Ikegami

Unicam HD

16-bit Full Digital HDTV
Portable Camera System **HDK-55**

HDK-55

The HDK-55 is a high performance full digital HDTV camera with superb picture quality and system versatility for studio and field production.
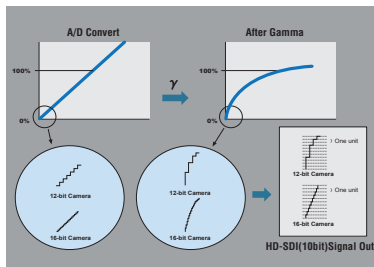
Newly developed FPGA with advanced full digital process ASIC

The HDK-55 incorporates a newly developed FPGA together with advanced full digital process ASIC to achieve outstanding picture performance.

Video processing technology to maximize the benefit of 16-bits

This camera is designed from the start based on 16-bit A/D and matching 16-bit DSP to maximize the benefits of high bit quantization.
Especially for the dark areas of the picture, the higher gradation for gamma and other circuits improves the reproduction, providing for more natural color in the shadow areas of the picture.

2/3-inch 2.3 Mega pixel AIT CCDs

2/3-inch 2.3 Mega pixel AIT CCDs are employed to achieve 1000 TVL horizontal resolution with excellent signal to noise ratio of 60dB at F10 (1080/59.94i) or F11 (1080/50i) 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.

FA(Fiber Adaptor) or TA(Triax Adaptor)

2 Channels QTV

Two channels of QTV output (VBS) are available for prompter and external monitoring purposes.
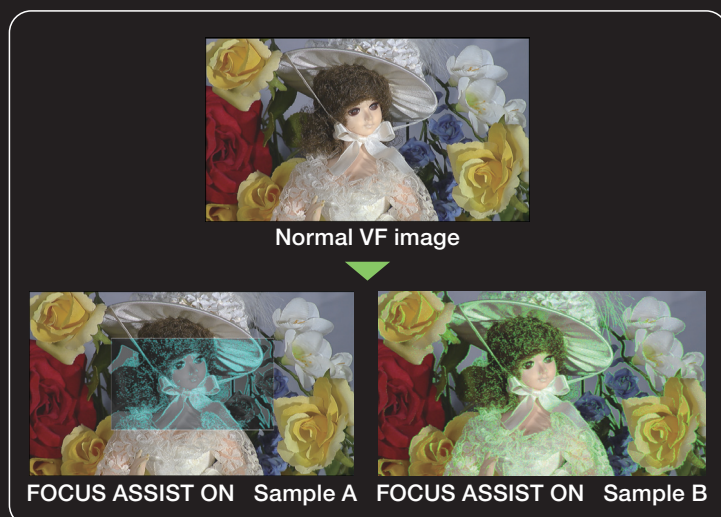The AUX OUT (VBS) connector can be assigned to QTV-1, QTV-2, or Main video by menu.

Note:BS/CCU should support 2 channels of QTV

Sophisticated features made possible with digital technology

The Fine Detail (DTL) function makes the picture more realistic by compressing the detail edge component when shooting high contrast scenes. Highlight DTL and several other DTL functions are also available.
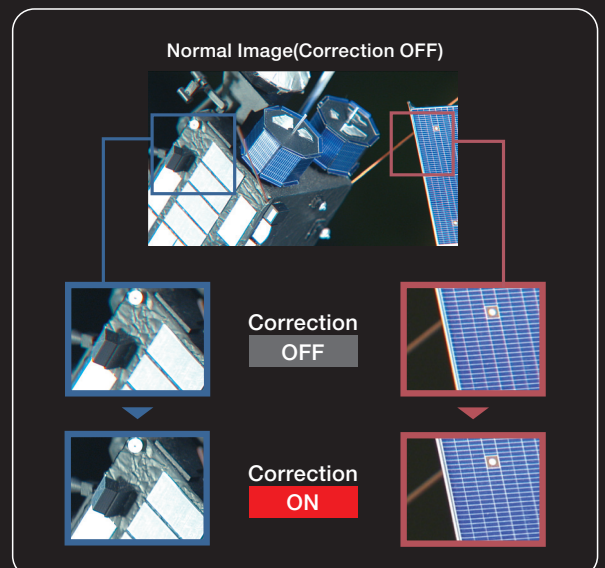

▶ Camera Operator Assist Functions

There are two types of camera operator assist functions incorporated in the HDK-55 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 newly incorporated useful tool, providing very distinct enhancement to the viewfinder edge signal to enable the camera operator to make critical focus adjustment.

Normal VF image

FOCUS ASSIST ON   Sample A   FOCUS ASSIST ON   Sample B

▶ 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.

Normal Image(Correction OFF)

Correction OFF

Correction ON

Affordable Camera Control Unit

The BSF-55 is newly designed in the compact size of 1.5RU height with 19-inch rack mount width, transmitting uncompressed high quality pictures with use of an optical fiber connection between HDK cameras. Both HDTV and SDTV formats are supported simultaneously in both digital and analog form with a wide range of built-in interfaces. The BSF-55 also features embedded audio in the SDI output signals.

A half-rack base station, BS-89A, is also available, permitting full SMPTE fiber cable extension with a compact base station, suitable for small sized OB vans and rental / flight-pack systems. The BS-89A supports 2 channels of QTV to match the camera head feature.

State-of Art System Accessories, Expanding HDTV

SE-H700 System Expander

The SE-H700 System Expander enables the use of the 9-inch viewfinder and full studio lenses with the HDK-55, converting the portable camera into a full facility studio camera. Installation of the camera into the SE-H700 is easy, and conversion back to portable configuration is quick for maximum operating flexibility.

Variety of Viewfinders

For the HDK-55, 2-inch 16:9 high definition VFs for portable application are available, including monochrome CRT type and color LCD type. In addition, 5-inch CRT, 7-inch LCD and 9-inch LCD color viewfinders are also available as options.

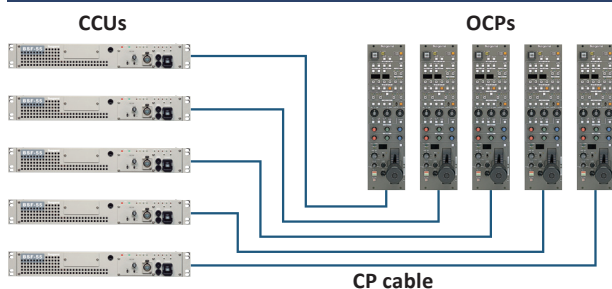2-inch CRT

2-inch LCD

5-inch CRT

7-inch LCD

9-inch LCD

Sophisticated Camera Control Panel System

There are two types of camera control panel systems, each with a wide range of camera control capability. The conventional OCP allows direct and quick control of various camera parameters using dedicated buttons on the panel. The OCP-200 / MCP-200 Network based control panel system allows any OCP 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.
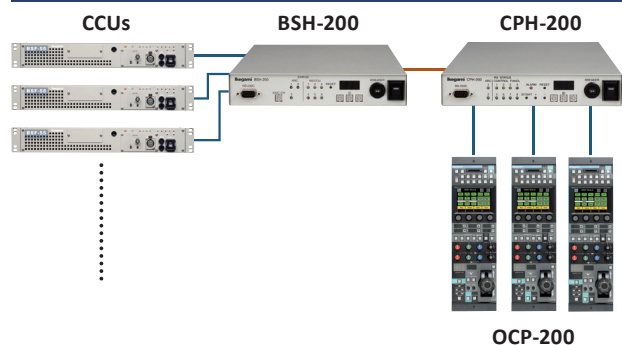
The depth-of-control of the OCP-200 can be selected from basic to complete to fit the customers' operating discipline. Conventional one by one camera control connection is also available with the OCP-200.

Conventional one by one camera control connection

CCUs   OCPs

CP cable

New and traditional control panels can be directly connected to the cameras on a one-by-one basis.

Arc net based camera control system

CCUs   BSH-200   CPH-200

OCP-200

Unicam HD

HDK-55

Ratings

HDK-55 Camera Head with FA-55

Scanning System	1080/59.94i, 1080/50i						
Image Sensor	2/3-inch 2.3 million pixel AIT CCD						
Optical System	2/3-inch RGB prism, f1.4						
Lens Mount	BTA-S1005B						
Filter ※	Optical Filter (servo)			1	2	3	4
		ND		100%	25%	6.20%	1.60%
	Electronic Color Compensation			A	B	C	D
		ECC		3200K	4300K	6300K	8000K
Sensitivity	F10 (1080/59.94i) / F11 (1080/50i) typical at 2000 lx (White reflection 89.9%)						
S/N Ratio	60dB typical (HDTV)						
Limiting Resolution	1000TV lines						
Gain	-6,-3, 0, +3, +6, +12, +18dB						
Electric Shutter	1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000						
Operating Temperature	-20℃ to +45℃(-4℉ to -113℉)						
Operating Humidity	30% to 90% (non-condensing)						
Operating Voltage	DC +11 to +16V						
Weight	4.5Kg (9.92 lbs) with FA-55						
Dimensions	W138.5 x H270 xD337 mm (W5.45 x H10.63 x D13.27inch) Approx. (excluding protrusions) (with FA-55)						
Power Consumption	Approx. 20W (without FA-55)						

Input signals	
External Sync Signal	SYNC 0.6Vp-p ±6dB 75ohm BNC type 1ch
Audio Signal	-60 to +4dB (Variable) / -20dB (Fixed) XLR type 2ch (600ohm balanced)
Intercom Signal	XLR type or 110 type 2ch

Output signals	
Main Video Signal	Y,Pb,Pr 4:2:2 serial digital, Fiber optic connector 1ch
SDI OUT	HD-SDI, BNC type 1ch
MON SDI	HD-SDI, BNC type 1ch (VF, RET, or Main video selectable by menu)
Q-TV	VBS signal, BNC type 1ch (QTV or Mon video (HD-Y signal) switch selectable)
AUX OUT	VBS signal, BNC type 1ch (QTV-1, QTV-2, or Main video selectable by menu)
DC OUT	+12VDC 500mA (max), 4-pin type 1ch

※Dual servo filter version wil be available later (model name may change)

BSF-55 Base Station

Operating Humidity	30% to 90% (non-condensing)
Operating Voltage	AC100V to 240V ±10%
Weight	Approx. 7kg (15.43 lbs)
Dimensions	W483 x H66.4 x D405 mm (19.02 x 26.14 x 15.94 lbs) (excluding protrusions)
Power Consumption	Approx. 55VA

Input signals	
External Genlock	BNC type, 1ch (HDTV/SDTV auto detect) HD: PS(1Vp-p) or Tri-Sync Signal(0.6Vp-p±6dB) 75ohm bridged SD: VBS(1Vp-p) or BBS 75ohm bridged
SDI Return Video Signal	75ohm Single End, BNC type 2ch (HD/SD SDI selectable)
VBS Return Video Signal	75ohm Single End, BNC type 2ch
Q-TV Signal	VBS 1Vp-p 75ohm Single End, BNC type 1ch

Intercom/Tally	
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
PGM(Program Sound)	0dBs 600 ohm/10k ohm switchable 2ch
Tally	R/G 2ch

Output signals	
HD-SDI/SD-SDI Signal	HD-SDI(SMPTE292M) /SD-SDI(SMPTE259M), 75ohm BNC type 4ch(HD-SDI/SD-SDI selectable)
WFM Signal	Serial Digital 75ohm BNC type 1ch (HD-SDI/SD-SDI selectable)
PM Signal	Serial Digital or VBS 75ohm BNC type 1ch (HD-SDI/SD-SDI selectable)
VBS Signal	1.0Vp-p 75ohm BNC type 2ch
MIC	0dBs/+4dBs Low 2ch

Intercom/Tally	
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
Tally	R/G 2ch