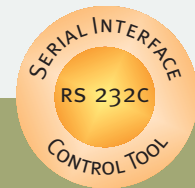


CV-A2 Progressive Scan



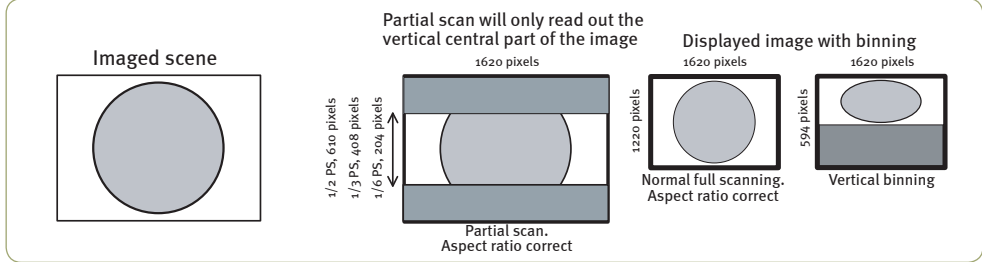
- *Compact 1/1.8" monochrome progressive scan camera*
- *1620 (h) x 1220 (v) 4.4 μ m square pixels*
- *15 frames/second with full resolution in continuous operation*
- *Increased frame rate with partial scan and vertical binning*
- *Increased sensitivity with vertical binning*
- *Exposure time from 53.1 μ s to 108.7 ms using Pulse Width Control mode*
- *Programmable exposure from 76.5 μ s to 66.5 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-A2

Specifications	CV-A2
Sensor	1/1.8" progressive scan
Pixel Clock	36.15 MHz
Frame rate full frame	15 frames/second (1252 lines per frame)
Active area	7.12 (h) x 5.36 (v) mm
Cell size	4.4 x 4.4 pixels
Active pixels	1620 x 1220
Read-out modes	Full 1620 (h) x 1220 (v) 15 fps 1/2 partial scan 1620 (h) x 610 (v) 28 fps 1/3 partial scan 1620 (h) x 408 (v) 40 fps 1/6 partial scan 1620 (h) x 204 (v) 70 fps Vertical binning 1620 (h) x 594 (v) 30 fps Smear-less Frame-delay readout For multi-camera read-out
Sensitivity	0.3 Lux (On sensor, max. gain, shutter off, 50% video)
S/N ratio	>50dB (0dB gain)
Video output	Composite VS signal, 1Vp-p, 75Ω Video signal, 0.7Vp-p (selectable)
Auto-iris lens video output	0.7Vp-p
Gain	Manual, -3 to +12 dB Automatic, -3 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 1/15 to 1/200,000 in 16 steps Programmable exposure (PE) 1.44H to 1252.44H (76.5 μs to 66.5 ms) Pulse Width 1H to 2047H (53.1 μs to 108.7 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
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% 2.3W
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 / Trigger / Sync

HIROSE HR10A-10R-12PB-01

Pin 1 GND
 2 +12 V DC input
 3 Ground
 4 Video/Iris 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

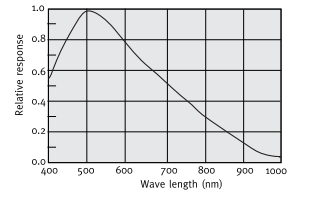
HIROSE HR10A-1R-6PB

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



Dimensions

Front view

44 (1.73)
 29 (1.14)
 C-Mount

Side view

66 (2.60)
 13.9 (0.55)
 36.5 (1.44)

Bottom view

13 (0.51)
 50 (1.97)
 6-M3 Depth
 5 (0.2)
 26 (1.02)

Top view

26 (1.02)
 5 (0.2)
 ≥M3 Depth

Rear view

HIROSE 12pin Connector
 HIROSE 6pin Connector
 BNC Connector

Ordering Information

CV-A2 1/1.8" Monochrome Progressive Scan Camera

MP40 Tripod Adapter (must be ordered separately)

Europe, Middle East & Africa
 Phone +45 4457 8888
 Fax +45 4491 3252

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

Visit our web site on www.jai.com



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI U.S. cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notification.