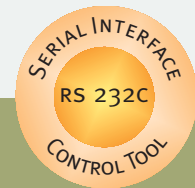


CV-A1 / CV-A1 UV

Progressive Scan



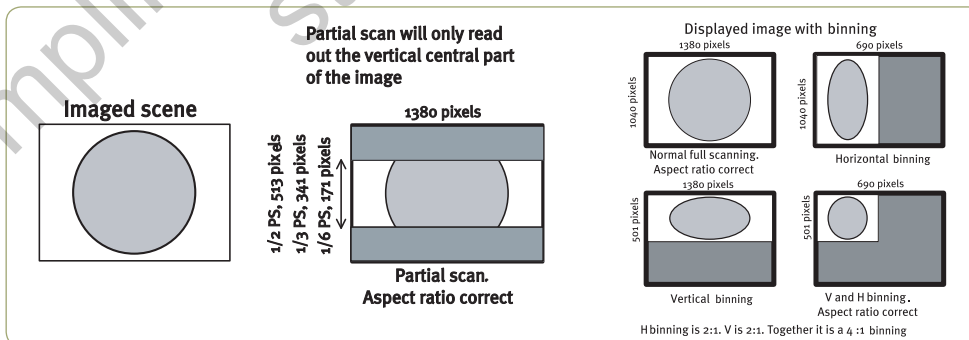
- Compact 1/2" monochrome progressive scan camera
- UV version available (CV-A1 UV)
- 1392 (h) x 1040 (v) 4.65 μm square pixels
- 16 frames/second with full resolution in continuous operation
- Increased frame rate with vertical binning and partial scan
- Increased sensitivity with H and V binning
- Exposure time from 75.9 μs to 116 ms using Pulse Width Control mode
- Programmable exposure from 75.9 μs to 59.8 ms
- Frame-delay readout mode for multiplexed readout of up to 3 cameras
- Internal, external HD/VD or random trigger synchronization
- Smear reduction readout mode
- LVAL-synchronous/-asynchronous operation (auto-detect)
- Exposure enable (EEN), Write enable (WEN) and Pixel Clock output
- Setup by Windows NT/2000/XP via serial communication



Specifications for CV-A1 / CV-A1-UV

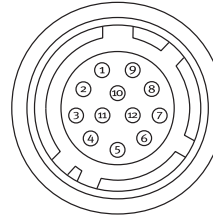
Specifications	CV-A1 / CV-A1 UV
Sensor	1/2" progressive scan
Pixel Clock	28.64 MHz
Frame rate full frame	16.037 frames/second (1068 lines per frame)
Active area	6.4 (h) x 4.8 (v) mm
Cell size	4.65 x 4.65 pixels
Active pixels	1380 x 1035
Read-out modes	Full 1380 (h) x 1035 (v) 16 fps 1/2 partial scan 1380 (h) x 513(v) 30 fps 1/3 partial scan 1380 (h) x 341 (v) 43 fps 1/6 partial scan 1380 (h) x 171 (v) 75 fps Horizontal binning 690 (h) x 1035 (v) 16 fps Vertical binning 1380 (h) x 527 (v) 32 fps H + V binning 690 (h) x 527 (v) 32 fps Smear-less Smear reduction Frame-delay readout For multi-camera read-out
Sensitivity (CV-A1)	0.3 Lux (On sensor, max. gain, shutter off, 50% video)
S/N ratio	>50dB (odB gain)
Video output	Composite VS signal, 1Vp-p, 75Ω Video signal, 0.7Vp-p (selectable)
Gain	Manual, -3 to +12 dB Automatic, 0 to +12dB
Synchronization	Int. X-tal, Ext. HD/VD or random trigger
Inputs	Trigger 4V, TTL HD/VD sync 4V, 75Ω or High Z (switchable)
Outputs	HD / VD sync. 4V, 75Ω WEN (Write Enable) 4V, 75Ω EEN (Exposure Enable) 4V, 75Ω Pixel clock 4V, 75Ω
Trigger modes	Continuous, EPS (Edge Pre-Select), PWC (Pulse Width Control), Long time exposure, Smear reduction and Frame-delay readout
Electronic shutter	Pre-set shutter 1/16 to 1/200,000 in 16 steps
Programmable exposure (PE)	1.3H to 1000H (75.9 μs to 59.8 ms)
Pulse Width	1.3H to 2000H (75.9 μs to 116 ms)
Long time exposure	2 frames to ∞
Accumulation	HD synchronous or HD asynchronous
Control interface	RS-232C, short ASCII commands
Functions controlled by RS-232C	Scanning format, Trigger modes, Readout modes, Programmable exposure, Shutter, Gain, Pixel clock output, Sync on/off, Black level, Manual gain, AGC, Gamma
Functions controlled by internal DIP-switches	VD input/output, HD input/output, HD/VD 75Ω termination on/off
Operating Temperature	-5°C to +45°C
Humidity (operation)	20 - 90% non-condensing
Storage temp./humidity	-25°C to +60°C / 20 to 90%
Vibration	10G (20Hz to 200 Hz XYZ)
Shock	70G
Regulations	CE (EN 61000-6-2, EN-61000-6-3), FCC part 15 class B, RoHS/WEEE
Power	12V DC +/-10%, 1.8W
Lens mount	C-mount
Dimensions (H x W x L)	29 x 44 x 66 mm
Weight	150 g

Readout formats



Connector pin-out

DC-IN/SYNC.

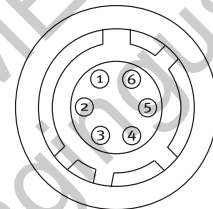


HIROSE HR10A-10R-12PB-01

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

(Pin configuration compatible with EIAJ standard)

RS 232C/TRIGGER



HIROSE HR10A-7R-6PB

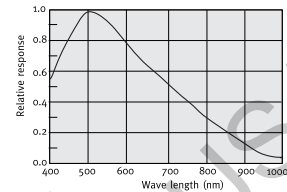
- | | | |
|-----|---|----------------|
| Pin | 1 | TXD |
| | 2 | RXD |
| | 3 | Ground |
| | 4 | Ground |
| | 5 | Trigger input |
| | 6 | EEN/WEN output |

*) Configurable

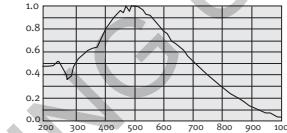
HIROSE Plugs for cable:
12 pin: HIROSE HR10A-10P-12S
6 pin: HIROSE HR10A-7P-6S

Spectral Response

CV-A1

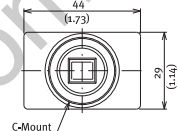


CV-A1-UV

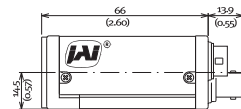


Dimensions

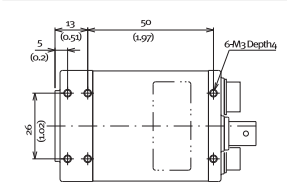
Front view



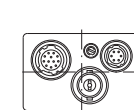
Side view



Bottom view



Rear view



Ordering Information

CV-A1 1/2" Monochrome Progressive Scan Camera
CV-A1 UV 1/2" UV-enhanced Progressive Scan Camera
MP40 Tripod Adapter (must be ordered separately)

Europe, Middle East & Africa
Phone +45 4457 8888
Fax +45 4491 8880

Asia Pacific
Phone +81 45 440 0154
Fax +81 45 440 0166

Americas
Phone (Toll-Free) 1 800 445 5444
Phone +1 408 383 0300

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