

JVC®

The Perfect Experience /

NETWORK VIDEO RECORDER VR-N1600

High-Performance 16-Channel Digital Recorder
for Large-Scale Surveillance System



Powered by Milestone



Major Features

- **Simple Operation**
All-in-one design and easy-to-use operations with VCR-like front panel controls including Jog/Shuttle
- **High-Quality Picture**
High frame rate of 160fps for recording, and 80fps for viewing and distribution
- **Milestone XProtect Enterprise Pre-installed**
Fully licensed for 16 cameras, no need to install additional software – quick and easy installation
- **Advanced Functions**
Full Milestone XProtect Enterprise display and search functionality
- **Superior Scalability**
NAS archive capability for high capacity recording
Open platform for easy integration with other devices
- **Advanced PTZ Control and Accuracy**
Accurate PTZ control to ensure secure and reliable monitoring for preset positions

Reliability, Usability, Scalability – Count on All the Elements to Boost Your Security to New Levels

VR-N1600 is a high-performance 16-channel network video recorder that can be used in a large-scale surveillance system. It's an ideal solution for users who want advanced, more versatile network monitoring and enhanced system reliability.

Milestone XProtect Enterprise, which holds a major share in this market, is pre-installed, so advanced functions are ready for your commands from day one and all basic operations are possible on this VCR-like front panel. All-in-one design including



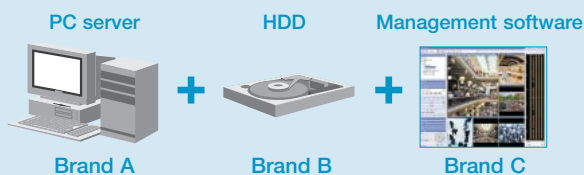
viewing, recording and playback, assures high reliability and easy maintenance. More important, it features open platform design for systems scalability, and supports high-capacity recording with NAS and secured data backup with RAID.



All-in-one solution

The VR-N1600 offers an all-in-one solution that includes live viewing, recording and playback in one unit. There's no need for troublesome system dividing for system maintenance, greatly reducing the burden on administrators.

Build-up system with different brands' devices



- Necessary to contact different companies in case of maintenance or trouble.

JVC VR-N1600



All-in-One Solution

- Contact JVC only. JVC's one-year warranty covers both hardware and software.

● VCR-Like Front Panel Design and Operations

Various functions can be operated by the front panel controls. You can control the network surveillance system with simple Turn Key operation as if you are operating a VCR.



Power Switch

Live/Playback Selection
Viewing images can be switched between live view and playback view.

Various Camera Controls
Camera selection, PTZ controls, Preset position selection, Search, Zoom-in, Zoom-out, etc.

Playback/Recording Controls
Play/stop of recorded images, Recording, Key Lock/Unlock, Image search, etc.

Jog/Shuttle Dial
Forward/reverse playback, single-step forward/reverse, Playback speed and direction setting, etc.

Open Architecture for Easy Integration

The VR-N1600 is open platform to make it easy to integrate with an external system such as access control systems, POS systems, or ATM systems. It also supports not only JVC IP cameras but also dedicated third party cameras.

High-capacity recording capability

Hard disk drive can be upgraded up to 5TB and data recording on NAS is also available. In addition, its unique archive function effectively utilizes disk space for efficient data storage. (Archive Function: Video data recorded on the database is transferred and stored on the allocated space of the HDD as required. This enables HDD capacity to be used more efficiently than accumulating data on the database. Archived data can be played back seamlessly, just as normal data would, without stopping the network system.)

Analog camera support

In conjunction with a video server such as the VN-E4 Network Encoder, analog cameras can be incorporated into the system the same as IP cameras.

Advanced PTZ Control and Accuracy

With JVC's PTZ Camera VN-C625U/C655U, preset positions are stored on the camera unit. So positioning accuracy offered originally by the camera is maintained even if you engage PTZ control via the VR-N1600. Secure monitoring for preset positions is assured.

Other features

- Improved usability with mouse operation via USB interface
- Data export capability for USB memory and external CD-R drive (optional)
- RAID function for secured data backup (Hardware RAID1 supported. Mirroring is possible by upgrading internal HDD. Hot swapping is not supported.)
- PTZ camera control is possible on operation screen.
- Recording, distribution and export of audio source are possible with 2ch audio interface.
- Stable performance is assured with dual network ports for the camera network and the client network.

● Recording Time Schedule

- 16 channel recording without audio recording at 500GB pre-installed HDD [Hour]

Image Size	Data/Image (kB)	Frame rate per second (each camera)					
		10	5	3	1	0.5	0.2
VGA	32	22	43	72	223	470	1211
	24	30	60	100	305	635	1623
	20	37	73	122	371	767	1953
	16	46	93	155	470	964	2447
QVGA	27	26	53	88	269	562	1440
	15	50	99	166	503	1030	2612
	8	96	192	319	964	1953	4918
	5	155	310	517	1557	3139	7883

The actual recording time varies depending on the camera settings, input image contents and condition of the hard disk. Use this table as a guide to the recording time.

● Supported cameras and firmware

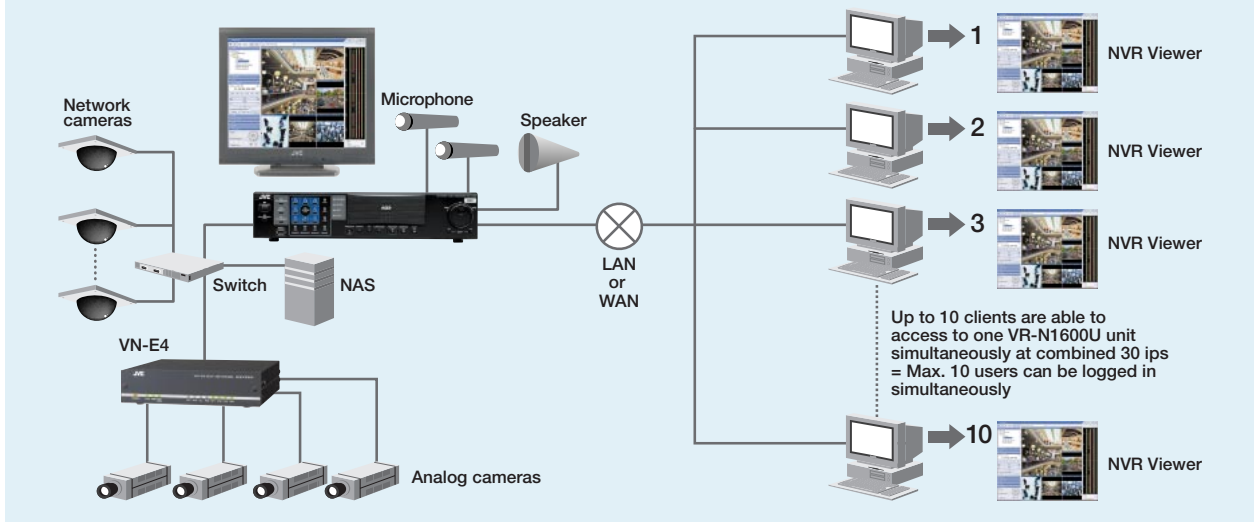
Brand	Model	Firmware
JVC	VN-C20U	Ver. 1.0+
	VN-C215V4U/VP4U	Ver. 1.0+
	VN-C625U	Ver. 2.06+
	VN-C655U(B)	Ver. 2.07+
	VN-E4	Ver. 1.2+
VERINT	S1700	Ver. 4.22b build 28+
	S1704	Ver. 4.22b build 28+
	S1708_SSL	Ver. 4.22b build 28+
	S1900	Ver. 4.4j build 100+
	S2700e	Ver. 4.4h build 600+
	S2700e/VR	Ver. 4.4h build 600+
AXIS	206	Ver. 4.21 and 4.4
	207	Ver. 4.22
	211/211A	Ver. 4.3
	216FD	Ver. 4.34
	225FD	Ver. 4.31
	207W	Ver. 4.40
	212	Ver. 4.35
	213	Ver. 4.30
	214	Ver. 4.33

AXIS: This product is using Axis HTTP version 2.0.

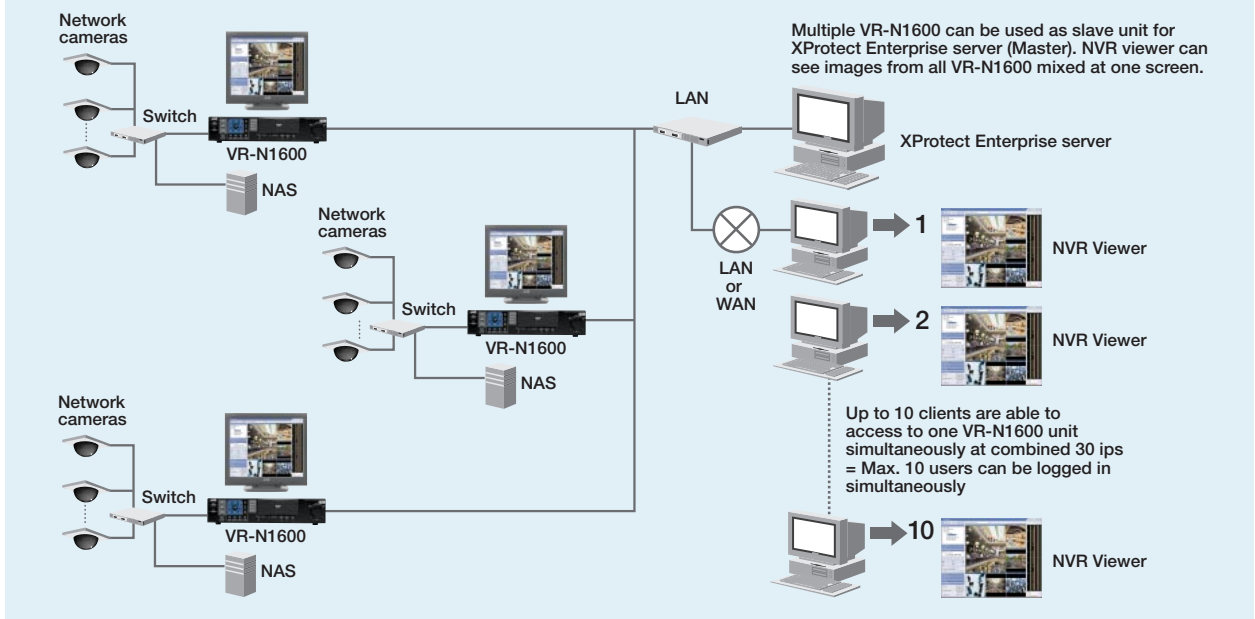
- The use of Axis HTTP version 2.0 has been approved by Axis Communications AB.

A Variety of System Configurations

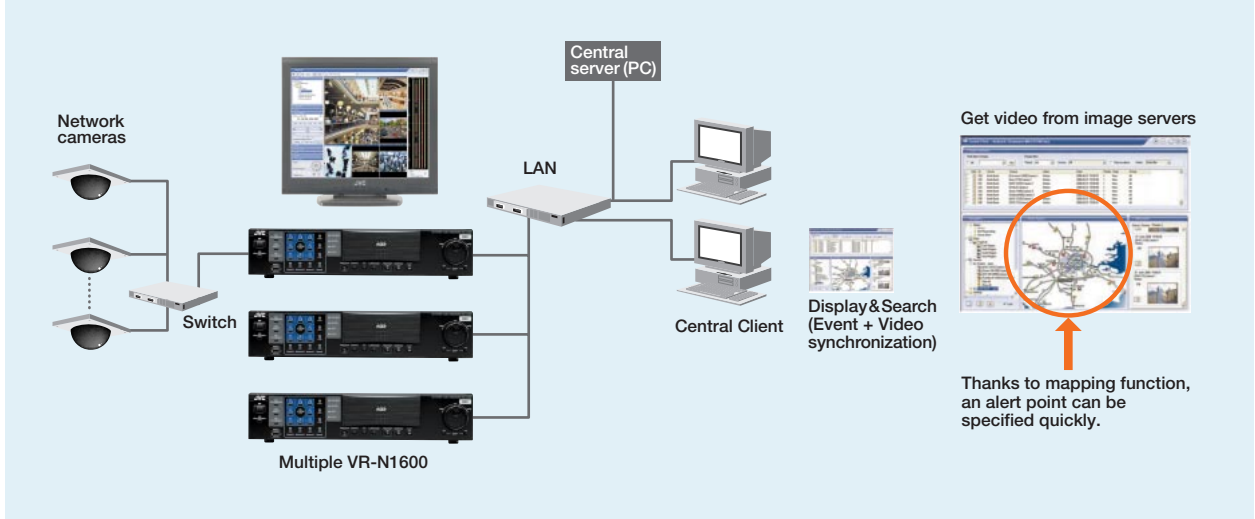
Basic system configuration



Expanded system with optional Milestone XProtect Enterprise server



Total surveillance application with optional Milestone Central Client software



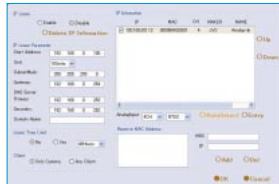
High-Quality Monitoring and Milestone XProtect Enterprise Versatile Capabilities



With the VR-N1600, Milestone XProtect Enterprise software and 16-channel camera license are pre-installed. You can use a variety of advanced functions from day one with no additional investment.

Easy Setup

The VR-N1600's sophisticated setup menu makes network settings so simple. It covers all the complicated settings including automatic camera detection and IP address assignment.



Monitoring with high-quality pictures

The VR-N1600 assures high quality monitoring which is rather difficult for network systems. Its picture quality offers recording of 160fps, display of 80fps and distribution of 80iops (VGA) images.

Advanced Data Export Functions

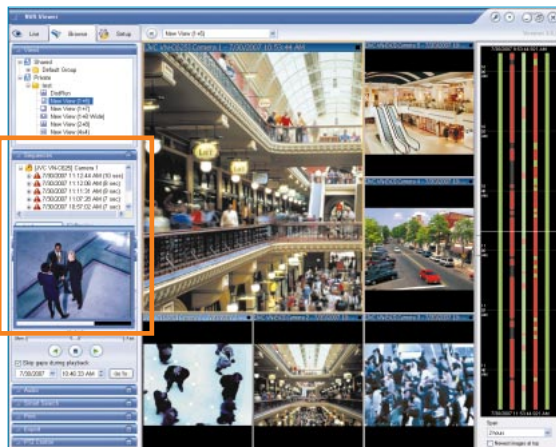
Recorded data can be exported in AVI or JPEG format. The VR-N1600 also features an export function with advanced encryption using the original format as well as password protection to prevent unauthorized viewing.

Versatile Search Functions

With pre-installed Milestone XProtect Enterprise, advanced search functions are available.

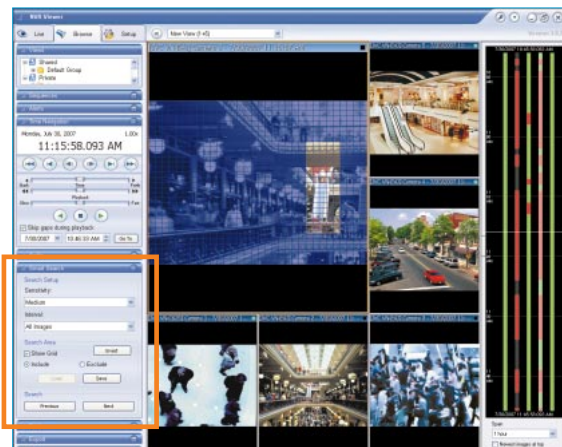
Sequence Search

Only the portion with any changes before and after the designated time and date can be listed and previewed.



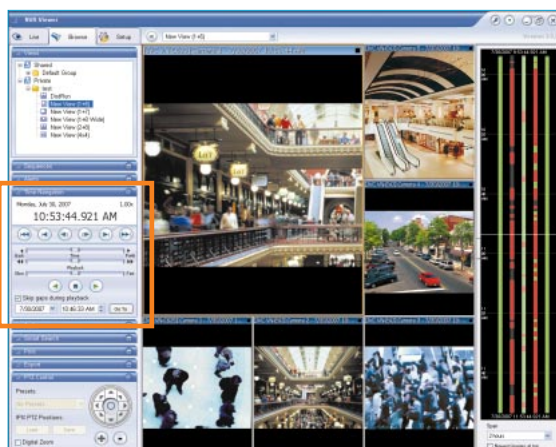
Smart Search

Motion detection for recorded images is available. You can quickly find desired scenes among long time recordings.



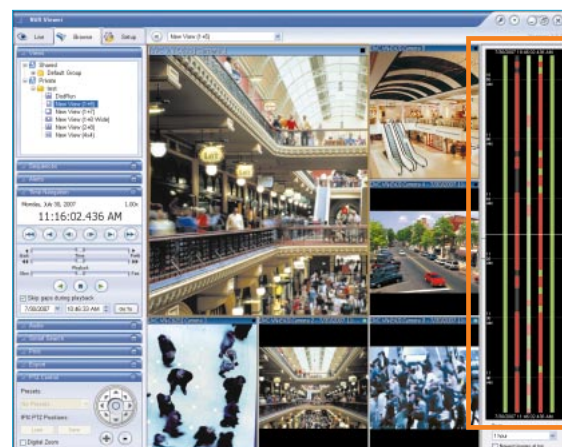
Time Navigation

Playback or fast-forward/rewind of recorded images for designated time and date is possible. Simultaneous control of all cameras is possible.



Timeline Browser

Existence or non-existence of recordings for all cameras and motion detection archives are displayed in different colors to enable you to check it in one glance. By dragging the timeline directly, you can fast-forward or rewind images of all cameras simultaneously.



● Specifications

Recording format	Motion JPEG/MPEG4
Camera channel	16
Frame rate (VGA)	Recording/Display/Distribution: 160/80/80
CPU and memory	Core 2 DUO E4300 (1.80GHz), RAM: 512MB
HDD capacity	500GB
Additional HDD	500GB (internal), max. 4TB (USB external)
NAS	Yes
Mirroring	Internal HDD
Export function	Export media: USB memory or CD-R/RW (USB external) Export format: AVI (video), JPEG (image), database (internal format)
Recording function	Alarm recording, Scheduled recording, Manual recording
Playback function	Normal/Slow/Fast playback, fast forward and reverse, Frame-by-frame playback
Search function	Time/Date search, Alarm search, Motion detection on playback images
Security	Protected by user name and password
Language support	Main menu: English Application: English, German, French, Italian, Spanish
Supported protocol	HTTP, SMTP (client), TCP, DHCP (client/IP lease), ARP, DNS (client), NTP
Minimum requirements for remote PC	OS: Windows 2000 Professional, Windows 2000 Server and Advanced Server, Windows XP Professional (32 or 64-bit), Windows Server 2003 (32 or 64-bit) CPU: Pentium 4 2.4GHz or higher (Xeon recommended) RAM: 512MB (1GB recommended) Network: At least 10/100 Ethernet NIC Graphic card: AGP or PCI-Express, 1,024x768 (1,280x1,024 recommended), more than 16-bit color HDD capacity for installation: 50MB Software: .NET Framework 2.0 and DirectX 9.0 or later, Microsoft Internet Explorer 6.0 or later
Remote PC operation	Live viewing, Playback of recording images, Camera control, Data export
Interfaces	LAN1: 1000BASE-T, 100BASE-T, 10BASE-T LAN2: 100BASE-T, 10BASE-T Serial: USB2.0 x 5 Display output: D-sub 15-pin, 1,600x1,200 / 1,280x1,024 / 1,280x720 / 1,024x768 Camera control: D-sub RS-485 (for analog PTZ control) Audio in: Analog RCA x 2 Audio out: Analog RCA x 1 Alarm terminal: Alarm in x 8, Emergency, Alarm reset in, EXT REC in, OPE on/off, Alarm out, Warning out, REC tally, Option out x 2, Common x 3
Power supply	VR-N1600U: AC 120V VR-N1600E: AC 220-240V
Power consumption	VR-N1600U: Max. 1.2A (120V) VR-N1600E: Max. 0.8A (220-240V)
Operating temperature	5°C – 40°C (41°F – 104°F)
Dimensions (W x H x D)	420mm x 88mm x 350mm (16-5/8" x 3-1/2" x 14-5/8")
Weight	7.7kg (17lbs) excluding power cord
Accessories	Startup guide, CD-ROM (Instructions), Power cord(s), Rack mount brackets, HDD brackets

● Peripheral Equipment

- JVC External HDD Unit
500GB, 1TB, 2TB model selectable



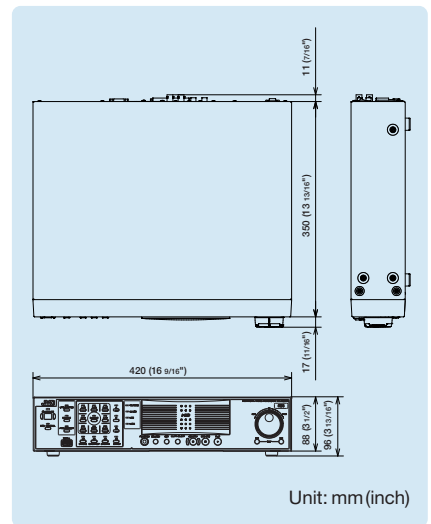
VR-D0

- USB Joystick (non JVC product)



HFX1400

● Dimensions



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