

# Ikegami

# Unicam HD

**HDR Ready**

3-CMOS HDTV Camera System

# HDK-73



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2.6 Mega pixel high performance CMOS sensors  
The camera employs 2.6 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 F12.

### Newly Developed High Performance Full HD 2/3-inch CMOS Sensors

The HDK-73 utilizes three 2/3-inch 2.6 mega pixel CMOS sensors, each capable of capturing full HD 1920 x 1080 resolution images and a wide dynamic range of more than 600%, and giving you an excellent sensitivity of F12 (60Hz) / F13 (50Hz) and high signal-to-noise ratio.

### Native Multi-format

The CMOS sensors support progressive and interlace readout, natively supporting 1080i/59.94 and 1080i/50, as well as 720p/59.94 and 720p/50 HDTV formats.

### Advanced Full Digital DSP

This camera is designed from the start base on End-to-End Digital made possible by using CMOS sensors, and includes 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. Up to 38-bits are used within the DSP.

### Lens Aberration Correction Function

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



### 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.

### Quick EZ Focus Assist Function

The Quick EZ 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. The size of area, area color, edge color, and display time on the viewfinder are adjustable in the camera menu.



Focus Assist: ON

### RET and QTV Channels

The featured base stations for the HDK-73 support four channels of return video (RET), two each for SDI and VBS. The selected channel can be output at the camera as an HD-SDI signal (upconverted if input in SDTV) and used to feed a talent monitor or other purpose. In addition there is a separate prompter channel (QTV) with SDTV input at the base station and SD output at the camera.

### Advanced Digital Detail

Both horizontal and vertical Detail Correction circuits for red, green and blue signals are independently and digitally processed. You can obtain the full resolution of a high quality picture with extremely low noise, even under low-light shooting conditions.

### Dockable Camera Body

With a docking style camera body, either an FA(Fiber adapter), TA (Triax adapter) or CA (Camera adapter) can be mounted without any external cables depending on the use. A new lower profile and lower weight improve the maneuverability for shoulder use.



### Moire Reduction Filter (Factory Option)

An Anti-Moire Optical Low-Pass Filter can be fitted in the filter wheel to reduce unwanted moire video patterns when shooting a large LED screen, etc.

\* If this optional filter is ordered, one of the ND filters must be replaced.

## Affordable Base Stations

### FA-55 / BSF-55 SMPTE Fiber System

The FA-55 / BSF-55 is the fiber adapter and base station which are ideal for the HDK-73. The BSF-55 is 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 camera and base station. 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.



BSF-55

### DTA-55 / BST-55 Digital Triax System

The DTA-55 / BST-55 is a triax transmission system, using Ikegami's original super low latency digital transmission to minimize degradation and deliver the full resolution and SNR of the camera head to the base station regardless of the triax cable distance. This transmission system allows customers to transition from SD to HD while still using their existing triax camera cable infrastructure, saving cost and continuing to use a rugged easy to repair cable/connector type.



BST-55

### FA-300 / BSF-300 Fiber Extension System

The FA-300 Fiber Adapter and BSF-300 Base Station have OpticalCON DUO connectors for fiber cable connection. It can accept either a common optical LC-Duplex connector for single-mode fiber cables, or a mating OpticalCON DUO connector for hybrid fiber/copper camera cables. This enables affordable and flexible integration for a variety of applications. The PSU-300 supplies power to the fiber adapter and camera head via a hybrid cable with connection to the base station via a pair of fibers, and extends the overall cable length to make the system flexible.



BSF-300

Note: SE-H750 System Expander is not applicable to FA-300 due to power limitation.

## State-of-the-Art System Accessories, Expanding HDTV

### Docking with CA-75HD Camera Adapter, makes Stand-alone Operation possible

In the stand-alone configuration you can attach with external devices, such as wireless transmission or solid state/HDD recorder, making the camera suitable for live sports, news gathering or field production. The HDK-73 can interface with portable recorders via SDI to control the REC trigger, display status such as REC tally and remaining recording time.

### SE-H750 System Expander

The SE-H750 System Expander enables the use of a studio viewfinder and full studio lenses with the HDK-73, converting the portable camera into a full facility studio camera. Installation of the camera into the SE-H750 is very easy, and conversion back to portable configuration is quick for maximum operating flexibility.



### Tripod Mounting Plate, T-430

The T-430 is a new tripod mounting plate with increased stability and strength in holding the camera. For ease of use, the camera can slide into the plate leading with either the front or rear foot of the camera. The HDK-73 is fully compatible with either the new T-430 tripod plate or the conventional T-791A tripod plate.



### High Performance Viewfinders



VFL200HD  
2-inch Viewfinder



VFE740HD  
7.4-inch OLED Viewfinder



VF700W  
7-inch Viewfinder/Field Monitor  
(Available only in US)

## Variety of Camera Control Panel Systems

### OCP-300 Sophisticated Camera Control Panel

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 flexibility 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.

### BSH-300 Ethernet Converter

The BSH-300 is used for converting command between Ethernet and ICCP, allowing previous control panels to be integrated into the Ethernet network system.

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

### OCP-10 Small and Compact Operation Control Panel

The OCP-10 is a small and compact operation panel to connect with a base station or camera adapter for camera control. It can control basic functions of the camera, such as Iris, White Balance, Black Balance, Paint, Gamma and Master Black and it is ideal for field production or under limited space situations. Also, it supports an Ethernet based control system, allowing customers to choose the camera control system between Ikegami's traditional ICCP control and Ethernet based control system.

\* There is a version not supporting an Ethernet based control system.



## HDR (High Dynamic Range)

The camera provides an HDR function with its HLG (Hybrid Log Gamma) curve. It is now possible to shoot a scene with high dynamic range without losing gradation in the highlights.

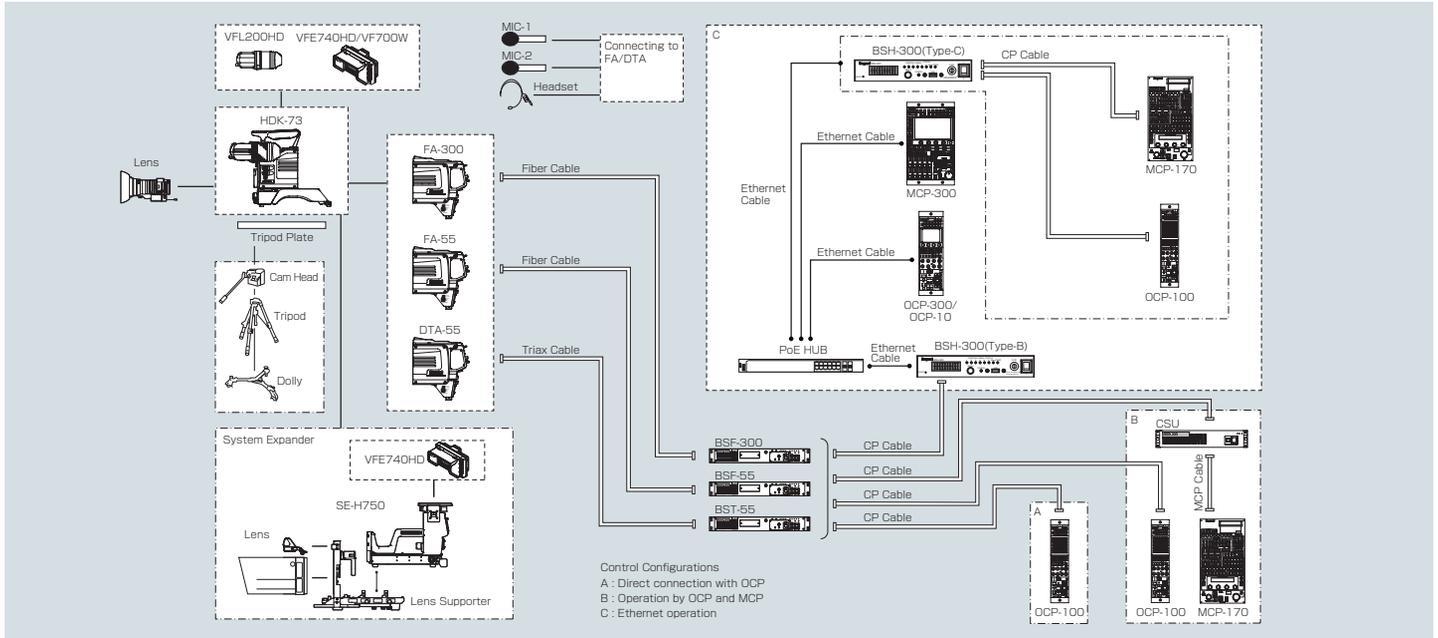


Standard Gamma



Hybrid Log Gamma with HDR monitor

# SYSTEM CONFIGURATION FOR HDK-73



Control Configurations  
 A : Direct connection with OCP  
 B : Operation by OCP and MCP  
 C : Ethernet operation

## Specifications

### HDK-73 with FA-55/FA-300/DTA-55

Signal Format	1920 x 1080/59.94i, 50i 1280 x 720/59.94p, 50p 720 x 580/59.9i (NTSC), 720 x 576/50i (PAL) (Available from BSF-55/300 or BST-55)				
Image Sensor	2/3-inch 2.6 million pixel CMOS sensors				
Optical System	2/3-inch, R,G,B 3 prism, F1.4				
Lens Mount	B4 mount bayonet				
Filter		1	2	3	4
	ND	100%	25%	6.2%	1.6%
		A	B	C	D
	ECC	3200K	4300K	6300K	8000K
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) (Camera Head + FA, excluding VF)				
Dimensions	W138.5 x H270 x D337mm (Camera Head + FA, excluding VF) (W5.5 x H10.62 x D13.25 inch)				
Sensitivity	F12 at 2000lx 1080/59.94i (Typical)				
S/N Ratio	60dB or more (in 1080/59.94i)				
Limiting Resolution	1000TV lines (in 1080/59.94i)				
Electrical Shutter	1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000				
Modulation Depth	60% at 800TV lines (in 1080/59.94i)				
Gamma	OFF, 0.35, 0.4, 0.45, Hybrid Log Gamma				
Gain	-6dB, -3dB, 0dB, +3dB, +6dB, +9dB, +12dB, +18dB				
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 110 Type CN 2ch				
Output Signals					
Analog Video Signal	R, G, B D-Sub CN 1ch (for System Expander)				
HD-SDI Signal (with FA-55)	Serial Digital 75 ohm BNC 1ch				
HD-SDI Signal (with DTA-55)	Serial Digital 75 ohm 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-55/300: VBS signal, BNC type 1ch DTA-55: SD-SDI signal, BNC type 1ch				
AUX OUT Signal	VBS signal, BNC type 1ch (QTV-1, QTV-2, or Main video selectable by menu) * Available with FA-55/300 only. * QTV-2 can not be selected if BS/CCU does not support 2 channels of QTV.				
MON Video Signal	VF/RET/MON (MENU Selection) Serial Digital 75 ohm BNC 1ch				
Intercom Signal	0 dBs 4ch (ENG/PROD/PGM1/PGM2) XLR Type or 110 Type CN				
DC Output	+12VDC 500mA (Max.), 4-pin type 1ch * Option for DTA-55				

### HDK-73 with BSF-55/BST-55/BSF-300

Operating Voltage	AC100V to 120V / 200V to 240V ±10%	
Power Consumption	BSF-55: approx. 44W (BS only) Power for HDK-73 and FA-55 without VF: approx. 70W BST-55: approx. 64W (BS only) Power for HDK-73 and DTA-55 without VF: approx. 99W BSF-300: approx. 44W (BS only) Power for HDK-73 and FA-300 without VF: approx. 70W	
Ambient Temperature	0°C to +40°C (32°F to 104°F)	
Relative Humidity	30% to 90% (Non-condensing)	
Weight	BSF-55: approx. 7kg (15.43 lbs) BST-55: approx. 8kg (17.64 lbs) BSF-300: approx. 7kg (15.43 lbs)	
Dimensions	W483 x H66.4 x D405 mm (W19.00 x H2.63 x D16.00 inch) (excluding protrusions)	
Maximum Cable Distance	FA-55/BSF-55: 2000m (6561.68ft) with 9.2mmφ Hybrid Fiber/Copper Cable DTA-55/BST-55: 800m (2624.67ft) with Fujikura 8.8mmφ Triax Cable FA-300/BSF-300: 300m (984.25ft) with 9.2mmφ Hybrid Fiber/Copper Cable	
Input Signals		
External Sync Signal	HDTV: PS 1Vp-p 75ohm bridged or Tri-sync signal 0.6Vp-p ± 6dB 75ohm bridged connection SDTV: VBS 1Vp-p 75ohm bridged connection or BBS 75ohm bridged connection	
Return Video Signal	HD-SDI/SD-SDI: 75ohm single end, 2ch (HD-SDI/SD-SDI selectable) VBS: 75ohm single end, 2ch	
Q-TV Signal	BSF-55/300: VBS 75ohm single end, 1ch BST-55: SD-SDI 75ohm single end, 1ch	
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		
Main Video Signal		
HD-SDI/SD-SDI Signal	HD-SDI (SMPT292M) / SD-SDI (SMPT259M) 75ohm BNC type 2ch 4 outputs (HD-SDI/SD-SDI selectable)	
VBS Signal	1.0Vp-p 75ohm BNC type 1ch 2 outputs	
PM Signal		
HD-SDI/SD-SDI Signal	Serial Digital 75ohm, 1ch (HD-SDI/SD-SDI selectable)	
SDTV Analog Signal	1.0Vp-p 75ohm BNC type 1ch 1 output	
WFM Signal		
HD-SDI/SD-SDI Signal	Serial Digital 75ohm, 1ch (HD-SDI/SD-SDI selectable)	
Phase Reference Signal	75 ohm single end Analog 1ch HDTV: Tri-Sync (0.6Vp-p) / SDTV: HV (2Vp-p) (MENU Selection)	
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/+4dBs 2ch 2outputs Low impedance (MENU Selection)	
Tally	R/G 2ch	
Data Trunk	RS-422 1ch	
* Option for camera side	* In case of the BST-55, the data trunk channel is not supported as standard.	

Design and specifications are subject to change without notice.

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