

► Single-chip colour microhead CCD camera

The colour microhead camera series IK CU51 (PAL) and IK CU44 (NTSC) are ideally suited to medical applications such as endoscopy, and also for quality control in industrial environments. The centrepiece of the design is an external control unit (CCU) to which the small, lightweight 1/2", 1/3" and 1/6" sensor based camera heads can be connected. Unlike other comparable camera systems on the market, the different heads and cable lengths can be swapped easily at any time without the need to readjust the control unit. This saves time and additional costs.

The design, with external control unit and separate microheads, minimises the camera's dimensions and thus the space required, while still providing excellent image quality. The microhead technology combines the latest electronic components: Hyper HAD CCD sensors maximise the sensitivity, while the latest DSP processors ensure the best image quality in addition to providing extra functionality such as automatic white balance adjustment, exposure time, gain and backlight compensation. All camera settings can be performed using the buttons on the on-screen display or in Windows via an RS232 interface.



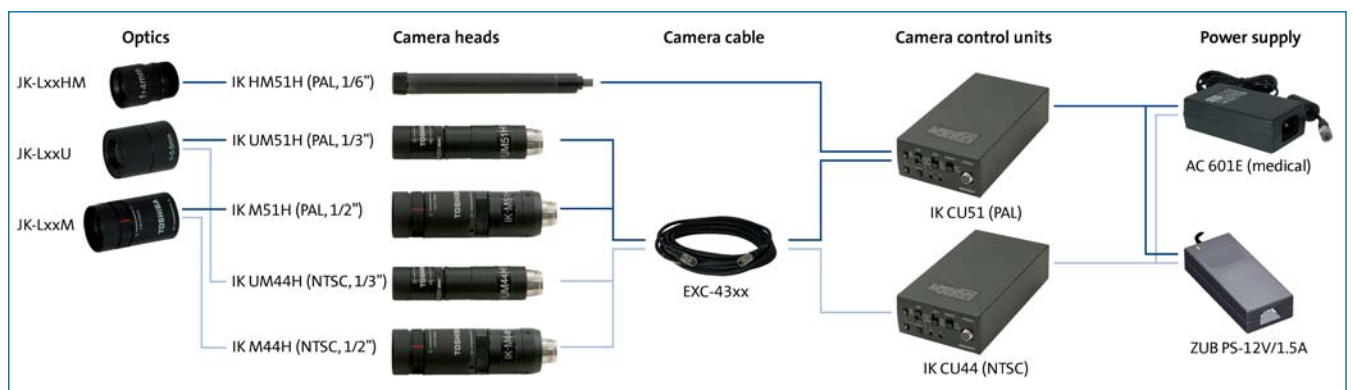
**Applications**

- Medical (microscopy, endoscopy, dermatology, ophthalmology, etc.)
- Inspection tasks in industrial environments
- Security monitoring
- Broadcasting, plus many others

► Technical highlights

- 1/2", 1/3" or 1/6" IT CCD sensors (1/6" only for PAL)
- 752 x 582 pixels (HxV) (IK CU51)
- 768 x 494 pixels (HxV) (IK CU44)
- Sensor heads with 7 mm, 12 mm and 17 mm diameters
- OEM versions for, for example, the 1/6" head, 90° angle head, board version with 4.5 mm diameter
- High TV definition with >470 lines (horizontal)
- Compact, easy-to-use base unit
- Video outputs: FBAS and Y/C (S-VHS)
- Latest CCD and DSP technologies
- CCD iris (up to 1/10,000) and automatic gain control (AGC)
- White balance: automatic, switching, manual
- On-screen menu for fast, easy camera setup
- RS232 interface for controlling the camera functions
- Cable lengths of up to 54 m (1/2" and 1/3") or 10 m (1/6")

► System components for the Toshiba IK CU51 (PAL) and IK CU44 (NTSC) camera series

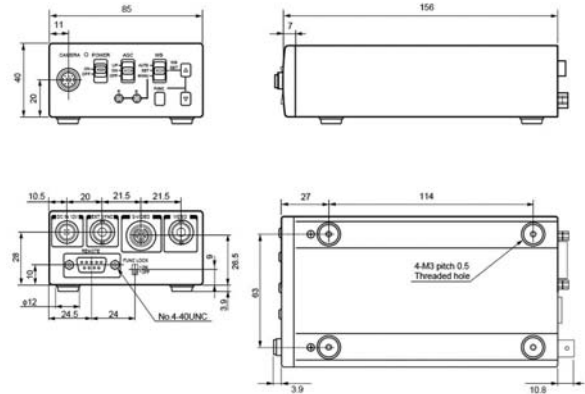




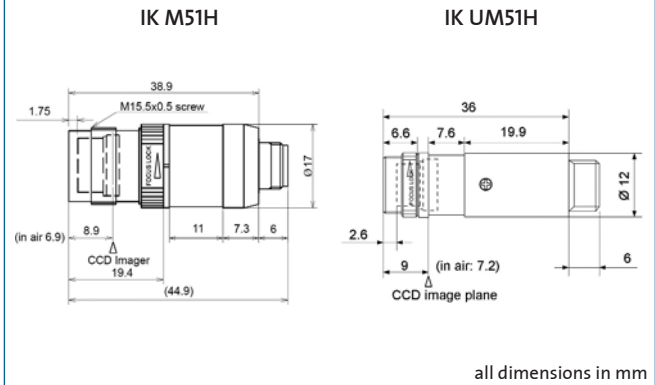
► Technical specifications

SPEZIFICATIONS	IK CU51	IK CU44
POWER SUPPLY	12 VDC ±0,5 V, 360 mA	12 VDC ±0,5 V, 310 mA
CCD SENSOR	1/2", 1/3" or 1/6" IT-CCD	1/2" or 1/3" IT-CCD
PIXELS	752 (H) x 582 (V)	768 (H) x 494 (V)
EFFECTIVE	1/2"-CCD 6,47 (H) x 4,83 (V)	6,54 (H) x 4,89 (V)
IMAGE AREA	1/3"-CCD 4,89 (H) x 3,64 (V)	4,88 (H) x 3,66 (V)
[mm]	1/6"-CCD 3,65 (H) x 2,71 (V)	-
HORIZONTAL RESOLUTION	> 470 lines	
REFRESH RATE	(H) 15,625 kHz (V) 50 Hz	15,734 kHz 59,94 Hz
SCANNING SYSTEM	2:1 interlaced	2:1 interlaced
SYNCHRONISATION	Internal/external (autom.)	Internal/external (autom.)
SIGNAL-TO-NOISE RATIO	> 46 dB	
VIDEO OUTPUT	VBS 1.0 V <sub>p-p</sub> , (BNC terminal) PAL system Y/C separation output (S terminal)	
OUTPUT IMPEDANCE	75 Ω unbalanced	75 Ω unbalanced
EXTERNAL SYNCHRONISATION	Input: VBS 1.0 V <sub>p-p</sub> , (BNC terminal) PAL, 75 Ω unbalanced Adjustment function: Subcarrier phase, H phase	
WHITE BALANCE	Automatic/set/manual	
GAIN CONTROL (AGC)	SENS UP (+ 6 dB)/ON/OFF	
SHUTTER	Automatic, 1/50 s, 1/100 s, 1/250 s, 1/500 s, 1/1.000 s, 1/2.000 s, 1/4.000 s, 1/10.000 s, synchronised scan	
TEMPERATURE RANGE	-10 °C to +40 °C (in operation)	
VIBRATION/SHOCK RESISTANCE	70 m/s <sup>2</sup> (10 to 200 Hz) / 700 m/s <sup>2</sup>	
DIMENSIONS	85 x 40 x 156 (W x H x D in mm)	
WEIGHT	390 g	

IK CU51 base unit



Camera heads



► Pin assignment

DC IN 12V Pin	Signal	S-VIDEO Pin	Signal	REMOTE Pin	Signal
1	+12 VDC	1	+12 VDC1	1	NC
2	+12 VDC	2	+12 VDC	2	TXD
3	GND	3	Y	3	RXD
4	GND	4	C	4	DSR
				5	GND
				6	DTR
				7	CTS
				8	RTS
				9	NC