

Ikegami

**HD**  
High Definition

1920 X 1080

3CMOS FULL HDTV Medical Grade Camera  
**MKC-300HD**



# MKC-300HD

Ikegami, the worlds leading manufacturer of HDTV solutions responds to the demands of Medical Professionals with unsurpassed picture technology and true to life color rendition.

Record breaking HDTV quality encapsulated in a minimalist ergonomic design for Medical Professionals.



Actual size

- **Full (1920x1080) HDTV**  
Internal signal processing of full HDTV Input with full HDTV Output. Various HDTV outputs are available, namely, 720p, 1080i and 1080p.
- **Ikegami provides the smallest and lightest 3-Chip Full HDTV Medical Grade Camera Head in the world.**  
Ground breaking compact and light weight camera head, with dimensions of 34x40x40mm(WHD) and weight of 100g encapsulating a newly developed CMOS circuit for C-mount applications.
- **Easy Operation**  
The MKC-300HD utilises the same user-friendly interface as previous MKC cameras and enables the Medical Professional to upgrade to full HDTV seamlessly.

## Superb Performance for High-End Medical Applications

### 1000 lines Horizontal Resolution F10/2000lux High Sensitivity

The MKC-300HD employs 3 x 2.1Mega pixel Full HDTV 1/3-inch CMOS Sensors to provide 1000 lines of high definition video images, coupled with High Sensitivity performance of F10/2000lux providing the optimal video quality required for high-end medical video systems.

### 54dB High S/N Ratio

Optimised signal processing circuitry achieves a high Signal-to-Noise Ratio of 54dB.

### Digital Processing

Video signal processing is done in the same signal process ASIC as Ikegamis' HDTV broadcast cameras to constantly achieve the same high level of quality and reliability.

## Ikegami guarantees the Highest Image Acquisition for surgical microscope, and surgical operating theatre applications.

### Automatic Iris Control

Accurate Iris control is possible with auto-iris camera adaptors and Auto-iris lenses.

### Automatic Electronic Shutter system (Shutter Iris)

Electronic shutter (shutter Iris) functionality to maintain optimized performance in a variety of situations.

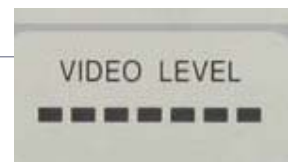
### Scene File

4 position scene file is provided to keep pre-set memory for functions and controls.



### Video Level Indicator

Level Indicator is provided on a front panel of Camera Control Unit (CCU) for ease of operation.



### Skin Tone Enhancer

Fine control of human skin tone details is provided as standard to reproduce fine skin tone.





## Advanced functions to help operation

### Slow Shutter Provision

For very low light level imaging (i.e. Fluorescent lighting), a slow shutter function is provided.

### Flip and Turn Function

Digital capture means that captured images can be flipped horizontally and vertically. Allowing for correction of image inversion from the optics used.

An optional foot pedal is required to allow external operation of this function.

### Still image capture

Still images (up to 1920x1080) can be captured and saved to an optional USB memory (JPEG or BMP). Controllable from external inputs such as a foot pedal.



## Various Functions for a wide range of Operational Modes

### Picture Freeze

Pressing the Freeze button on the CCU panel will hold the current image.

This allows detailed inspection of situations where motion could hide details.

This facility can also be synchronised with an external trigger for use in strobe applications.



### DVI-D Output

Can output at 1920x1080i/p 59.94/50Hz and 1280x720p 59.94/50Hz.

This enables the camera to be used with external High Quality display and PC monitors.

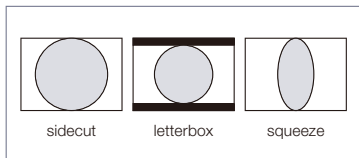
### Remote Control Functions

Can be used with external triggers such as the optional foot pedal, and programmed to control Image Flip/Turn, Still Image Capture, or Scene Files.

### Standard output of SDTV (NTSC/PAL) down-converted video

The MKC-300HD has an internal down-converter to output SDTV. Composite signal, Component and S-VIDEO outputs are provided as standard.

Can be used for integration with existing equipment such as DVD recorders.



### Long 30m camera cable extension

The cable connecting the Camera-Head and the CCU can be up to 30m long (optional cable). No more need to worry about cable routing in overhead applications. Consult Ikegami or Ikegami dealer.

### Anti-biotic coating

Camera-head and CCU utilises an anti-biotic coating to help to improve infection control.



## Optional Accessories

<p><b>Camera Cable</b></p> <p>MCCDHPP-050 5m Camera Cable                  MCCDHPP-100 10m Camera Cable                  MCCDCHP-100 10m Extension Camera Cable</p> <p>Exclusive cable connecting Camera-Head and CCU. (Maximum length 30m)</p>	<p><b>OFLTVP Dual Foot Pedal</b></p> <p>Functions like Still Image Capture, Scene File, Flip and Turn Function can be assigned to this unit.</p>	<p><b>HD Zoom Lens</b></p> <p>High Definition 16 to 1 Zoom Lens</p>	
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**Rating**

Optics	RGB prism method		
Scanning System	Sensor output: 1920x1080, 50/59.94 frames, Progressive Camera output:2:1 interlace 1080 lines 50/59.94 fields or Progressive 720 lines 50/59.94 frames		
Image Pickup Device	1/3-inch CMOS x 3		
Effective Pixels	1920(H) X 1080(V): 2.1M pixels		
Lens Mount	C-Mount		
Aspect Ratio	H16:V9		
Output signal			
HDTV	Analogue Y,Pb,Pr/RGB	D-Sub(15p)	1 line
	HD-SDI(1080i or 720P)	BNC	2 lines
	DVI (1080i, 1080P or 720P)		1 line
SDTV (Down Convert)	Composite (VBS)	BNC	1 line
	S-VIDEO	S-Terminal	1 line
	RGB/Y,Cb,Cr	D-Sub(15p)	1 line
Input signal			
Genlock	HD-SDI	BNC	1 line
USB Interface	USB 2.0 2 lines (Front/Rear) for Still Picture Capture		
Electric Shutter Speed	OFF, 1/100 to 1/10000		
Camera Cable (Option)	MCCDHPP-050 5m	Camera Cable	
	MCCDHPP-100 10m	Camera Cable	
	MCCDCJP-100 10m	Extension Camera Cable	
	MCCDCJP-250 25m	Extension Camera Cable with booster	
Power Requirement	AC100V to AC240V ±10%		
Power Consumption	60VA		
Operating Temperature	0°C to +40°C		
Dimensions/Weight (APPROX.)	Camera Head:W34 x H40 x D40mm / 100g CCU:W210 x H80 x D300mm / 2500g		

**Performance**

Resolutions	Horizontal: 1000 TV lines
S/N Ratio	54dB (Gamma/Detail off, Y signal)
Sensitivity	F10 at 2000 lux/3200°K or better
Registration Error	Within 0.05% of on full screen

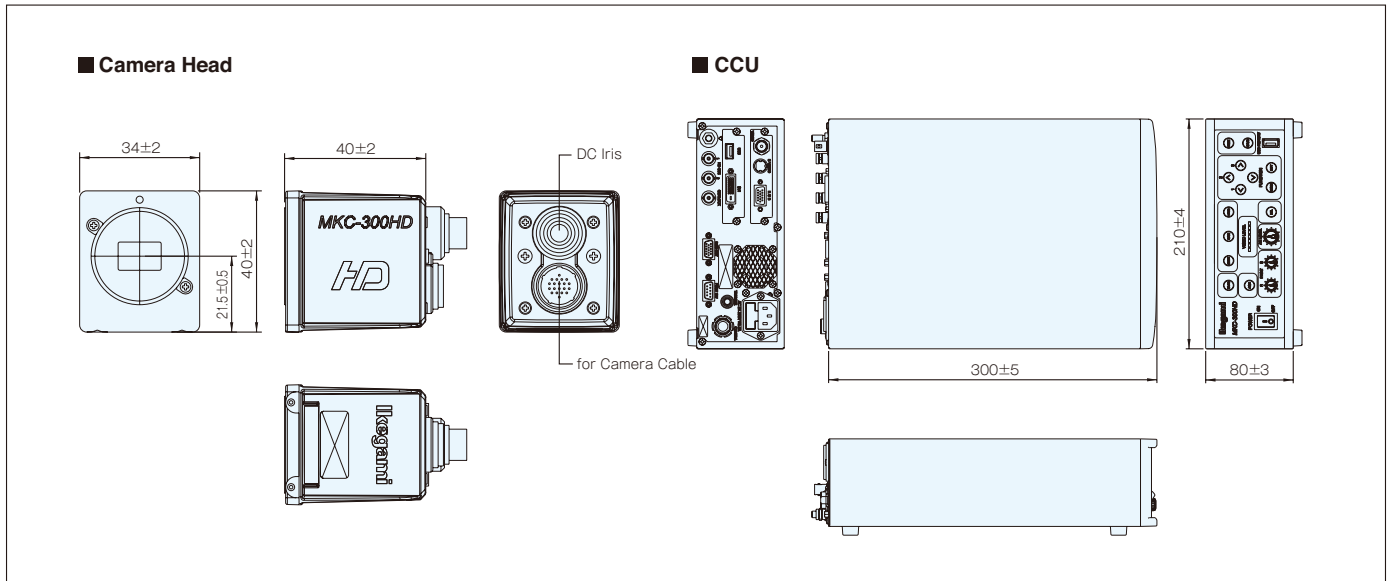
**Function**

Function	Image Flip and Turn Still Image Capture Scene File Down Convert (SDTV output)
Auto functions	Auto White Balance Auto Gain Control Auto Shutter Iris Auto Iris Control (DC Iris)
Skin Detail Enhancement	ON/OFF, and level adjustable
Slow Shutter	Up to 1/4 seconds slow shutter speed available
Paint	R-channel / B-channel (Level adjustable)
AE Level	Exposure level adjustment
Video Level Indicator	Built-in, Seven (7) steps
Color Bar	Built-in
Photometry Area	Selectable in Menu
4:3 Video Output	4:3 side cut

Standard Accessories	AC Power Cable
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Optional accessories	Camera Cable, RGB cable Foot Pedal, HD Zoom Lens
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**External Appearance (mm)**



Design and specifications are subject to change without notice.

**Ikegami** **IKEGAMI ELECTRONICS (U.S.A.), INC.**

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