity
• 5 x 3.5" SATA I/II HDD, up to 10TB
(the standard system is shipped without HDD)

HDD Tray
• 5 x hot-swappable and lockable tray

LAN Port
• 2 x Gigabit RJ-45 Ethernet port

LED Indicators
• Status, HDD 1, HDD 2, HDD 3, HDD 4, HDD 5, LAN, USB

USB
• 5 x USB 2.0
Front: for USB storage device
(One Touch Auto Video Backup)
Back: for UPS device

eSATA
• 1 x eSATA port (back); reserved for local backup

Buttons
• Power, one touch auto video backup, reset

LCD Panel
• Mono-LCD display with backlight, Enter button, and Select button for configuration

Alarm Buzzer
• System warning

Form Factor
• Tower

Hardware Dimensions
• 261.1(D) x 188.5(W) x 261.1(H) mm
• 10.28(D) x 7.42(W) x 10.28(H) inch

Color Box Shipping Weight
• 8Kg (17.64 lb)

Operation Environment
• Temperature 0~40°C
• Humidity 0~95% R.H.

Power Supply
• Output: 250W, Input: 110-240V AC, 50/60 Hz, 5A

Power Consumption
• 71.54~76.39W Write/Read (RAID5)
• 57.69~60.01W Write/Read (Single)

Secure Design
• K-Lock security slot for theft prevention

VGA
• Reserved VGA interface for maintenance

RS-232
• RS-232 x1

Fan
• 12cm quiet cooling fan (12V DC)

Certification
• CE, FCC, VCCI, BSMI

Software Specifications

Video
Display Mode:
◆ 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20-channel display, Picture-in-Picture mode, sequential mode
Multi-server Monitoring:
◆ Up to 120 channels monitoring from multiple QNAP NVRs
Recording Connection:
◆ **VioStor-5012:** Up to 12 channels
◆ **VioStor-5020:** Up to 20 channels
Compression Format:
◆ M-JPEG and MPEG-4 (depend on the IP camera)
Video Setting:
◆ Resolution, quality, frame rate
E-map:
◆ Upload E-map (JPEG)

Recording
Recording Mode:
◆ Continuous/ manual/ schedule recording
◆ Alarm recording/ multiple alarm recording schedules
* Up to 15 schedules are supported for each camera
Buffer Storage for Alarm Images (before & after events):
◆ Pre-recording: up to 300 sec; post–recording: up to 300 sec (total 600 sec/ 10 min)
Recording Performance:
◆ **VioStor-5012:** Up to 360 fps at D1 or VGA
◆ **VioStor-5020:** Up to 600 fps at D1 or VGA
* Real performance may vary in different environment
Megapixel Recording: High performance megapixel recording (up to 8 megapixels)
File format: AVI (can be played by Windows Media Player)

Utility Software
QNAP Finder: Discovery and quick setup for NVR
VioStor Player: Play the recording files on your Windows computer easily

Playback
Playback Channel:
◆ Max 4-channel playback at the same time
Playback Mode:
◆ Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control
Search Mode:
◆ By date & time and recording type
Playback Enhancement:
◆ Full screen display, video snapshot, digital zoom
Download:
◆ Download recordings via the web

Storage
Disk Management:
◆ Single disk, RAID 0, RAID 1, RAID 5, RAID 5+ Hot spare, RAID 6, RAID 6+ Hot spare, and JBOD/ Linear
◆ Online RAID Capacity Expansion/ Online RAID Level Migration
◆ HDD S.M.A.R.T. / Bad blocks scan
Services: Web File Manager, FTP, SMB/CIFS

LCD Panel
◆ PC-less RAID configuration for the first time setup
◆ Checks or configures the IP settings, physical disk info, system info, shut down or reboot the NVR etc.

Network
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-Lan

Security
Operation System: Linux-embedded system
On-line Users List: Record of the users currently logged on and previously logged on to the NVR
Host Access Control: Specify the connections to be allowed and denied to access NVR
Authority management: The right to monitor and playback each camera can be separately defined for each user (max 32)
Alert Notification: Buzzer, e-mail alert, event notification
UPS: APC / MGE (USB type UPS)
Event Logs: Detailed record of event logs

Client PC Requirement
(Suggested system requirement for better video performance)
CPU:
◆ Motion JPEG format (up to 20 channels):
Pentium 4 CPU 2.8 GHz or above
◆ MPEG-4 format (up to 20 channels):
Dual core CPU 2.8 GHz or above
For higher surveillance performance, please select more advanced PC models.
Memory: 1GB or above
Operation System: Microsoft Windows XP/ Vista® (32-bit)
Web Browser: Internet Explorer 6.0 or later
Network Interface: 10/100 Mbps or above
View Resolution: Suggested 1024 x 768 pixels or above

Language Support
English/ French/ German/ Italian/ Japanese/ Spanish/ Simplified Chinese/ Traditional Chinese/ Danish/ Dutch/ Finnish/ Korean/ Norwegian/ Polish/ Portuguese/ Russian/ Swedish

* Designs and specifications are subject to change without notice.

Package Contents

VioStor NVR

CD-ROM

Ethernet cable x 2

Quick Installation Guide

Power cord

Flat head screw x 20

Hard disk lock

Quick Installation Guide (RAID configuration)

Brand	Models	VioStor-5012	VioStor-5020
		12 channels	20 channels
AXIS	206M/ 207/ 207W/ 207M/ 207MW/ 209FD/ 209FD/ 210/ 210A/ 211A/ 211/ 211W/ 211M/ 212/ 213/ 214/ 215/ 216FD/ 216MFD/ 221/ 223M/ 225FD/ 231/ 232/ 233D/ 241Q/ 241QA/ 241S/ 241SA/ 243SA/ 247S/ P3301/ Q7401/ M1011/ M1011-W/ M1031-W	●	●
ACTi	ACM-123X/ ACM-1311/ ACM-143X/ ACM-3001/ ACM-3211/ ACM-3311/ ACM-34XX/ ACM-4100/ ACM-4200/ ACM-5001/ ACM-56XX/ ACM-5711/ ACM-7411/ ACM-8211/ ACM-8511/ CAM-5XXX/ CAM-6XXX/ ACD-2100/ ACD-2200/ SED-2140/ SED-2120	●	●
Arecont	AV 1300M/ AV 2100M/ AV 3130/ AV 3100/ AV 5100M/ AV 8180	●	●
Canon	VB-C300/ VB-C300B/ VB-C50iR/ VB-C50i/ VB-C50FSi/ VB-C50Fi	●	●
D-Link	DCS-2120/ DCS-3220/ DCS-3220(G)/ DCS-3420/ DCS-5220/ DCS-5300/ DCS-5300G/ DCS-6620/ DCS-6620G/ DCS-2121/ DCS-900(A)/ DCS-900(B)/ DCS-900(B2)	●	●
EDIMAX	IC-1510/ IC-3010(WG)/ IC-7000PT	●	●
ELMO	PTC-402C-IP	●	●
EtroVision	EV3130/ EV3131/ EV3131A/ EV3830/ EV6130/ EV6332/ EV6530	●	●
GANZ	ZN-D2024/ ZN-PT304L/ ZN-PT304WL/ ZN-YH305/ ZV-S306	●	●
iPUX	ICS 1001/ ICS 1011/ ICS 1003/ ICS 1013/ ICS 1300/ ICS 1310/ ICS 130A/ ICS 131A	●	●
IQeye	510/ 511/ 701/ 702/ 703/ 705/ 710D/ 711D/ 712D/ 752/ 753/ 755/ 802/ 803/ 805/ 811/ 852/ 853/ 855	●	●
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	●	●
MOBOTIX	D12D-IT/ D12D-Sec/ D22M-Basic/ D22M-IT/ D22M-Sec/ M12D-IT/ M12D-Sec/ M12M-IT/ M12M-Sec/ M12M-Web/ M22M-IT/ M22M-Night/ M22M-Sec/ Q22M-Basic/ Q22M-Sec	●	●
Panasonic	BB-HCM580/ BB-HCM581/ BB-HCM527/ BB-HCM531/ BB-HCM511/ BB-HCM515/ BB-HCM547/ BL-C1/ BL-C10/ BL-C111/ BL-C131/ BL-C20/ BL-C30/ BL-C30K1/ BB-HCM481/ BB-HCM403/ BB-HCM381/ BB-HCM371/ BB-HCM331/ BB-HCM311/ BB-HCM110/ BB-HCM100/ KX-HCM280/ KX-HCM180/ BL-C11/ BL-C31/ NF282/ NF284/ NP1000/ NP1004/ NP244/ NS202(A)/ NW484/ WV-NF302/ WV-NP304/ WV-NP304V	●	●
SANYO	VCC-P450/ VCC-P470/ VCC-PT490/ VCC-PT500/ VCC-9800	●	●
SONY	SNC-CS10/ SNC-CS11/ SNC-CS20/ SNC-CS50/ SNC-CM120/ SNC-DF40/ SNC-DF50/ SNC-DF70/ SNC-DF80/ SNC-DS10/ SNC-DS60/ SNC-DM110/ SNC-DM160/ SNC-P1/ SNC-P5/ SNC-RX530/ SNC-RX550/ SNC-RX570/ SNC-RZ25/ SNC-RZ30/ SNC-RZ50/ SNC-Z20	●	●
TOSHIBA	IK-WB12/ IK-WB21	●	●
TRENDnet	TV-IP212/ TV-IP212W/ TV-IP312/ TV-IP312W/ TV-IP410/ TV-IP410W/ TV-IP422/ TV-IP422W	●	●
VIVOTEK	IP3112/ IP3122/ IP3111/ IP3121/ IP3132/ IP3135/ IP3137/ PT3112/ PT3122/ PT3117/ PT3127/ IP6112/ IP6122/ IP6117/ IP6127/ FD6112V/ FD6122V/ PZ6112/ PZ6122/ PZ6114/ PZ6124/ SD6112V/ SD6122V/ IP7131/ IP7132/ IP7133/ IP7134/ IP7135/ IP7137/ IP7138/ IP7139/ IP7142/ IP7151/ IP7152/ IZ7151/ PT7135/ PT7137/ PZ7151/ PZ7152/ SD7151/ FD7131/ FD7132/ FD7141/ VS 3102/ VS 3100P/ VS 7100	●	●
Y-CAM	Y-Cam White/ Y-Cam Black	●	●

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