Ikegami

Unicam HD

PHASE®

4K

The Latest Technology
Full Digital HDTV Portable CMOS Camera System

HDK-95C

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HDK-95C

Next generation 2.5 Mega pixel high performance CMOS sensors

The camera employs 2.5 Mega pixel 2/3-inch CMOS image sensors,achieving superior quality HDTV video with horizontal resolution of 1000TVL, SNR of 60dB or more, and sensitivity of F11.

Native Multi-format

The CMOS sensors support native progressive and native interlace readout modes of operation. The camera supports 1080i/59.94 or 720p/59.94 and 1080p/29psf as standard. Additional optional formats include 3G formats, 24p formats and 50 Hz formats.

3G Upgrade Path

The camera supports 1080p/59.94 4:2:2, 1080p/50 4:2:2, 1080i/59.94 4:4:4, and 1080i/50 4:4:4 3G HDTV formats by software upgrade. (Option)

Newly developed FPGA DSP

High density 45nm rule FPGA are employed for the digital video processing for superb picture quality. And the DSP includes custom gamma curves (cine gamma).

Camera Operator Assist Functions

The HDK-95C camera head incoporates a camera operator assist function to aid the operator finding correct focus. The viewfinder detail (VF DTL) function allows the camera operator to increase the detail edges to the viewfinder video for easy focusing.

HD-SDI Trunk

When the camera is operating with FA-97 fiber adaptor and CCU-980 or BS-98, the system allows 3G (1.5G x2) transmission from the camera head to the CCU. With the camera operating in 1.5G, then a second external 1.5G video can be transmitted to the CCU as a video trunk channel. For POV or 3D applications, this will reduce the cables which need to be run.

Two HD-SDI outputs from the camera head

Two HD-SDI output signals (1.5G) are selectable between Camera, VF, RET and MON (monitor) for external monitoring at the camera head. HD QTV is added to the line up of HD-SDI output signals.

2 Channels QTV

Two channels of QTV output (VBS) are available for prompter and external monitoring purposes.
* BS/CCU must support 2 channels of QTV
* This function is available with FA-97A.

24p Upgrade Path

The camera can also be software upgraded to support 1080p/23.98, 1080p/23.98psf, and 1080i/59.94 with 2-3 pulldown.

HD-SDI QTV Channel

When configured with FA-97A and BS-98/CCU-980, the HDK-95C includes an HD-SDI QTV channel, in addition to the 2 channels VBS QTV.

Digital Extender

There is the selection of x1.5, x2, x3, x4 digital extender available to enlarge the image at the center of shot without any loss in image sensitivity.

Docking style camera body

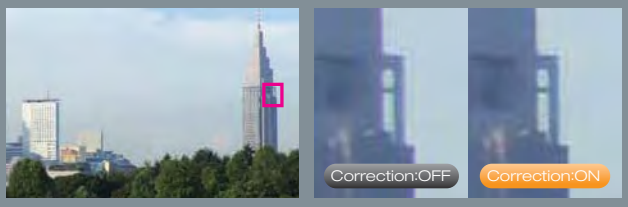
With a docking style camera body, either an FA (Fiber Adaptor) or TA (Triax Adaptor) can be mounted depending on the use. Lower profile and lower weight improve the manuverability for shoulder use.

FA(Fiber Adaptor) or TA(Triax Adaptor)

Fully compatible with previous CCUs (such as CCU-890M) and current CCUs and Base Stations

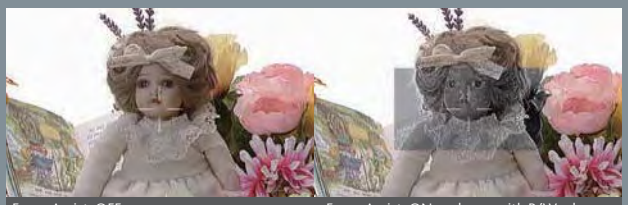
Lens Aberration Correction Function

The Lens Aberration Correction function is newly incorporated for minimizing the blur and colored edges caused mainly by lens chromatic aberration.



Camera Operator Assist Functions

There are two types of camera operator assist functions incorporated in the HDK-95C camera head. The viewfinder detail(VF DTL) function allows the camera operator to increase the detail edges to the viewfinder video for easy-focusing. In addition, the Quick EZ Focus (Focus Assist) function is a newly incorporated useful tool, providing very distinct enhancement to the viewfinder signal to enable the camera operator to make critical focus adjustment.



Focus Assist: OFF　　Focus Assist: ON as shown with B/W edges

Base Station/Camera Control Unit

BS-98/CCU-980 Hybrid 2K/4K

The BS-98 and CCU-980 are new rack-mountable fiber transmission units for UnicamHD series cameras. High quality 4K ultra HD and 3G/HD-SDI output are supplied simultaneously when connected with a UnicamHD camera, such as an HDK-97C or HDK-95C (with FA-97A). It includes so called Super Resolution with non-linear processing, a new technology to reconstruct high resolution signals that is not possible in conventional HD processing! The CCU-980 is a full rack size camera control unit and the BS-98 is a half rack size base station. The CCU-980 can be fitted with a triax board set, allowing simple switching between SMPTE fiber and triax. They support not only Ikegami's conventional one-by-one ICCP control or Arcnet based network control systems, but also an Ethernet based control system, allowing customers to choose the camera control system based on their needs.

BS-98 Hybrid 2K/4K

CCU-980 Hybrid 2K/4K

State-of Art System Accessories, Expanding HDTV

CA-75HD Stand-alone Operation System

The CA-75HD is a camera adaptor for Unicam series HD cameras. Attaching this adaptor to Unicam series HD cameras makes stand-alone operation possible, such as wireless transmission or ENG-style with portable video recorders.

SE-H750 System Expander

The SE-H750 System Expander enables the use of the 9-inch viewfinder and full studio lenses with the HDK-95C, converting the portable camera into a full facility studio cameras. Installation of the camera into the SE-H750 is very easy, and conversion back to portable configuration is quick for maximum operating flexibility.

Variety of viewfinders

For the HDK-95C, a 2-inch 16:9 high definition LCD color viewfinder for portable application is available. In addition, a 7.4-inch OLED and a 9-inch LCD color studio viewfinders are available as options.

2-inch LCD

9-inch LCD

VFE740HD 7.4-inch OLED Color Viewfinder

The VFE740HD is an OLED Color Viewfinder, employing a 7.4-inch QHD OLED panel, achieving high resolution, high brightness, high contrast and wide viewing angle. Its true color reproduction and high quality gradation provide optimum monitoring in the full range of uses. Especially its fast response achieves superb fast motion images for shooting sports, etc.

Sophisticated Camera Control Panel System

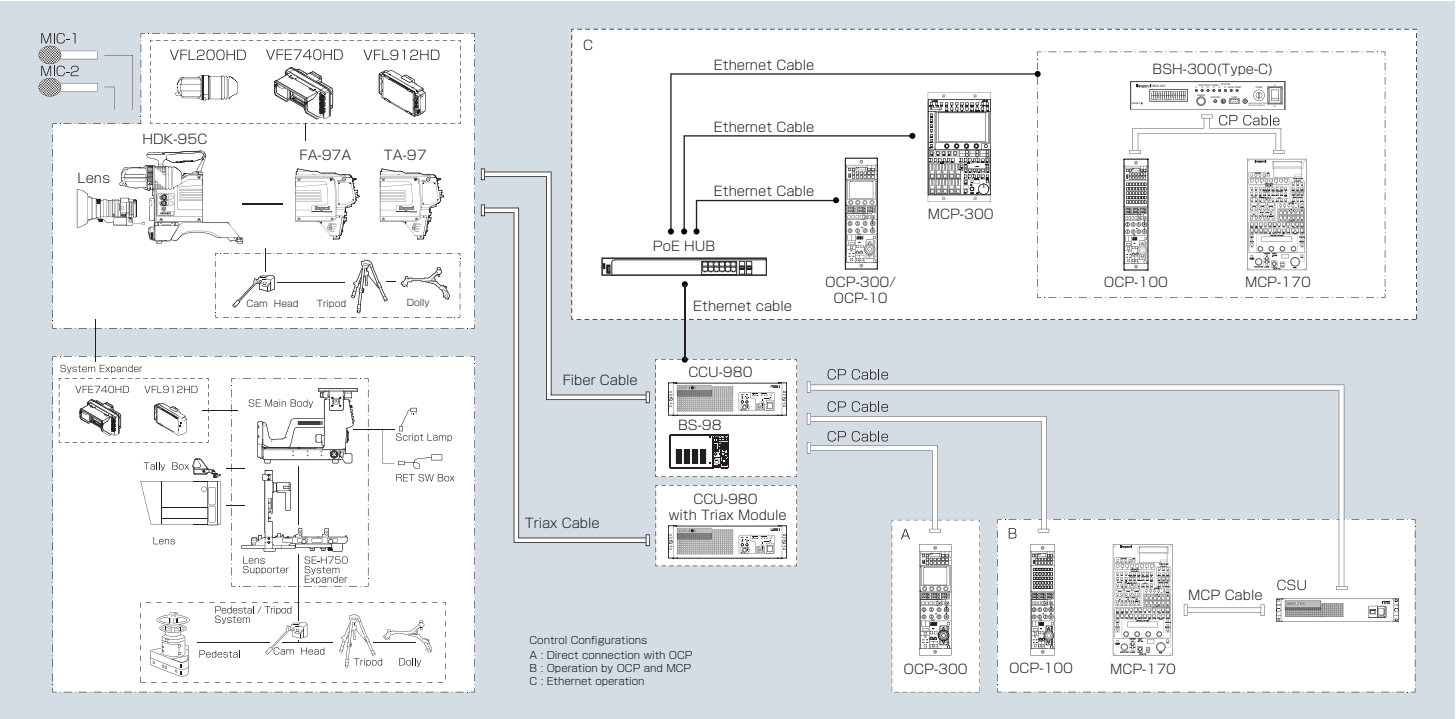
Three different control architectures are supported by the new OCP-300 Operation Control Panel and BSH-300 Ethernet/ICCP command converter, each with a wide range of camera control capability.The OCP-300 supports not only Ikegami's conventional one-by-one ICCP control and Arcnet based control systems, but also an Ethernet based control system, allowing customers the flexibly to choose the camera control system based on their needs. The OCP-300 includes a touch screen LCD with rotary encoders, and SD Memory Card slot for full camera setup and filing capability. The depth-of-control feature allows the OCP-300 control to be selected from basic to complete to fit the customer's operating discipline. The OCP-300 also supports PoE, Powering over Ethernet, so separate power supplies are not necessary. The BSH-300 is used for converting command between Ethernet and ICCP, allowing previous control panels such as the OCP-200 and MCP-200, to be integrated into the Ethernet network system.

OCP-300

BSH-300

*There are three types of BSH-300, Type-A, Type-B and Type-C, each with a different type and number of connectors.

SYSTEM CONFIGURATION FOR HDK-95C



Rating

HDK-95C

Signal Format	1080i (59.94Hz or 50Hz) Y,Pb,Pr 4:2:2 Interlaced (50Hz option) 720p (59.94Hz or 50Hz) Y,Pb,Pr 4:2:2 Progressive (50Hz Option) 1080p (29.97Hz) Y,Pb,Pr 4:2:2 Progressive (Option) 1080p (23.98Hz) Y,Pb, Pr 4:2:2 Progressive (available by upgrade) 1080p/59.94 4:2:2, 1080p/50 4:2:2, 1080i/59.94 4:4:4, and 1080i/50 4:4:4 (available by upgrade)
Image Sensor	2/3-inch 2.5 million pixel CMOS Sensors
Optical System	2/3-inch, R,G,B 3 CMOS, F1.4
Lens Mount	BTA- S1005B
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
Sensitivity	F11 (typical) at 2000lx (in 1080i/59.94)
S/N Ratio	60dB or more (in 1080i/59.94)
Limiting Resolution	1000TV lines (in 1080i/59.94)
Modulation Depth	55% at 800TV lines (in 1080i/59.94)
Variable Color Temperature	2,000K to 20,000K variable
Electrical Shutter	1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000
Detail Correction: Vertical	5 lines
Detail Correction: Horizontal	Boost frequency: 13MHz to 22MHz (HDTV)
Gamma	OFF, 0.35, 0.4, 0.45
Gain	-6dB, -3dB, 0dB, +3dB, +6dB, +9dB, +12dB
Ambient Temperature	-20°C to +45°C (-4°F to 113°F)
Relative Humidity	30% to 90% (Non-condensing)
Operating Voltage	+11 to 16V
Weight	approx. 4.6kg (10.1lbs) (Head + FA or TA, excluding VF)
Dimensions	W138.5 x H270 x D337mm (Head + FA or TA, excluding VF) (W5.5 x H10.62 x D13.25 inch)
Input Signals	
External Sync Signal	SYNC 0.6Vp-p ±6dB 75ohm BNC CN 1ch (BB/PS Signal) * DTA-55 does not have external sync signal input in self-contained operation.
Audio Signal	-60dB to +4dB (Variable) / -20dB (Fixed) XLR CN 2ch (600 ohm Balanced)
Intercom Signal	XLR Type or 110Type CN 2ch
Video Trunk	Serial Digital 75ohm BNC 1ch (FA-97A)

Output Signals	
Analog Video Signal	R, G, B D-Sub CN 1ch (for System Expander)
HD-SDI Signal with FA-97A	Serial Digital 75ohm BNC 1ch * 3G HD-SDI will be available with optional 3G upgrade to the camera.
HD-SDI Signal with DTA-55	Serial Digital 75ohm BNC 1ch * The output signal should be fixed with main video signal in self-contained operation, and set to RET signal in cable operation. * The audio signal is not embedded.
Q-TV Signal	FA-97A: VBS signal, BNC type 2ch DTA-55: SD-SDI signal, BNC type 1ch
MON Video Signal	VF / RET / MON (MENU Selection) Serial Digital 75ohm BNC 1ch OR VF / RET / MON / HD-QTV (MENU Selection) Serial Digital 75ohm BNC 1ch * FA-97A+CCU-970M required for HD-QTV output. * HD-QTV(Trunk) module should be installed in the CCU.
HD QTV	Serial Digital 75ohm BNC 1ch (Option) * FA-97A+CCU-970M required for HD-QTV output. * HD-QTV(Trunk) module should be installed in the CCU.
Intercom Signal	0 dBs 4ch (ENG/PROD/PGM1/PGM2) XLR Type or 110Type CN
DC Output	+12VDC 500mA (max), 4-pin type 1ch * Option for DTA-55

BS-98 / CCU-980

HDTV System(Input Signals)		
External Reference Input		GENLOCK : Tri-level sync ot BBS 75 ohm BNC x2 (Loop Through) (HDTV/SDTV automatic detection) SUB REF: 10 Field ID 75 ohm BNC x2 (Loop Through)
Return Video Input		75 ohm 3G/HD/SD-SDI Single End 4ch or 2ch Active-Through (Menu Selection)
Q-TV (Prompter) Input		HD-QTV: HD-SDI 75 ohm single end 1ch (require 3G bandwidth fiber adaptor) SDTV: VBS 75 ohm single end 2ch
Output Signals		
Line Video Output	4K : 3G/HD-SDI	Serial Digital 75 ohm BNC 4ch 1 output each (OUT3) Quad link (3840 x 2160 Progressive Square Division)
	2K : 3G/HD-SDI	Serial Digital 75 ohm BNC 2ch 4 outputs (OUT1/OUT2) SMPTE 425M, SMPTE 372M, SMPTE292M standard * 3G-SDI format supports Dual-Link outputs (Menu Selection)
Monitor Video Output	2K : 3G/HD-SDI	Serial Digital 75 ohm BNC 1ch 1 output (HD PM) *SMPTE 425M, SMPTE292M standard

Trunk Video Output	HD-TRUNK: HD-SDI 75 ohm single end 1ch (require 3G bandwidth fiber adaptor)
Intercom(ENG/PROD)	4-wire or Clearcom or RTS
4-wire	0dBm 600 ohm 2ch
Clearcom	-15dBs 200 ohm 2ch
RTS	0dBs 200 ohm 2ch
MIC	0dBs 2ch 2 outputs Low impedance
Tally	R/G/Y 3ch OPEN (OFF) / GND (ON) 50mA (max)
Control	
Arcnet	BNC x1ch
Ethernet	RJ-45 x1ch
ICCP	OCP/CCP x1, CCP/CSU x1
General	
Operating Voltage	AC100/110/117/220/240V±10%
Power Consumption	BS-98:approx. 80VA (BS only) Power for camera head: less than 155VA CCU-980:approx. 110VA (CCU only) Power for camera head: less than 400VA
Ambient Temperature	BS-98:0°C to +40°C (32°F to 104°F) CCU-980:0°C to +45°C (32°F to 113°F)
Relative Humidity	30% to 90% (Non-condensing)
Dimensions	BS-98:W218.6 x H125x D457mm (W8.63 x H4.92 x D18.00 inch)(excluding protrusions) CCU-980:W483×H133×D454mm (W19.00 x H5.25 x D17.88 inch) (excluding protrusions)
Weight	BS-98:approx. 9kg (20 lbs) CCU-980:approx. 28kg (62 lbs)

Design and specifications are subject to change without notice.

U315B163-IB

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