JVC®
The Perfect Experience

MPEG-4 NETWORK ENCODER/DECODER
DM-NC40

[STREAMING] [TELECONFERENCING] [SECURITY]

Stand-alone, real-time, MPEG-4 encoder/decoder compatible with major players and platforms

QuickTime™ Player

RealOne™ Player

JVC DM-NC40 NETWORK CODEC

ENCODE | DECODE | HOLD | IN1 IN2 | POWER

◄ ► ▼ ▲ CF PLAY STOP HOLD SELECT PinP

MPEG-4 Encoding
54kbps ⇔ 2Mbps

QuickTime

real①ne

DM-NC40U (NTSC) MPEG-4 Network Encoder/Decoder
DM-NC40E (PAL)   MPEG-4 Network Encoder/Decoder

Real-time MPEG-4 video and audio transmission and reception.

JVC's MPEG-4 codec allows you to transmit and simultaneously receive MPEG-4 video and audio, in real-time, over an IP network. Flexible and versatile, the DM-NC40 is ideal for a wide range of applications, including streaming and teleconferencing.
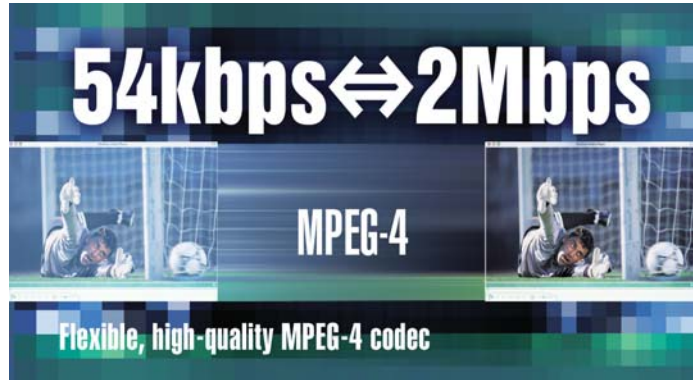
ADVANCED FEATURES

Flexible, high-quality MPEG-4 codec
- The DM-NC40 is a high quality video and audio codec with bit rates up to 2 Mbps, standard resolution up to 352x240* and frame rates up to 30 fps.**

  * DM-NC40U: 352 x 240/DM-NC40E: 352 x 288
  ** DM-NC40U: 30fps/DM-NC40E: 25fps

Built in decoder — standard!
- DM-NC40's built-in decoder allows you to use the same streaming device for bi-directional teleconferencing and interactive security applications. Connect to a monitor, flat-panel display, or projector for viewing.
  You can connect external devices. Couple this with the bi-directional data path and trigger outputs, you can control video switchers, pan-tilt-zoom cameras.

ISMA (Internet Streaming Media Alliance) streaming
- ISMA compliance assures operation with all devices that meet this new industry standard, including major players and platforms.

  * ISMA compliant plug-in may be required.

QuickTime™ Player   RealOne™ Player

JPEG Image Recording*
- Record high resolution (704 x 480**) motion JPEG images to CompactFlash card. Trigger recording from any of the four alarm inputs or from the front panel. A built-in buffer even allows pre-alarm recording.

  * Available in Camera Mode
  ** DM-NC40U: 704 x 480, 640 x 480/DM-NC40E: 704 x 576

Decode and capture software for DM-NC40
- In addition to using most popular media players, software available from JVC allows you to display and capture the streaming video from the DM-NC40 on your PC.

Unicast and multicast transmission allows unlimited users to "tune-in" to a single stream, virtually eliminating LAN congestion
- Reach more clients reflecting the video stream through a server. Compatible with major servers for "reflecting" your unicast or multicast stream. Reach more people and increase flexibility.

  * Multicast transmission requires a multicast-ready network (IGMPv2).

Easy operation & maintenance
- A built-in Web Server allows easy system configuration using your favorite Web Browser over an IP network. In addition, Telnet or API setup is available.
- Once configured using any computer connected to a network, the DM-NC40 does not require any further intervention. Just connect to a network, add audio, video and power, and you're streaming!
- Upgradable — Use the DM-NC40's built-in CompactFlash slot for upgrades in the field.

Alarm input / TTL level output
- Four alarm inputs can trigger video capture or automatic remote connections. Using a Web Browser, remotely control up to eight, 5-volt trigger outputs.
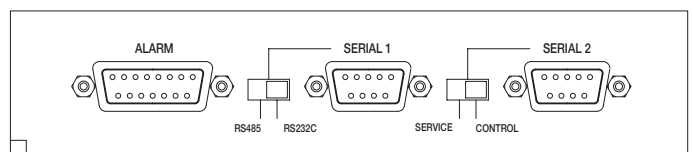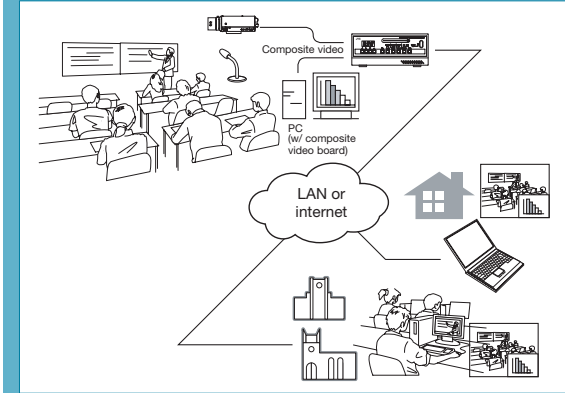
RS232/485 data path
- Two transparent, bi-directional RS232/485 data paths for remote control of external equipment.

With DM-NC40's flexibility, streaming live or taped events is easy.

Video Streaming
- Distance learning — reach students anywhere in the world
- Training without travel saves time and money
- Stream live events, such as meetings, religious services, sporting events, etc.
- Stream recorded events - stream from any NTSC or PAL video source
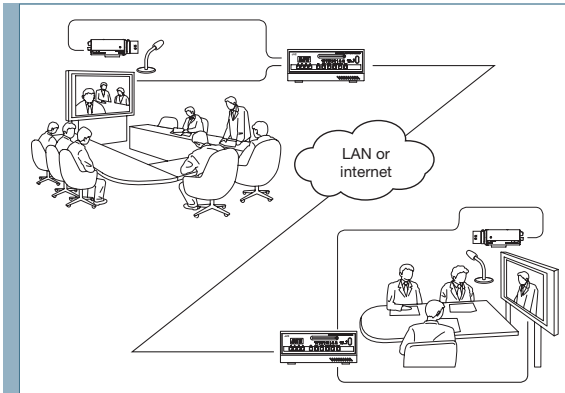
Related Equipment

GY-DV300 (DV Camcorder)   **AV-P950 (Visual Presenter)**   **BR-DV3000 (DV Recorder)**

Teleconferencing
- Portable teleconferencing system, easy to set up and use
- Use standard NTSC (PAL) cameras and displays
- No PC required
- Use bi-directional data path for remote camera control or switching
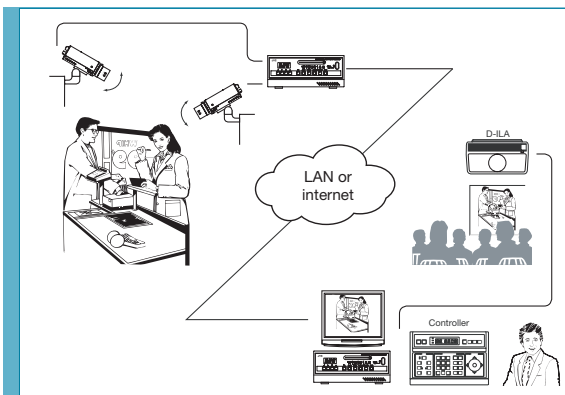
Related Equipment

GD-V502 (Plasma Display)   **LM-15G (LCD Monitor)**   **Pan-Tilt Unit & Control**

Remote Control/Security
- Two bi-directional data paths for RS232/485 controllable devices
- Connect to video switchers, Pan/Tilt/Zoom cameras, VCR's, etc.
- Eight 5-volt triggers controlled from a Web Browser
- Alarm Trigger for Image Capturing and Automatic Connection
- Add a VCR for achiving

Related Equipment

KY-F560 (System Camera)   **BR-DV6000 (DV Recorder)**   **DLA-SX21 (D-ILA Projector)**
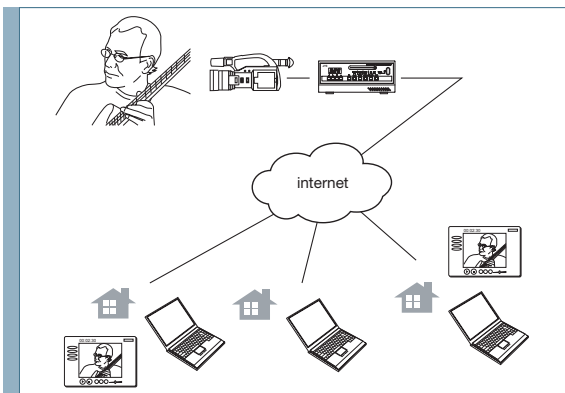
Unicast and Multicast
- Simultaneous unicast and multicast operation
- Unicast over the Internet to anywhere in the world
- Use any major player on any major platform
- Multicasting over your LAN saves bandwidth
- Reflect through a server for wide distribution

Related Equipment

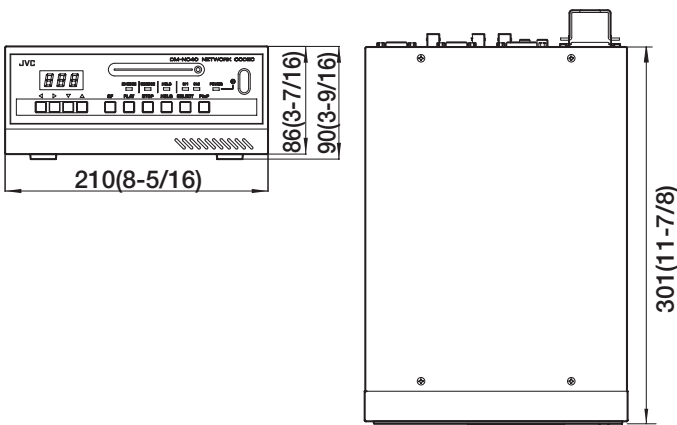**GY-DV5000 (DV Camcorder)**   **QuickTime™ Player**   **RealOne™ Player**

SPECIFICATIONS

	DM-NC40U (NTSC)/DM-NC40E (PAL)
Interface	
Video	Input: Analog composite; BNC x 2 Loop-through output: analog composite; BNC x 2 Output: Analog composite; BNC x 1
Audio	Input: Analog, line level, unbalanced; RCA x 2 (L/R) Output: Analog, line level, unbalanced; RCA x 1
Network interface	10BaseT/100BaseTX; RJ-45 x 1
Alarm input	4-input — D-sub 15P x 1
TTL level output	8-output
Local image recording	CF Type 1 interface for JPEG image capture on CompactFlash card
Front panel controls	Power, cursor, input switching, PinP switching, recording (CF), play, stop, hold
Video	
Compression format	MPEG-4 ASP/SP (ISMA/ISO), JPEG (ISO)
Frame size	DM-NC40U/MPEG-4: 352 x 240, 176 x 120, JPEG: 704 x 480 MPEG-4: 320 x 240, 160 x 120, JPEG: 640 x 480 DM-NC40E/MPEG-4: 352 x 288, 176 x 144, JPEG: 704 x 576
Frame rate	DM-NC40U/MPEG-4: 30fps (maximum value varies depending on the frame size and bit rate) DM-NC40E/MPEG-4: 25fps (maximum value varies depending on the frame size and bit rate)
Bit rate	256k – 2 Mbps (ISMA), 54k – 2 Mbps (teleconference)
Delay	Within approx. 0.3 sec. (between DM-NC40s: Network delay excluded)
Audio	
Compression format	AAC-LC stereo (ISMA), G.726 monaural (teleconference)
Bit rate	96 - 128 kbps (ISMA), 16 - 32 kbps (teleconerence)
Sampling rate	32 kHz (ISMA), 8 kHz (teleconference)
Stream	
Data protocol	RTP (unicast/multicast), HTTP (JPEG)
Control protocol	RTSP, HTTP, IGMPv2, Telnet
External equipment control	
Serial port	Control via RS-232C/RS-485 (data pass-through)
Setting	
Web server	Set with Web browser. (In addition to the Web browser, setting with Telnet or terminal is available.)
General	
Power requirements	DM-NC40U: 120 V AC, 50/60 Hz DM-NC40E: 220-240 V AC, 50/60 Hz
Power consumption	0.4 A
Operating temperature	0°C to 40°C/32°F to 104°F
Weight	Approx. 3.0 kg/6.7 lbs.

OPERATING ENVIRONMENT

The following operating environment is recommended as of Dec 2003.

Personal computer for viewing streaming video
CPU: Pentium III, 700 MHz or higher
　　　Power PC G3 500MHz or higher
OS: Windows XP Home Edition, Windows XP Professional, Windows 2000
　　　Mac OS 8.6 - 9.2.2, Mac OS X 10.0-10.3
Memory: 256MB or higher
Monitor: 640x480 or higher
(The above CPU spec is required for viewing image with Max. frame rate.)

Web browser
The DM-NC40 is configured using a standard web browser.
- Internet Explorer 6.0, Netscape 7.0 (PC)
- Safari 1.0, Internet Explorer 5.0 (Mac)

Player software
- Apple QuickTime 6.x (PC/Mac)
- Realnetworks RealOne player* (PC only)
  Free plug-ins required for ISMA compliance.
- Philips Platform4 PC player (PC only)
Above players are confirmed in MPEG-4 SP mode.

CompactFlash cards usable with the DM-NC40
- Only TYPE 1 cards can be used.
- SanDisk Corporation
  128MB (SDCFH-128-xxx)
  256MB (SDCFH-256-xxx)
  512MB (SDCFH-512-xxx)

DIMENSIONS

unit: mm (inches)

210(8-5/16) · 86(3-7/16) · 90(3-9/16) · 301(11-7/8)

BIT RATE

ISMA Server Mode

Bit rate (kbps)		54	64	76	91	108	128	160	192	224	256	288	320	352	384	424	460	512	640	768	1000	1200	1500	1700	2000
Frame rate (fps)	H	—	—	—	—	—	—	—	—	—	6	6	10	15	15	15	15	30	30	30	30	30	30	30	30
	M	—	—	—	—	—	—	—	—	—	5	5	6	6	10	10	10	15	15	15	15	15	15	15	15
	L	—	—	—	—	—	—	—	—	—	3	3	5	6	6	6	6	10	10	10	10	10	10	10	10
Audio rate (bps)		—									96k									128k					

Camera Mode, Monitor Mode, and Teleconference Mode

Bit rate (kbps)		54	64	76	91	108	128	160	192	224	256	288	320	352	384	424	460	512	640	768	1000	1200	1500	1700	2000
Frame rate (fps)	H	3	3	3	6	6	6	6	15	15	15	15	15	15	15	30	30	30	30	30	30	30	30	30	30
	M	2	2	2	5	5	5	5	10	10	10	10	10	10	10	15	15	15	15	15	15	15	15	15	15
	L	1	1	1	3	3	3	3	6	6	6	6	6	6	6	10	10	10	10	10	10	10	10	10	10
Audio rate (bps)		16k										32k													

*In the table above, NTSC frame rates are shown.

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* RealOne is a registered trademark of RealNetworks, Inc.

DISTRIBUTED BY

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