



CV-A1

Compact Mega Pixel Progressive Scan Cam-



- *New compact size 1/2" progressive scan monochrome CCD camera*
- *1392 (h) x 1040 (v) 4.65 μ m square pixels*
- *16 frames per second with full resolution*
- *Up to 75 fps with partial scan*
- *4 times normal sensitivity with H and V binning*
- *Internal, external HD/VD or random trigger synchronization*
- *Edge pre-select, pulse width control and start/stop trigger modes*
- *Shutter speeds from 1/16 to 1/200,000 second in 16 steps*
- *Programmable exposure*
- *Frame-delay readout in combination with pulse width controlled shutter*
- *Unique smear reduction circuit*
- *Exposure enable EEN, write enable WEN and pixel clock output*
- *Short ASCII commands for fast mode setup via serial port*
- *Setup by Windows 98/NT/2000 software via RS 232C*

The leading manufacturer of high performance camera solutions

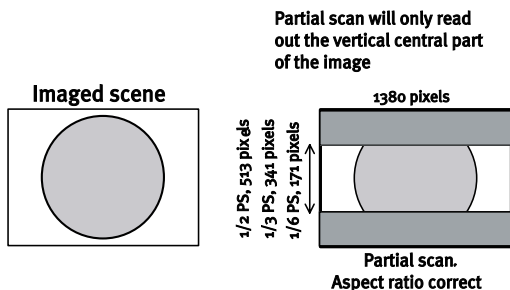
Specifications for CV-A1

Specifications

CV-A1

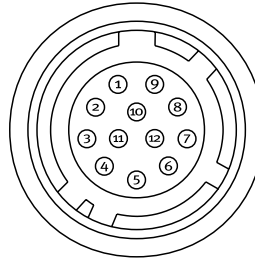
Scanning system	Progressive scan
Pixel clock	28.64 MHz
Line frequency	17.127 kHz (1672 pixel clock/line)
Frame rate for full frame	16.037 frames/sec. (1068 lines/frame)
CCD sensor	Monochrome 1/2" IT CCD
Sensing area	6.42 (h) x 4.81 (v) mm
Effective pixels	1392 (h) x 1040 (v)
Pixels in video output	
Full:	1380 (h) x 1035 (v) 16 frames/sec.
Horizontal binning:	690 (h) x 1035 (v) 16 frames/sec.
Vertical binning:	1380 (h) x 501 (v) 32 frames/sec.
H + V binning:	690 (h) x 501 (v) 32 frames/sec.
1/2 partial:	1380 (h) x 513 (v) 30 frames/sec.
1/3 partial:	1380 (h) x 341 (v) 43 frames/sec.
1/6 partial:	1380 (v) x 171 (v) 75 frames/sec.
Cell size	4.65 (h) x 4.65 (v) μ m
Sensitivity on sensor	0.3 Lux (Max gain, 50% video)
S/N ratio	>50 dB
Video output	Composite VS signal, 1 Vpp, 75 Ω Video signal 0.7 Vpp (selectable)
Gamma	0.45 or 1.0
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 sync. input/output	4 V, 75 Ω
Trigger input	4 V, TTL
WEN output (write enable)	4 V, 75 Ω
EEN out. (exposure enable)	4 V, 75 Ω
Pixel clock output	4 V, 75 Ω
Trigger modes	Continuous, Edge pre-select, Pulse width control, Start/stop
Readout modes	Frame-delay readout, Smearless, Binning
Shutter	1/16 through 1/200,000 sec.
Triggered shutter speed	1/16 through 1/12,000 sec.
Programmable exposure	1023 steps in 58 μ s increments
Long time exposure	2 frames to ∞
Smearless readout	Reduced smear at high shutter speeds
Functions controlled by RS 232C	Scanning format, Trigger modes, Readout modes, Shutter speed, Pixel clock output, Sync. on/off, Programmable exposure, Manual gain, AGC, Gamma
Functions controlled by internal DIP switches	VD input/output, HD input/output HD, 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 %
Power	12V DC $\pm$ 10%. 1.8 W
Lens mount	C-mount
Dimensions	29 x 44 x 66 mm (HxWxD)
Weight	150 g

Readout Formats



Connection Description

DC-IN/SYNC.

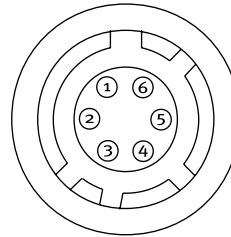


HIROSE HR10A-10R-12PB-01

- | | | |
|-----|----|--------------------|
| 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 | Pixel clock output |
| | 10 | WEN output |
| | 11 | Trigger input |
| | 12 | Ground |

(Pin configuration compatible with EIAJ standard)

RS 232C/TRIGGER

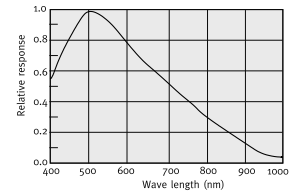


HIROSE HR10A-7R-6PB

- | | | |
|-----|---|---------------|
| Pin | 1 | TXD |
| | 2 | RXD |
| | 3 | Ground |
| | 4 | Ground |
| | 5 | Trigger input |
| | 6 | EEN output |

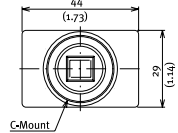
Plugs for cable:
12 pin: HIROSE HR10A-10P-12S
6 pin: HIROSE HR10A-7P-6S

Spectral Sensitivity

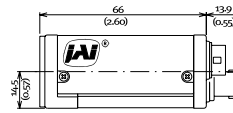


Dimensions

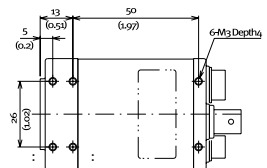
Front view



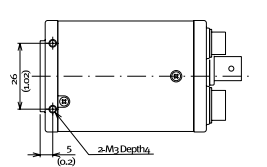
Side view



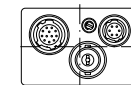
Bottom view



Top view



Rear view



Ordering Information

CV-A1 1/2" Compact Mega Pixel
Progressive Scan Camera
MP40 Tripod Adapter (must be
ordered separately)

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