Ikegami

HD
High Definition

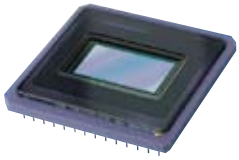
Dual Format Support with CMOS Technology and HD-Triax System
Full Digital HDTV Portable Camera System

HDK-77EC2

The HDK-77EC2 supports native 1080i/59.94Hz and 720p/59.94Hz dual format with CMOS sensors and adopts TA-79HD HD-Triax Adaptor to utilize existing triax infrastructure. The harmony of advanced technology and legacy of transmission system offers a practical solution.

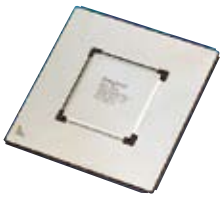
Revolutionary 2/3-inch 2.5 Mega-pixel CMOS sensors

Advanced CMOS sensors are employed to achieve superb picture quality. CMOS sensors have wide dynamic range and in principle, no smear since electric charges are not shifted throughout the imager which is the cause of vertical smear in CCDs. Instead each pixel of the CMOS sensor has it's own amplifier (which changes electric charges to voltage signals). So it performs signal amplification on a pixel basis.



Chip C4

Ikegami's video processing know how greatly influenced the development of Chip C4 ASIC (Application Specific Integrated Circuit). Chip C4 processes the digital video output from the CMOS sensors including Knee, gamma, color and DTL correction. For example, various DTL functions, Soft DTL, Skin tone DTL, horizontal / vertical / diagonal DTL, and DTL boost frequency are controlled in Chip C4 with up to 38-bit internal quantization.



Sophisticated features made possible with digital technologies

FINE DTL function

By expanding the small edge in the low contrast object and compressing the edge component in the high contrast object, the impression for the glare of picture with too much edge is reduced and the natural image, which is more visual for human being, can be obtained.

Six-Vector Color Corrector + Two-Axis Custom Color

Includes a color correction function that enables hue and saturation to be adjusted for each of the six primary colors (R, G, B, Cy, Y, Mg), plus another function to make color correction of two user-selected colors of the subject. Color correction before Gamma Circuit provides more true color reproduction.

Enhanced Digital DTL

Improved visual reproduction of subjects such as texture and sheen, and richer reproduction of details in skin tone and in dark backgrounds is realized.

Super KNEE

The Super Color Knee system maintains color saturation without changing the hue of the highlighted parts and provides natural color reproduction under high luminance conditions.

KNEE DTL function

KNEE DETAIL function provides better expression in highlight scene, improving on previous Knee Aperture. Vertical and Horizontal contour corrections are independently made to the highlight video where the KNEE is processed. (Supported by OCP-200/MCP-150/MCP-200/RCP-50B)

Menu Preset function

All menu items including Level and Control settings can be preset and easily recalled from the control panel. It is also easy to reset to factory settings. Preset for 3 MATRICES can be set. The MATRIX settings can be preset for different lighting, and then selected by the control panel.
(Supported by OCP-200/MCP-150/MCP-200/RCP-50B)

Master FLARE

A Master FLARE function enables one adjustment to control the overall level of FLARE while maintaining the tracking of the R/G/B channels. This feature makes it possible to control flare during operation since the color balance is never off. (Supported by OCP-200/MCP-150/MCP-200/RCP-50B)

Clear VF DTL function

This function makes a difference in the edging of the image exclusively in the viewfinder, to make the precise point of focus easier to find, and to make it easier for the cameraperson to focus.

CCU-890T Full digital processing HDTV-Triax Camera Control Unit

The CCU-890T is designed for dedicated use of a triax connection between the HDK-77EC2 camera with TA-79HD triax adaptor, ensuring full resolution transmission of HDTV signals over conventional triax cable, up to 1550m with 14.5mm diameter Fujikura triax cable. By using optional Up/Down converters HDTV and SDTV formats are supported simultaneously in both digital and analog form with a wide range of built-in interfaces. The CCU-890T also features embedded audio in the SDI output signals, as well as, frame synchronizer for return video input signals.

TA-79HD HDTV-Triax Camera Adaptor

A high performance HDTV triax transmission system is now available. This is ideally suited for studio/field applications where there is an existing triax infrastructure.

Transmission Distance

Up to 850m (2,800ft.)	by	8.8mm	diameter triax / Fujikura
Up to 1,550m (5,100ft.)	by	14.5mm	diameter triax / Fujikura
Up to 500m (1,600ft.)	by	9.2mm	diameter triax / Belden type 9267
Up to 1,000m (3,300ft.)	by	13.2mm	diameter triax / Belden type 9232

State-of-the-Art HDTV System Accessories

High Performance Viewfinders

For the HDK-77EC2, a 2-inch 16:9 high definition VF for portable application is available. In addition, 5-inch CRT and 9-inch LCD color viewfinders are also available as options.

SE-79D System Expander

The SE-79D System Expander enables the use of the 9-inch viewfinder and full studio lenses, converting the HDK-77EC2 portable camera into a full facility studio camera.

BS-89 Compact Base Station

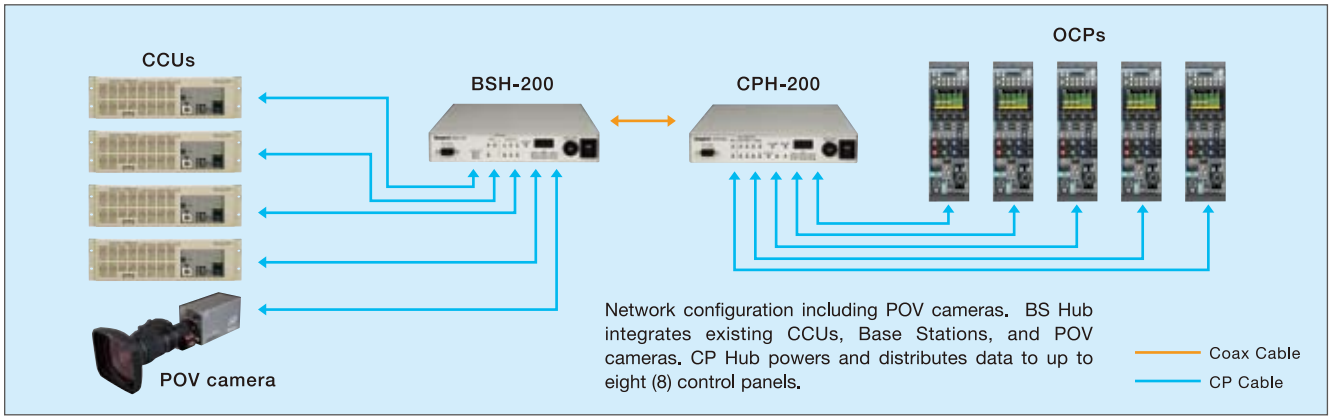
The BS-89 offers the alternative of SMPTE fiber cable connection between the HDK-77EC2 camera with FA-79A fiber adapter, cable length up to 2000m.

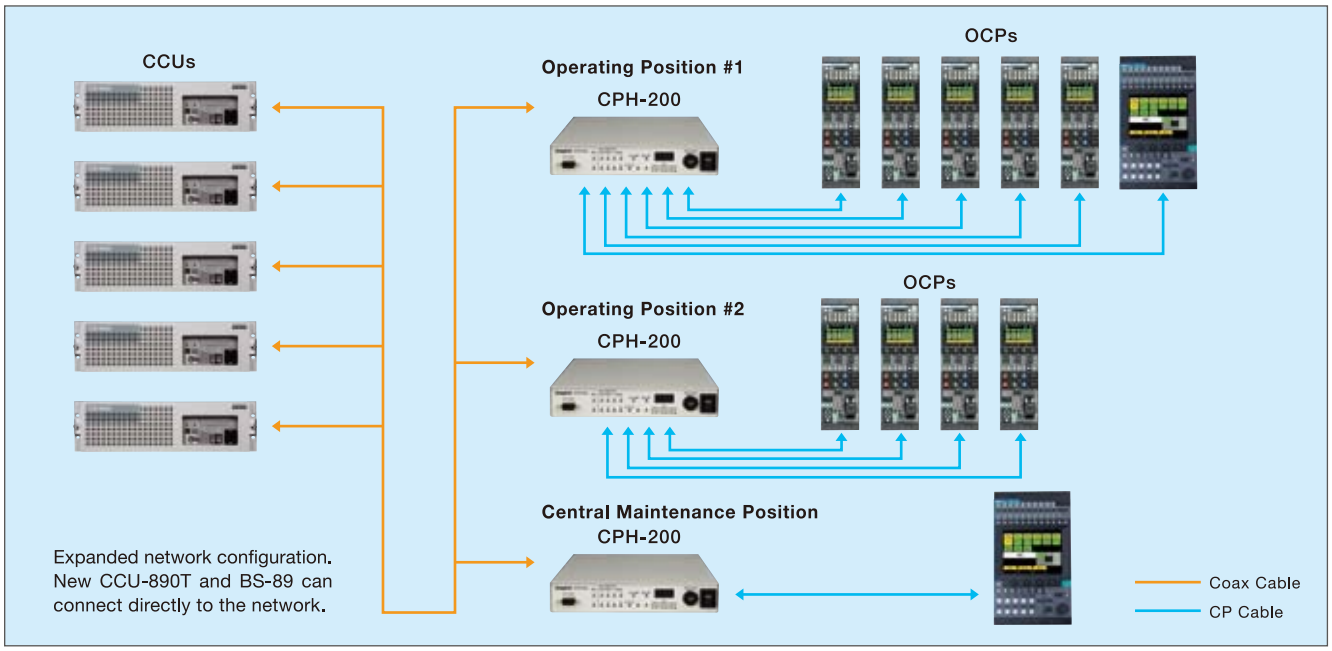
BS-89 Front

BS-89 Rear

Cutting-edge, Network based Control Panel System

The OCP-200 / MCP-200 is a new Network based control panel system offered as an alternate to the traditional Ikegami style control panels. The Network system allows any OCP-200 to control any camera with assignment set at the OCP itself. System wiring is simplified with control of up to 96 cameras via a single coax cable between CCU locations and video control locations. The OCP-200 and MCP-200 include touch screen LCDs. Conventional one by one camera control connection is also available.





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HDK-77EC2

Ratings

- Image sensor ····· 2/3-inch 2,500,000-pixel CMOS
- Optical system ····· 2/3-inch, f1.4 prism
- Lens mount ····· BTA S-1005B (standard)
- Viewfinder ····· 2-inch B/W viewfinder (standard),
  5-inch B/W viewfinder (option) or
  9-inch color LCD viewfinder (option)
- Input signals
  - HDK-77EC2/TA-79HD
    - External SYNC signal ····· SYNC 0.6Vp-p ±6dB
    - Audio signal* ····· -60, -50, -40, -30, -20, -10, 0, +4dB 600Ω (2ch, balanced)
      (after selecting, variable 5db available)
    - Intercom signal ····· 2ch (ENG/PROD) (Standard : XLR type)
  - CCU-890T
    - [HDTV system (SMPTE274M and SMPTE292M)]
    - Genlock signal ····· PS 1.0Vp-p or Sync 0.6Vp-p ±6dB 75Ω bridged
    - Return video signal ····· HD-SDI : 75Ω, Single End 4ch
      (Option) VBS/D1 : 75Ω, bridged 2/4ch
    - Q-TV signal ····· VBS 1.0Vp-p 75Ω, Single End
    - Intercom/Tally
      - Intercom (ENG/PROD) ····· (4-wire or Clearcom or RTS)
      - 4-wire ····· 0dBm 600Ω 2ch
      - Clearcom ····· -15dBs 200Ω 2ch
      - RTS ····· 0dBm 200Ω 2ch
      - Tally ····· contact/voltage R, G 2ch
      - Program sound ····· 0dBs 600Ω 2ch

- Output signals
  - HDK-77EC2
    - Video signals
    - MON HD-SDI ····· Monitor, VF or Return Select 1ch, 75Ω (BNC Connector)
    - Analog Monitor signal ····· Viewfinder Video 1ch, 75Ω (BNC connector)
  - TA-79HD
    - HD SDI signal ····· Y, P_B, P_R 4:2:2 serial digital 1ch
      (BNC connector) (SMPTE292M)
    - Q-TV signal ····· Analog signal, 75Ω (BNC connector)
    - Intercom signal ····· 0dBs 2ch (ENG/PROD) (Standard: XLR type)
    - VTR signal ····· BTA S-1005B (Factory option)
  - CCU-890T
    - RGB signal (HDTV/SDTV) (Option) ··· RGB or Y, P_B, P_R 75Ω 1ch
      (either HDTV output or NTSC output is selected)
    - HD SDI signal (SMPTE294M) ····· 75Ω 4ch
    - HD-WFM signal ····· HD-SDI 75Ω 2ch
    - HD-PM signal ····· PM-SDI 75Ω 2ch (MON can be selected)
    - Composite video signal (Option) ····· VBS 1.0Vp-p 75Ω 2ch
    - SD-SDI (Option) (SMPTE259M) ····· 270Mbit/s 0.8Vp-p 75Ω 2ch
    - SD-WFM signal (Option) ····· R,G,B,Y,ENC select 1.0Vp-p 75Ω or SDI 75Ω 2ch
    - SD-PM signal (Option) ····· R,G,B,Y,ENC select 1.0Vp-p 75Ω or SDI 75Ω 2ch
    - Audio Signal
      - Mic ····· 0dBm 600Ω 2ch
      - Digital audio ····· AES 3ID 1Vp-p 75Ω 1ch (In conformity with AES/EBU)
    - Intercom/Tally
      - Intercom (ENG/PROD) ····· (4-wire or Clearcom or RTS)
      - 4-wire 0dBm ····· 600Ω 2ch
      - Clearcom ····· -15dBs 200Ω 2ch
      - RTS ····· 0dBm 200Ω 2ch

- Filter ·····

	1	2	3	4	5
ND	CAP	100%	25%	6.2%	1.6%
	A	B	C	D	E
CC	CROSS	3200K	4300K	6300K	8000K

- Electric color temperature ····· 5600K
- Ambient temperature ····· -20°C ~ +45°C (-4°F ~ +113°F)
  CCU-890T : 0°C ~ +45°C (+32°F ~ +113°F)
- Relative humidity ····· 30%~90% (Non-condensing)
- Operating voltage
  - HDK-77EC2 ····· +11~16VDC
- Weight
  - HDK-77EC2 ····· 5.7kg (12.57 lbs) (without lens)
  - CCU-890T ····· approx. 31kg (68.34 lbs)
- Dimensions
  - HDK-77EC2 ····· W107 X H232 X D375mm
    (W4.21 X H9.13 X D14.76 inches)
  - CCU-890T ····· W482.6 X H132.6 X D481mm
    (W19.00 X H5.22 X D18.94 inches)

Performance

- Sensitivity ····· F10(1080i/59.94 mode), F11(1080i/50 mode)/2000 lx
- S/N
  - HDTV system ····· 60dB (Typical)
- Modulation depth
  - HDTV system ····· 45% or more 1080/59.94i at 27.5MHz
    40% or more 720/59.94p at 28.875MHz
- Limiting resolution
  - HDTV system ····· 1000 TV lines (1080/59.94i)
    700 TV lines (720/59.94p)
- Video frequency response (Base Station output)
  - Y output
    - Below 60Hz ····· Falling
    - 60Hz~30MHz ····· within 1.0dB
    - Over 30MHz ····· Falling
  - P_B, P_R output signal
    - Below 60Hz ····· Falling
    - 60Hz~15MHz ····· within 1.0dB
    - Over 15MHz ····· Falling
- Audio Frequency response (CCU output)
  - Y output
    - Below 100Hz ····· Falling
    - 100Hz~10kHz ····· within 1.0dB
    - Over 10kHz ····· Falling
- Contour correction
  - Vertical ····· 5line
  - Horizontal ····· Boost frequency, 13MHz~24MHz (HDTV)
- Gamma ····· OFF, 0.35, 0.4, 0.45
- Gain ····· -3dB, 0dB, +3dB, +6dB, +12dB (Standard)
- Power consumption
  - HDK-77EC2 ····· Camera Head only: 26W
    2-inch VF: 6W

Design and specifications are subject to change without notice.

H160A094-HI2

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