



CV-A436

Remote Head

Progressive Scan Monochrome Camera



- Remote head 1/3" progressive scan monochrome camera
- 170 x 46mm head with 2m cable
- 659 (h) x 494 (v) square pixels (VGA format)
- 60 frames per second single channel video output
- High S/N ratio >53 dB
- Shutter speeds from 1/60 to 1/200,000 second in 15 steps in continuous mode
- Shutter speeds from 1/60 to 1/20,000 second in 10 steps in EPS modes
- Programmable exposure with 1H steps. (31.8 μ s)
- Partial scanning 1/2, 1/3 and 1/6 for higher frame rates
- Internal, external HD/VD or random trigger synchronization
- Edge pre-select, pulse width control, start/stop trigger modes
- Long time exposure with external VD pulse interval
- Frame-delay readout in connection with pulse width controlled shutter
- Exposure enable EEN, write enable WEN and pixel clock output
- Short ASCII commands for fast mode setup via serial port
- Setup by Windows NT/2000/XP software via RS 232C

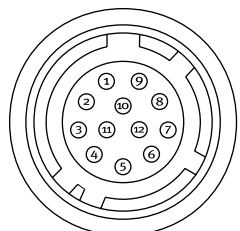
The leading manufacturer of high performance camera solutions

Specifications for CV-A436

Specifications	CV-A436
Scanning system	Progressive 525 lines, 60 frames/sec.
Pixel clock	24.54 MHz
Line frequency	31.46 KHz. (780 pixel clock/line)
CCD sensor	Monochrome 1/3" IT CCD
Sensing area	4.9 (h) x 3.7 (v) mm
Cell size	7.4 (h) x 7.4 (v) μ m
Effective pixels	659 (h) x 494 (v)
Pixels in video output.	Full 648(h) x 492 (v) 60 frames/sec. 1/2 partial 648(h) x 240 (v) 112 frames/sec. 1/3 partial 648(h) x 160 (v) 158 frames/sec. 1/6 partial 648(h) x 80 (v) 268 frames/sec.
Sensitivity on sensor	0,1 Lux (Max gain, 50% video)
S/N ratio	>53 dB
Video output (with/without sync.)	Composite VS signal, 1 Vpp, 75 Ω Video signal 0.7 Vpp
Gamma	1.0 or 0.45
Gain	Manual - Automatic
Gain range	Man.: -3 to +12 dB - Auto.: 0 to +12 dB
Synchronization	Int. X-tal. Ext. HD/VD or random trigger
HD/VD sync. input/output	4 Vpp \pm 2 V, 75 Ω (or TTL input)
Trigger input	4 Vpp \pm 2 V, TTL
WEN output (write enable)	4 V, 75 Ω
EEN output (exposure enable)	4 V, 75 Ω
Pixel clock output	4 V, 75 Ω
Trigger modes	Continuous, EPS, PWC, Long time, Start/Stop and Smearless
Readout modes	Frame delay, Smearless, Partial
Trigger accumulation	HD synchronous or HD a-synchronous
Shutter speed	Continuous 1/60 to 1/200,000 second EPS 1/60 to 1/20,000 second
Programmable exposure	1.5 H to 525 H
Pulse width control	1 H to 1000 H
Start/stop	1/60 to 1/20,000 second
Long time exposure	2 frames to ∞
Frame-delay readout	Time from PWC trigger input to ext. VD input
Smearless readout	Reduced smear at high shutter speeds
Functions controlled by RS 232C	Trigger mode, shutter speed, shutter mode, scanning, gain, timing signal polarity
Functions controlled by internal DIP switches	VD input/output, HD input/output HD and VD 75 Ω termination on/off
Operating temperature	-5°C to +45°C
Humidity	20 - 80% non-condensing
Storage temp./humidity	-25°C to 60°C/20% - 80 % non-condensing
Vibration	10G (20Hz to 200 Hz XYZ)
Shock	70G
Regulations	CE (EN50081-1, EN50082-2), FCC part 15
Power	12V DC \pm 10%. 2 W
Lens mount thread	M15.5 x 0.5
Dimension/weight cam. head	\varnothing 17 x 46 mm. 25 g excluding cable
Cable length	2m. detachable at control unit
Dimensions control unit	29 x 44 x 66 mm (HxWxD)
Weight control unit	150 g

Connection Description

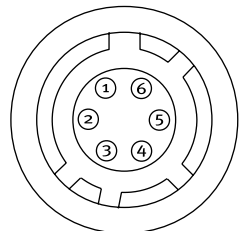
DC-IN/SYNC.



HIROSE HR10A-10R-12PB-01

Pin 1 Ground
2 +12V DC
3 Ground
4 Video output
5 Ground
6 HD input/HD output *)
7 VD input/VD output *)
8 Ground
9 NC/Pixel clock output *)
10 NC/GND/WEN output *)
11 NC/DC/Trigger input *)
12 Ground

RS232C/TRIGGER

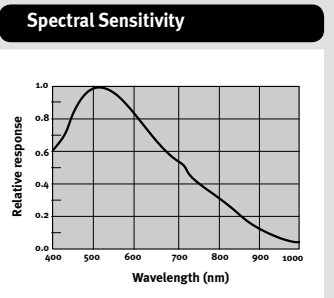


HIROSE HR10A-7R-6Pb

Pin 1 TXD
2 RXD
3 Ground
4 Ground
5 Trigger input *)
6 EEN output *)

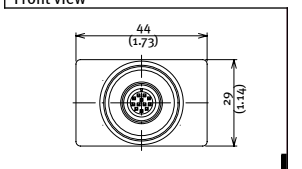
*) Option by internal setting

Plugs for cable:
12 pin: HIROSE HR10A-10P-12S
6 pin: HIROSE HR10A-7P-6S

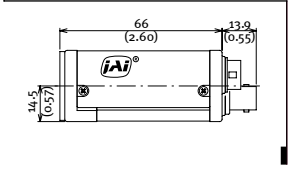


Control Unit Dimensions

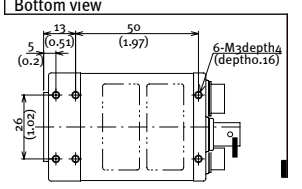
Front view



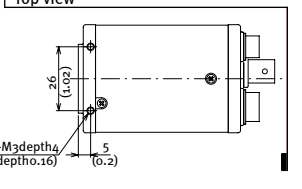
Side view



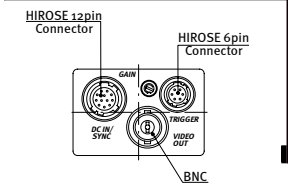
Bottom view




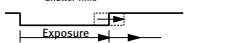

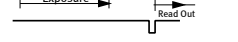
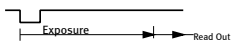


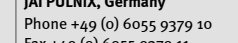
Top view

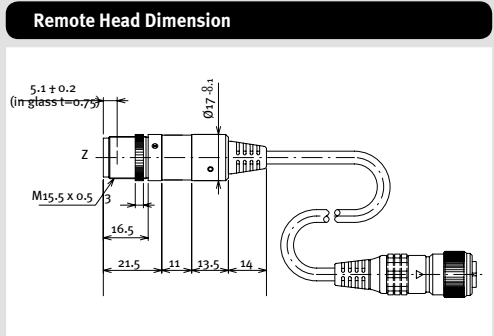


Rear view



Trigger/Readout Modes

EDGE	Trigger	
PRE-SELECT	Trigger	
PULSE	Trigger	
WIDTH	Trigger	
FRAME-DELAY	Trigger	
READOUT	Ext.VD	
START/STOP	Trigger	
	Ext.VD	



Ordering Information

CV-A436 1/3" Remote Head Progressive Scan Monochrome Camera, 2m cable

MP30 mounting bracket (must be ordered separately)

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