VioStor Pro Series Comparison Chart

	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
Product Photo				
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-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

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