JVC®

The Perfect Experience

ProHD

720p/24, 30, 60

HDV™

HDV 720p

GY-HD250U Studio and Field Production System

Two In One — Studio and ENG, HD or SD Experience Total HD Versatility with the GY-HD250U

JVC's new GY-HD250U provides an affordable and intelligent upgrade to full HD capability, making it ideal for both studio and ENG applications. With full-raster progressive HD imaging and HD/SD SDI output in both 720P and 1080i, the GY-HD250U delivers outstanding high definition performance, while providing a backward compatible design that lets you connect with your existing system with no need for cable or other upgrades. You can build an economical HD or SD studio system suitable for a wide range of professional and industrial applications, including sports, concerts and other events. Ergonomically designed to be systemized for both the road and in the studio, ProHD camcorders feature a compact, shoulder mounted design that provides excellent mobility with minimal fatigue during extended shooting. JVC's GY-HD250U — the optimum choice for the new era of Professional Full HD imaging.

GY-HD250U Key Features:

Interchangeable HD lenses
The GY-HD250U features a standard professional 1/3" bayonet lens mount that enables you to attach a wide variety of professional lenses. In addition to the standard detachable 16x servo Fujinon lens, an extensive selection of optional lenses are available, including an 18x Fujinon high-definition zoom lens, 13x (3.5 mm) wide angle zoom lens, 17x Fujinon zoom lenses in both zoom and motorized versions, 20x Canon zoom lens, a wide angle converter for the standard 16x lens, and adapters that allow 1/2" and 2/3" bayonet mount lenses to be used. You can even attach PL mount film camera lenses on the GY-HD250U with the use of the HZ-CA13U Cine Optical PL Adapter.

Uncompressed progressive 720/60 live signal output
The GY-HD250U can capture and output both digital and analog high quality HD signals at 60 progressive frames per second, making it ideal for live broadcasting. The uncompressed full-resolution signal in either 720p or converted 1080/60i can be output via the standard HD-SDI with embedded audio, as well as analog component terminals, providing an ideal feed to a video server, HD switcher or microwave link.

3-CCD camera system with 720p HD CCDs
The GY-HD250U uses three 1/3" high-definition CCD image sensors. Each array has a resolution of 1280 x720 full-raster square pixels using a micro lens system, providing optimum quality of the captured images. Other advantages include state of the art circuitry which virtually eliminates lag and image burn.

Built-in MPEG-2 Super Encoder
The GY-HD250U is capable of delivering a broadcast quality full raster 1280x720 60p encoded transport stream thanks to a high quality encoder built into the camera. At under 20Mbps, this stream can be transmitted via microwave without further encoding, making the camera ideal for live remote telecasts.

Genlock
The GY-HD250U camcorder has genlock input capability for synchronization and time code input/output, making multi-camera shooting possible. BB or VBS signals (SD) and HD tri-level sync signals (HD) are able to synchronize the camcorder to various components, including external audio recorders, other cameras and switchers. In addition, H Phase (HD/SD) and SC Phase (SD only) can also be adjusted.

Compact shoulder mount design
JVC's ProHD camcorders are the only professional HD camcorders to feature a compact shoulder mount design. As with the entire ProHD line, the GY-HD250U offers excellent mobility and enhanced usability, while its flexible range of ergonomic adjustments ensures that photographers, regardless of stature or physique, can operate the camcorder steadily and, above all, comfortably.

HDV and DV compatible
As the HDV format uses the same recording track pitch as Professional DV, the GY-HD250U can record either standard (SD) or high-definition (HD) signals according to your needs.

IEEE 1394 interface/HD-SDI output
The standard IEEE 1394 6-pin interface enables direct output of encoded signals to NLE systems, storage devices and microwave systems for capturing, editing, archiving and live transmission. There's also an HD-SDI (High-Definition Serial Digital Interface) connection that enables transmission of uncompressed digital HD signals via coaxial cable. Since the HD-SDI interface can frequently use existing SD-SDI cabling*, re-configuration of your existing SD studio system to HD production is simplified.

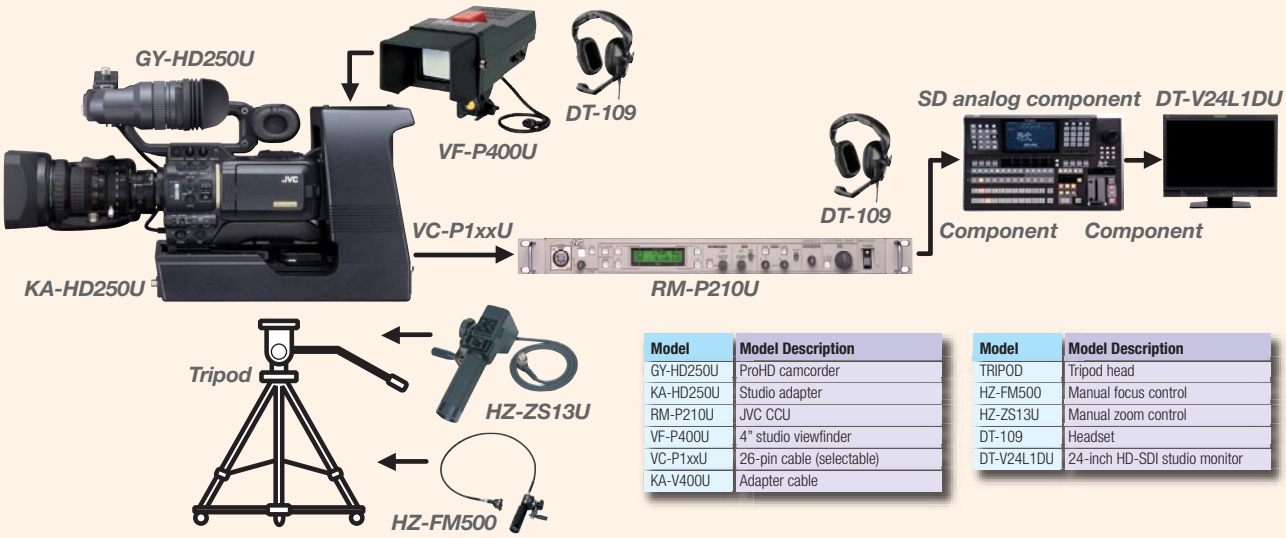
**NOTE: The gauge and length of the existing SD-SDI cabling will determine if it can accommodate the HD-SDI signal.*

- **Professional function and switch layout**
- **Detachable 230,000-pixel LCD color viewfinder**
- **3.5" LCD display panel**
- **Camera settings recorded on SD card**
- **Patented "FOCUS ASSIST" function**
- **Optional external HDD recorder: DR-HD100**
- **Multiple progressive frame rate recording: 24P, 25P, 30P, 50P, 60P**

GY-HD250U EFP/Studio System Configurations

JVC RM-P210U

Short Length Multicore Studio Configurations (SD System)



Model	Model Description
GY-HD250U	ProHD camcorder
KA-HD250U	Studio adapter
RM-P210U	JVC CCU
VF-P400U	4" studio viewfinder
VC-P1xxU	26-pin cable (selectable)
KA-V400U	Adapter cable

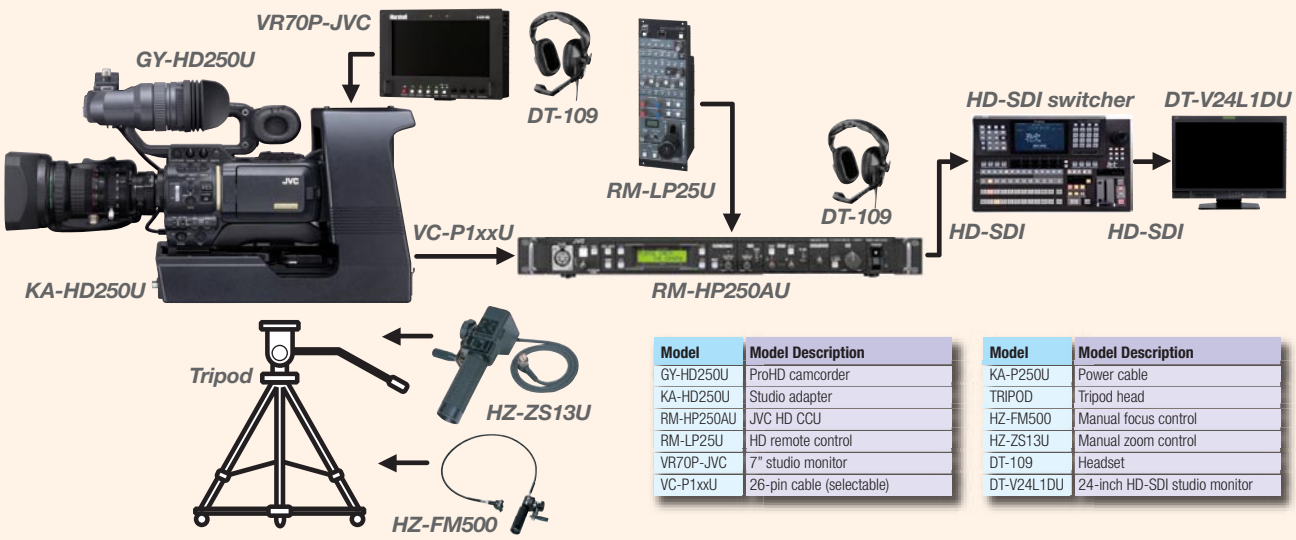
Model	Model Description
TRIPOD	Tripod head
HZ-FM500	Manual focus control
HZ-ZS13U	Manual zoom control
DT-109	Headset
DT-V24L1DU	24-inch HD-SDI studio monitor

Key features and user benefits:

- The GY-HD250U with KA-HD250 can be used to construct an economical SD studio system that produces both 16:9 or 4:3 SD images.
- Your investment is future proofed. Upgrading from an SD to an HD system will require changing the video interface only.
- If you're replacing a GY-DV550 camera system, you can continue to use the RM-P210 CCU, the 26-pin control cable, and the VF-P400 studio viewfinder.
- An existing 26-Pin Sony Multicore Cable can be used to connect RM-P210U and KA-HD250U.
- When required, you can use the GY-HD250U as an ENG camera by detaching it from the KA-HD250U.

JVC RM-HP250AU

Short Length Multi Core Studio Configurations (HD System)



Model	Model Description
GY-HD250U	ProHD camcorder
KA-HD250U	Studio adapter
RM-HP250AU	JVC HD CCU
RM-LP25U	HD remote control
VR70P-JVC	7" studio monitor
VC-P1xxU	26-pin cable (selectable)

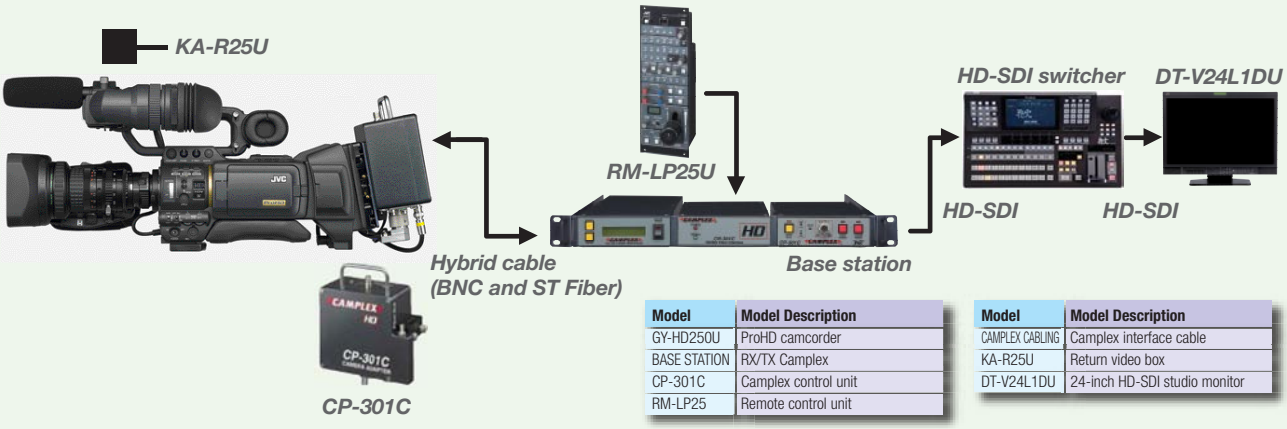
Model	Model Description
KA-P250U	Power cable
TRIPOD	Tripod head
HZ-FM500	Manual focus control
HZ-ZS13U	Manual zoom control
DT-109	Headset
DT-V24L1DU	24-inch HD-SDI studio monitor

Key features and user benefits:

- The GY-HD250U with KA-HD250 can be used to construct an economical HD studio system that produces stunning images.
- Both HD component and HD-SDI video are supported.
- The new RM-HP250AU enables you to connect an additional remote control to the studio system.
- A live 720P or 1080i signal can be output according to the requirements of your studio application.
- When replacing a GY-DV550-based studio system, you can continue to use the original 26-pin control cable and VF-P400 studio viewfinder.
- An existing 26-Pin Sony Multicore Cable can be used to connect RM-HP250AU and KA-HD250U.
- When required, you can use the GY-HD250U as an ENG camera.

Fiber Applications with Camplex CP-301C / with Telecast Copper Head

CAMPLEX
Medium-Length Fiber Cable EFP Configurations (HD System)

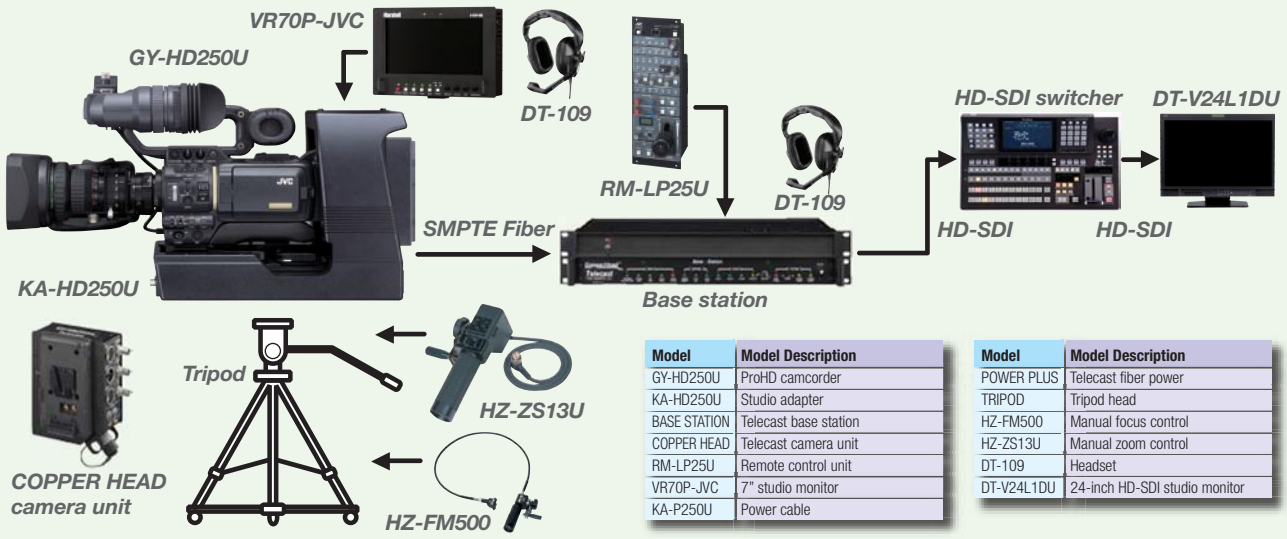


Model	Model Description
GY-HD250U	ProHD camcorder
BASE STATION	RX/TX Camplex
CP-301C	Camplex control unit
RM-LP25	Remote control unit

Model	Model Description
CAMPLEX CABLING	Camplex interface cable
KA-R25U	Return video box
DT-V24L1DU	24-inch HD-SDI studio monitor

Key features and user benefits:
- CAMPLEX's (CP-301C and CP-701C) CCUs provide an economical medium cable length (up to 900m) solution.
- CAMPLEX produces an economical hybrid cable that enables connected CCUs to interoperate with the GY-HD250U. Their system consists of a camera adapter mounted on the camera, a hybrid fiber cable and a base station.
- The camera adapter's light weight allows for shoulder-mounted operation with minimal operator fatigue.
- Return video capability is available with the KA-R25U adapter.

TELECAST FIBER
Long-Length Fiber Cable Studio Configurations (HD System)



Model	Model Description
GY-HD250U	ProHD camcorder
KA-HD250U	Studio adapter
BASE STATION	Telecast base station
COPPER HEAD	Telecast camera unit
RM-LP25U	Remote control unit
VR70P-JVC	7" studio monitor
KA-P250U	Power cable

Model	Model Description
POWER PLUS	Telecast fiber power
TRIPOD	Tripod head
HZ-FM500	Manual focus control
HZ-ZS13U	Manual zoom control
DT-109	Headset
DT-V24L1DU	24-inch HD-SDI studio monitor

Key features and user benefits:
- Sled-mounted configuration provides reliable long cable length CCU camera operation.
- Enables precise focusing and viewing of camera images on a high-definition studio monitor.
- Up to 150 watts of power is supplied to the camera and attached options.
- The GY-HD250U can be quickly detached from the Sled and used as an ENG camera.
- This configuration can be operated with cable lengths of up to 2K meters.

Specifications

GY-HD250U

[General]
Power requirement: DC 12 V
Power consumption: Approx. 24 W (in the Record mode)
Dimensions: 224 (W) x 243 (H) x 401 (D) mm
(8-13/16" x 9-1/2" x 15-3/4")
Mass: 3.7 kg (8.3 lbs.) (including viewfinder, microphone and tape)
Temperature:
- Operating: 0°C to 40°C (32°F to 104°F)
- Storage: -20°C to 60°C (-4F° to 140°F)

Humidity:
- Operating: 30% to 80% RH
- Storage: 85% RH or less

[Camera section]
Image pickup device: 1/3" interline-transfer CCDs
Color separation optical system: F1.4, 3-color separation prism
Number of pixels: Total: Approx. 1,110,000 pixels
Color bars: HD:SMPTE HDTV color bars
NTSC: SMPTE type color bars
Sync system: Internal sync (built-in SSG)
External sync:BB, VBS, signal or HD tri-sync signal
Lens mount: 1/3" bayonet system
ND filter: +1/4ND, +1/16ND
Gain: 0, 3, 6, 9, 12, 15, 18 dB, ALC
Electronic shutter:
- Standard value: 59.94 Hz
- Fixed values: 7.5-10,000 Hz, 11 steps (HDV HD60P/HDV HD30p;DV 60i mode: 6.25-10,000 Hz 11 steps (HDV HD50p/HDV HD25p: 6-10,000Hz, 12 steps (HDV HD24p/DV 24p)
- Variable scan: about 60 to 10,000Hz (HDV HD60p/HDV HD30p; DV60i/ about 50 to 10,000 Hz (HDV HD50p/HDV HD25p), about 24-10,000Hz (HDV 24p;DV24p)

[VTR section]
[Video]
Recording format: 720/24p, 720/25p, 720/30p, 720/50p, 720/60p, 480/24p, 480/60i
Video Format:
[HDV]
- Video signal recording format: HD1 format, 8-bit, 19.7 Mbps
- Compression: MPEG-2 video (profile & level: MP@H-14)
- Sampling frequencies: 720/60p: 74.25/1.001 MHz (4:2:2 component), 720/50p: 74.25 MHz (4:2:2 component), 1080/60i: 74.25/1.001 MHz (4:2:2 component, up conversion only), 1080/50i: 74.25 MHz (4:2:2 component, up conversion only)

[DV]
- Video signal recording format: DV format, 8-bit, 25 Mbps
- Compression: DV compression, 4:1:1 (NTSC)

Audio:
[HDV]
- Audio signal recording format: MPEG1 Audio Layer II

[DV]
- Audio signal recording format: 16-bit (locked audio), 48 kHz PCM for 2 channels or 12-bit, 32 kHz PCM for 4 channels
- Usable tape: Mini DV tape
- Tape speed: 18.812 mm/sec. (NTSC)
- Record/play time: 63 minutes (with an M-DV63PROHD tape)

[Connectors]
HD/SD SDI output: 0.8 V (p-p), 75 ohms, unbalanced (BNC)
HD-SDI: SMPTE292M/299M standard(embedded audio)
SD-SDI: SMPTE259M/272M standard(embedded audio)
Analog composite output: 1.0 V (p-p), 75 ohms, unbalanced (RCA)
Analog component output:
- Y: 1.0 V (p-p), 75 ohms, unbalanced (BNC)
- R-Y/B-Y: 0.7 V (p-p), 75 ohms, unbalanced (BNC)
- Analog composite input: 1.0 V (p-p), 75 ohms, unbalanced (BNC: switchable from Genlock input)
- Genlock input: 1.0 V (p-p), 75 ohms, unbalanced (BNC)

Audio inputs:
- Mic: -60 dBs, 3 kohms, balanced (XLR), +48 V output for phantom power supply
- Line: +4 dBs, 10 kohms, balanced (XLR)
- Audio outputs: -8 dBs, low impedance, unbalanced (RCA)
- Earphone jack: -18 dBs to -60 dBs, 8-ohm impedance (stereo mini-jack x2)
- Time code input: 1.0V-4.0V, high impedance, unbalanced (BNC: switchable from component output)
- Time code output: 1.0V-4.0V, low impedance, unbalanced (BNC: switchable from component output)
- IEEE1394 connector: 6-pin
- Remote connector: DIN 6-pin

[Accessories provided]
Viewfinder x 1, Lens (Th16x5.5BRM) x 1, Microphone x 1, SD memory card x 1, Tripod base x 1, V-wedge tripod adapter (KA-V100) x 1
(Lens is not supplied for GY-HD250CHU.)

RECORDING FORMATS & LIVE SIGNAL OUTPUTS

	Recording (Shooting)	Rec on tape	1394 out	Component/SDI out (EE out)	Composite out
HD (HDV)	720/60p	←	←	←	480/60i
	720/30p	←	←	720/60p	480/60i
	720/50p	←	←	←	576/50i
	720/25p	←	←	720/50p	576/50i
	720/24p	←	←	720/60p	480/60i
HD	720/60p	N/A	N/A	1080/60i	480/60i
	720/50p	N/A	N/A	1080/50i	576/50i
DV	480/60i	←	←	←	←
	480/60i (24p)	←	←	←	←

	Playback		1394 out	Component/SDI out			Composite out
HDV	720/60p		←	480/60i	1080/60i	720/60p	480/60i
	720/30p		←	↑	↑	↑	↑
	720/50p		←	576/50i	1080/50i	720/50p	576/50i
	720/25p		←	↑	↑	↑	↑
	720/24p		←	480/60i	1080/60i	720/60p	480/60i
DV	480/60i		←	←			←
	480/60i (24p)		←	←			←

	Recording (1394 in)	Rec on tape		Component/SDI out			Composite out
HDV	720/60p	←		480/60i	1080/60i	720/60p	480/60i
	720/30p	←		↑	↑	↑	↑
	720/50p	←		576/50i	1080/50i	720/50p	576/50i
	720/25p	←		↑	↑	↑	↑
	720/24p	←		480/60i	1080/60i	720/60p	480/60i
DV	480/60i	←		←			←
	480/60i (24p)	←		←			←

** Tape recorded in HDV 1080i format cannot be played back by GY-HD250 and BR-HD50.*

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■ Hachioji Business Center of Victor Company of Japan, Ltd. has received ISO14001 and ISO9001 Certifications under the global standard for environmental management.

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