



JVC IMAGING CAMERAS for Specialist Video and Still Image Applications

Supporting the transition from analogue to digital, JVC's versatile, high-performance

Display and capture high resolution still or moving pictures with excellent reproduction of detail and

Thanks to a newly developed Digital Signal Processor, high-quality moving pictures are captured and transferred without degradation in industrial, broadcast and medical applications.



KY-F560

1/2" 3-CCD video camera with optional SDI interface

A multi-purpose camera with analogue composite video and optional SDI (Serial Digital Interface) video output board. The KY-F560 can be controlled remotely on a pan & tilt head or integrated with special studio kits for use as a studio camera. The SDI video signal is a high quality digital signal used extensively in broadcast and industrial applications.



KY-F550

1/3" 3-CCD video camera with IEEE1394 (DV)

An ultra-compact, yet self-contained, camera that captures high quality video pictures via its built-in IEEE1394 (DV) interface. Still images for analysis can also be captured via either the DV interface or the RGB analogue output.



imaging cameras come with a wide range of interfaces for maximum flexibility.

colour - where quality is essential.

High resolution SXGA (1360 x 1024 pixels) digital images are captured with progressive scanning for high-level image processing and analysis in industrial and medical applications.



KY-F75

(IEEE1394)

1/2" 3-CCD progressive scan camera with IIDC interface

Captures high resolution SXGA (1360 x 1024) digital images and uses the IIDC v1.3 subset of IEEE1394 for uncompressed data transmission, at high speed, direct to PC for purposes of image capture and analysis.

KY-F1030

1/2" 1-CCD progressive scan camera with dual IIDC and RGB analogue interfaces

SXGA (1360 x 1024) digital imaging capability is effected by both IIDC (IEEE1394) and RGB analogue outputs, thus giving extended system flexibility. The KY-F1030 uses the same global standard as KY-F75, namely the IIDC v1.3 subset of IEEE1394, for uncompressed transmission of data.

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KY-F70B

1/2" 3-CCD progressive scan camera with dual SCSI and RGB analogue interfaces

Provides SXGA (1360 x 1024) images in both digital and analogue forms for a wide range of applications. Direct interface to PC is via SCSI-2 for SXGA image capture and analysis.



KY-F560U (NTSC) KY-F560E (PAL)

PRELIMINARY



Multi-purpose 3-CCD camera featuring 12-bit ADC and 24-bit DSP. A range of accessories allows it to be integrated into a variety of system configurations for use in industrial, broadcast and medical applications.

Thanks to the newly developed 12-bit ADC and 24-bit DSP, this small system camera can provide quality images with excellent colour reproduction and colour separation. Optional expansion accessories such as the SDI output card and the two Studio Kits allow easy, low-cost system integration into studio and remote applications.

- 1/2" 3-CCD colour accuracy (trichromatic prism)
- 1/2" bayonet lens mount
- Latest 12-bit ADC and 24-bit DSP for more than 400% dynamic range and ideal gamma correction

The latest 12-bit ADCs digitally convert the entire dynamic range of each CCD without distortion and with the finest possible steps. Together with a 24-bit, super fast, multi-stream, parallel processing DSP, highlight handling is dramatically improved and gamma correction is close to perfect, approaching the colour reproduction and shadow detail of a full studio camera.

- Horizontal resolution of 850 TVL and S/N of 64dB (NTSC) and 62dB (PAL)
- F13, 2000 lx sensitivity
- Composite output & Gen-Lock input
- JVC protocol (RS-232C, incl. lens controls)
- Compatible with JVC KY-F32 series options
- Can be expanded to include 26-pin connector and SDI compatibility using optional boards and studio kits Thanks to open architecture for extended application, digital or analogue studio application can be done with the KA-F5603 Studio Kit with SDI interface or the KA-F5602 Studio Kit with analogue video interface. Both studio camera systems can be complemented by the optional large viewfinder, intercom and remote control. Additionally, the KA-F5601 plug-in SDI camera interface can be useful for remote camera application in conjunction with the remote pan & tilt system.
- Remote camera control possible in conjunction with Fujinon pan & tilt head and system controller





KY-F550U (NTSC) KY-F550E (PAL)

PRELIMINARY



Multi-role 3-CCD camera with ultra-compact body and 12-bit ADC and 24-bit DSP. A wide range of accessories and adaptors make the camera ideal for medical and scientific use.

This ultra compact, self-contained 3-CCD camera provides high picture quality, thanks to the newly developed 12-bit ADC and 24-bit DSP. A built-in IEEE1394 DV interface meets industrial requirements by enabling fast transfer of compressed moving or still images to a PC for digital image processing. As the successor to the popular KY-F55B, it retains all the interfaces of its predecessor, including RGB analogue and RS-232 control.

- 1/3" 3-CCD colour accuracy (trichromatic prism)
- 1/3" C-mount
- Latest 12-bit ADC and 24-bit DSP for more than 400% dynamic range and ideal gamma correction

The latest 12-bit ADCs digitally convert the entire dynamic range of each CCD without distortion and with the finest possible steps. Together with a 24-bit, super fast, multi-stream, parallel processing DSP, highlight handling is dramatically improved and gamma correction is close to perfect, approaching the colour reproduction and shadow detail of a full studio camera.

- Horizontal resolution of 800 TVL and S/N of 62dB (NTSC) and 60dB (PAL)
- F11, 2000 lx sensitivity
- Ultra-compact size, all-in-one camera unit (no separate camera control unit required)
- Digital Auto Shading Compensation The Digital Auto Shading Compensation function can automatically compensate for any colour shading errors caused by interaction between the lens and prism assembly in C-mount optical systems.
- Analogue RGB, YC, and Composite output
- DV (IEEE1394) output for capturing high-quality motion picture DV interface consists of universal AV/C protocol. This allows high-quality compressed digital motion-picture signal transfer to a computer, another DV recorder or the BD-X201M Medical DVD recorder. In addition, the bundled software allows the DV signal to be viewed via the PC, whilst also offering full access to the main camera control parameters.
- JVC protocol (RS-232C, incl. lens controls)
- Compatible with JVC KY-F55B series options
- Supplied with Software Development Kit (SDK) and system software for capturing still and moving images from the DV output.





Designed with Optical Filter Option to Accommodate IR Applications

The IR cut filter which is used in the KY-F550 and both KY-F75 and KY-F70B cameras is designed to be swapped out, if so required. Easy access means that the original IR cut filter can be easily removed and replaced by JVC's quartz filter option. This permits black & white imaging within the IR band of the spectrum. Thus the cameras can operate in areas of ultra-low illumination.



SXGA digital imaging, excellent colour separation and colour reproduction with IEEE1394 and live image preview

Through its IIDC v1.3 IEEE1394 interface, the KY-F75 transfers high resolution, uncompressed SXGA images at the high speed of 7.5 frames per second. Conforming to strict medical standards, this multi-purpose camera is ideal for applications in a wide range of fields besides medicine, including industrial and scientific research and forensic science.

- Square pixel on-chip progressive scan CCDs, each with 1.45 million pixels, totaling 4.35 million
- Exceeds SXGA resolution with 1360 x 1024 pixels
- Progressive scan CCD output
- RGB prism separator and 3-CCD for total colour accuracy
- C-mount, half inch size fits a wide variety of scopes and lenses
- Direct digital interface to PC via IEEE1394
- IIDC V1.3 subset of IEEE1394 for uncompressed data transmission
- Live image preview on PC monitor and instantaneous capture
- Extended integration up to 4 seconds (Slow Shutter Mode)
- Single cable 6-pin IEEE1394 connection, carrying DC power, image and control signals
- EN 60601-1 and UL-2601 conformity is achieved when used with separate AC power adaptor AA-P700
- Bundled with JVC's new proprietary KY-WARE software, comprising SDK and KY-LINK for system control and image acquisition
- Turnkey solutions available, incorporating IEEE1394 card & accessories
- Compatible with OHCI type IEEE1394 interfaces for simple connection to laptop or desktop PC
- External trigger function for Sensor or Flash Synchronisation
- Designed to accommodate applications that use IR illumination, by way of having the IR cut filter externally accessible for swapping out with alternative special JVC quartz filter

KY-F70BU

1/2" 3-CCD progressive scan camera with C-mount and dual SCSI & analogue outputs



SXGA digital image capture with SCSI output and live colour preview for industrial and medical image processing

Whether used on a scope or with a lens attached, the KY-F70B delivers still images with excellent high-resolution and colour reproduction. The KY-F70B Digital Imaging System interfaces directly with a PC via SCSI-2 to capture SXGA resolution images, while still offering live colour motion preview in real time. When interfaced with PC capture board, it delivers SXGA resolution images in a wide range of applications.

- Square pixel on-chip progressive scan CCDs, each with 1.45 million pixels, totaling 4.35 million
- Exceeds SXGA resolution with 1360 x 1024 pixels
- Progressive scan CCD output
- RGB prism separator and 3-CCD for total colour accuracy
- C-mount, half inch size fits a wide variety of scopes and lenses
- Extended integration up to 4 seconds (Slow Shutter Mode)
- Pixel masking algorithm for optimised image quality
- Special algorithm for improved S/N ratio
- User-selectable Syncs: either Separate Syncs or Sync on Green
- WYSIWYG live preview mode (Live Colour Preview on VGA Monitor)
- External trigger function for Sensor or Flash Synchronisation
- EN 60601-1 and UL-2601 conformity is achieved when used with separate AC power adaptor AA-P700
- Designed to accommodate applications that use IR illumination, by way of having the IR cut filter externally accessible for swapping out with alternative special JVC quartz filter



SXGA digital image capture with dual output, IEEE1394 (IIDC) and RGB analogue, for industrial, scientific and medical use

The KY-F1030 has been designed to give flexibility in operation, whilst always meeting the demand for SXGA (1360 x 1024) high resolution imaging. Its dual output capability provides an IEEE1394, single cable PC system as well as an RGB capture card solution.

- 1360 x 1024 SXGA resolution camera (equivalent to 800 TV lines)
- 1/2" IT Progressive Scan CCD
- Effective pixel resolution 1.45 million
- IEEE1394 high speed transfer provides PC with live, native, uncompressed SXGA images at fast rate of 7.5 fps
- Global standard digital camera protocol IIDC v1.3 compliant
- Simple 6-pin IEEE1394 cable solution, embracing image capture, camera and lens* control and DC power, via 6-pin IEEE1394 port on desktop PC
- 1/2" C-mount fitting, to suit a wide variety of lenses and scopes
- JVC proprietary colour matrix
- Extended integration up to 4 seconds or 30 frames (Slow Shutter Mode)
- External trigger function for Sensor or Flash synchronisation
- Dual DC power options, either via 12V DC direct input from AC Adaptor or via IEEE1394 6-pin input
- EN 60601-1 and UL-2601 conformity is achieved when used with separate AC power adaptor AA-P700
- Compatible with OHCI type IEEE1394 interfaces for simple connection to laptop or desktop PC
- Supplied with JVC's proprietary KY-LINK image acquisition software, as part of the bundled KY-WARE software suite (see adjacent box)

* For applicable lenses, please contact your local JVC Professional Products office.

KY-WARE : Flexible Image Acquisition Solutions

The KY-F1030U/F75U is supplied with **KY-WARE**, which contains a number of software solutions: **KY-LINK** is JVC's proprietary image display, acquisition, and processing application. It features true What You See Is What You Get (WYSIWYG) image preview, and a range of image enhancement, processing and calibration tools. It creates a single-cable solution, where image data, camera control and power can all be transmitted via the IEEE1394 interface. A **TWAIN Driver** allows image acquisition from within any standard TWAIN-compatible application, such as Adobe Photoshop. A **Software Development Kit (SDK)** makes it simple for developers to integrate the KY-F1030U/F75U into custom applications – example source code is included to speed development.



APPLICATIONS

Remote Camera System

The remote camera system allows broadcasting and teleconferencing using high-quality pictures with excellent colour reproduction and high-speed image transfer.







Studio Camera System

This camera can be used as an ordinary studio camera in combination with the studio kit interface. Able to capture images and transfer to studio editing systems via various interfaces, including SDI connectivity for long-distance image transmission without degradation.







Image Analysis Camera System

Ideal for setup of a circuit board inspection system or stock authentication system thanks to its high S/N, high-resolution pictures, removable IR cut filter, etc. Captured images can be transferred to a PC for data analysis.









Medical Camera Systems

Ideal for setup of a fundus camera system thanks to excellent colour reproduction, removable IR cut filter, high S/N, etc. Motion images can be captured from surgical microscopes, shadowless lamp cameras and endoscopes. Still images also can be captured from fundus shooting and microscopy shooting.





Options and Related Equipment



BD-X201MU (NTSC) Medical DVD recorder with control by RS-232C, IEEE1394 and foot pedal

PRELIMINARY



With its compact footprint, high-speed search, and high-resolution video recording, this versatile professional-standard DVD recorder is ideal for medical archiving.

In addition to high-quality DVD recording capability, this professional-standard DVD recorder offers a powerful suite of authoring, encoding, layout and design capabilities, as well as a wide rage of interfaces and easy-to-use design that make it easy to create archive-guality DVDs. This DVD recorder is for use in industrial, scientific and medical applications.

All-in-one solution with no PC required

BD-X201ME (PAL)

- Incorporates high-quality picture circuitry developed for professional video recorders to ensure that original image information is recorded accurately and without degradation
- Real-time direct-to-disc recording. No delay of processing on hard disc drive Crash protection feature gives operator 15 seconds from power failure, in
- which to stop recording and so finish the Title and save the DVD contents Direct recording to DVD-R allows logos and company or hospital titles to be inserted in the main menu without complicated authoring
- JVC proprietary menu creation software "Easymenu" for customised design and lay-out of Title and Chapter menus, created on a PC and then downloaded to BD-X201M
- Customisable menu allows patient reference number & date to be easily entered
- Automatically allocated thumbnails for Titles and Chapters are reselectable
- Multi-session recording allows a patient's recordings to be accumulated over time to the same DVD, Title by Title
- Simple, automatic authoring with template and auto chapter maker
- DV emulation function enables direct control for NLE system through IEEE1394 (DV) interface
- High speed (24 min.) DVD-to-DVD duplication from one BD-X201M to another
- Professional hardware compression engine provides best-quality audio and video
- RS-232C control (Sony SVO9500 protocol)
- Foot pedal controlled recording
- Comprehensive range of digital and analogue I/Os including IEEE1394 and Y/C output
- Compact size: EIA half rack width and 2U height
- Medical standard conformity: UL2601-1 (USA) and EN60601-1 (Europe)

- DVD-R is compatible with the video mode of DVD-R Standard 2.0 or higher and DVD-RW is compatible with the video mode recording of DVD-
- DVD-R/DVD-RW discs finalized on this unit can be played back on most DVD-R/DVD-RW-compatible DVD players.However, some DVD-R/DVD-R/V-compatible DVD players may not play DVD-R/DVD-RW discs recorded on this unit.
- The screen is a sample screen produced by a prototype unit.
 Doby and the double-D symbol are trademarks of Doby Laboratories Licensing Corporation.
 The BD-X201M does not support the playback of commercial DVD-video discs.
 Recommended media: DVD-R for General Ver2.0 [JVC, Maxell, TDK (x1, x2, x4)]
- DVD-RW Ver1.1 [JVC, Maxell (x1, x2)]



Easymenu software for customised, one-time template designs



- Versatile template design software makes it easy to import background pictures and lay out thumbnails in a Windows environment Customised templates can be transferred to the BD-X201M via network connection. Easy wizard-based operation
- Simple 5-step menu screen creation: Button
- order setting, background setting, thumbnail setting, button setting, highlight color setting Freestyle layout also possible
- "Easymenu" system requirem
- (Recommended hardware) CPU: Pentium III, 1 GHz
- RAM 128 MB
- Microsoft Windows XP (Home Edition or Profes Others: Microsoft Internet Explorer 5.01 or higher should be installed Microsoft.NET Framework Runtime library is required.

Specifications

	KY-F560	KY-F550	KY-F75	KY-F70B	KY-F1030
	K1-1500	K1-1050	KI-175		
Image device	1/2-inch Interline Transfer CCD x 3	1/3-inch Interline Transfer CCD x 3	1/2-inch Interline Transfer CCD x 3	1/2-inch Interline Transfer CCD x 3	1/2-inch Interline Transfer CCD
Scanning	Interlace	\leftarrow	Progressive	\leftarrow	\leftarrow
Total pixels	NTSC: 41K pixels (811H x 508V) PAL: 47K pixels (795H x 596V)	←	1.5 million pixels	←	←
Effective pixels on CCD	NTSC: 38K pixels (768H x 494V) PAL: 44K pixels (752H x 582V)	\leftarrow	1.45 million pixels (H: 1,392 x V: 1,040)	\leftarrow	\leftarrow
Output pixels from CCD			1,360 x 1024 pixels 1,280 x 960 pixels switchable	\leftarrow	\leftarrow
Colour separation system	F1.4 RGB 3-colour separation system	\leftarrow			
Resolution	Y: 850 lines or more	Y: 800 lines or more RGB: 550 lines or more	1,000 lines	\leftarrow	800 lines
Registration	0.05% ore less (excluding lens characteristics)	\leftarrow			
Minimum required illumination	0.7 lx or less (F1.4, LOLUX)	1 lx or less (F1.4, LOLUX)			
Dynamic range	400% or more	←	250%	\leftarrow	←
S/N ratio	NTSC: 64 dB or more PAL: 62 dB or more (before signal processing)	NTSC: 62 dB or more PAL: 60 dB or more (before signal processing)			
Contour correction	Dual-edged	\leftarrow			
Synchronising system	Internal (built-in SSG)/external (VBS or BB)	Internal (built-in SSG)	\leftarrow	\leftarrow	\leftarrow
Lens mount	1/2-inch bayonet mount	1/3-inch C-mount	1/2-inch C mount	\leftarrow	\leftarrow
Analogue output signals	Composite: 1 Vp-p, 75 ohms	Composite: 1 Vp-p, 75 ohms RGB/7C (switchable): RGB: 0.7 Vp-p, 75 ohms (1 Vp-p, 75 ohms with SYNC 0N) Y: 1 Vp-p, 75 ohms C: Burst level at 0.286 (NTSC)/ 0.3 Vp-p, 75 ohms (PAL)	-	R/G/B 0.7 V(p-p) 75 ohms each SXGA 1360 x 1024 pixels 7.5 frames/sec. VGA: 640 x 480 pixels 60 frames/sec. (Image refresh rate 7.5 frames/sec.) VGA: 640 x 480 pixels 60 frames/sec. (Image refresh rate 30 frames/sec. Vertical resolution: 240 lines	RGB 0.7V, 75 ohms 7.5 fps
Digital video output	SDI (w/optional KA-F5601 or KA-F5603)	DV: DV standard (AV/C), 6-pin	IEEE1394 6 pins (IIDC ver. 1.3 standard), Uncompressed data (not for DV output)	SCSI-2 50P half-pitch SCSI connector	IEEE1394 6 pins
Protocol	-	AV/C	IIDC 1394 based Digital Camera Specification, Rev. 1.30	Original	IIDC 1394 based Digital Camera Specification, Rev. 1.30
Frame rate			7.5 frames/s		7.5 frames/s
Sync output	_	—	Internal synchronisation	Hs/Vs 3 V(p-p) (low active) Sync On Green [0.3 V(p-p)]	\leftarrow
Sensitivity	F13, 2000 lux	F11, 2000 lux	F8, 2000 lux (at 1/30 shutter)	←	←
Gain	-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB, +15 dB, +18 dB, LOLUX (+30 dB) ALC (0 dB to MAX') NTSC: ALC + EEI (0 dB to 18 dB, approx. 1/60 to 1/240) PAL: ALC + EEI (0 dB to 18 dB, approx. 1/50 to 1/200) V. GAIN (-3 dB to 18 dB, 0.2 dB step)	-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB, +15 dB, +18 dB, L0LUX (+30 dB) ALC (0 dB to MAX') NTSC: ALC + EEI (0 dB to 18 dB, approx. 1/60 to MAX') PAL: ALC + EEI (0 dB to 18 dB, approx. 1/50 to MAX') V. GAIN (-3 dB to 18 dB, 0.2 dB step)	0 dB, +6 dB, +12 dB (step) 0 — 12 dB (variable), ALC	ISO100, 200, 400 (0 dB, +6 dB, +12 dB)	0 dB, +6 dB, +12 dB (step) 0 — 12 dB (variable), ALC
Electronic shutter					
STEP	NTSC: NORMAL, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 PAL: NORMAL, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	NTSC: NORMAL, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 PAL: NORMAL, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	4 sec., 2, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000, V.Scan, EEI	←	←
V.SCAN	NTSC: Approx. 1/60 to 1/10000 PAL: Approx. 1/50 to 1/10000	\leftarrow	4.010s. to 1/5906.836s	1/30s. to 1/5906.836s	4.010s. to 1/5906.836s
EEI	NTSC: 1/30 to MAX PAL: 1/25 to MAX*	\leftarrow	1/7.5s to 1/2384.7s	\leftarrow	1s to 2384.7s
SLOW		NTSC: 1 to 240 frames PAL: 1 to 200 frames			
Dimensions (W x H x D) (excluding connectors)	70 x 80 x 152.5 mm 2-13/16 x 3-3/16 x 6 inches	70 x 65 x 80 mm 2-13/16 x 2-9/16 x 3-3/16 inches	70 x 80 x 150mm 2-13/16 x 3-3/16 x 5-15/16 inches	\leftarrow	70 x 64.8 x 125.5 mm 2-13/16 x 2-9/16 x 5 inches
Weight	800g/1.76 lbs.	500g/1.10 lbs.	750g/1.65 lbs.	850g/1.87 lbs.	470g/1.03 lbs.
Power supply	DC 12V (when AA-P700 is used)	\leftarrow	\leftarrow DC8V to 40V (IEEE1394 power supply)	\leftarrow	\leftarrow DC8V to 40V (IEEE1394 power supply)
Power consumption (Camera unit only)	8 W	7 W	12W (when AA-P700 is used, including lens) 7.2W (when IEEE1394 power supply +12V without lens)	15W (when AA-P700 is used, including lens) /,	8W (when AA-P700 is used, including lens)
Operating temperature	-5° to 40°C/23° to 104°F	←	0° to 40°C/32° to 104°F	←	←
Storage temperature	-20° to 60°C/-4° to 140°F	←	\leftarrow	←	←

Simulated picture

The values for weight and dimensions are approximate. Design and specifications subject to change without notice.



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