CV-M9 GE

3CCD Progressive Scan RGB Color

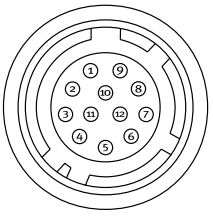
- *3 x 1/3" progressive scan RGB color camera*
- *1024 (h) x 768 (v) active pixels*
- *4.65 µm square pixels*
- *Compact RGB prism for C-mount lenses*
- *Chromatic shading reduction for wider choice of lenses*
- *30 frames/second with full resolution*
- *86 frames/second with 1/8 partial scan*
- *Vertical binning for higher sensitivity and frame rate*
- *12-bit internal video processing*
- *24 or 30-bit RGB output via GigE Vision*
- *Edge Pre-Select and Pulse Width Control trigger modes*
- *Sequencer trigger mode for on-the-fly change of shutter, gain and ROI*
- *Manual, continuous (auto-tracking) or one-push auto white balance*
- *Color bar test image for set-up*
- *Comprehensive software suite and SDK for Windows XP*

Specifications for CV-M9 GE

Specifications	CV-M9 GE
Sensor	3 x 1/3" progressive scan CCD
Pixel clock	33.75 MHz
Frame rate full frame	30 frames/sec. (729 lines per frame)
Active area	4.5 (H) x 3.6 (v) mm
Cell size	4.65 (h) x 4.65 (v) µm
Active pixels	1024 x 768
Readout modes	
Full	1024 (h) x 768 (v) 30 fps
1/2 partial	1024 (h) x 384 (v) 48 fps
1/2 partial	1024 (h) x 192 (v) 68 fps
1/8 partial	1024 (h) x 96 (v) 86 fps
V. binning	1024 (h) x 384 (v) 50 fps
Smear-less	In conjunction with trigger only.
Region-of-interest (ROI)	2 non-overlapping. User def. Mem. readout
Sensitivity	2 Lux (On sensor. Max. gain, 50% video)
S/N ratio	>50 dB (Green ch., 0 dB gain)
Video output	GigE Vision, 3 x 8-bit or 3 x 10-bit
Auto-iris lens video	0.7 Vp-p
Gain	Manual
Gain range, Master	-3 to +12 dB
R and B	-6 to +6 dB
Synchronization	External hardware trigger via GPIO Software trigger via GigE Vision
GPIO Module	
Input / output switch	Configurable 12-in / 9-out switch
Clock generator (one)	12-bit counter (based on 25 MHz clock or Pixel Clock)
Pulse generators (four)	20-bit counters programmable for length, start point, stop point, repeat
Hardware trigger modes	Continuous Edge-Pre Select (EPS) Pulse Width Control (PWC) Sequence (Gain, Shutter, ROI)
Electronic shutter	
Pre-set shutter	1/30 to 1/50,000 in 12 steps
Programmable exposure	1/30 s (791L) to 1/50,000 sec. (0.5 L) in 42 µs steps. Common and R, G, B individual.
Exposure time (Abs)	µsec – user definable. Same range as PE
Pulse Width Control	66.7 µs to 2 sec.
White balance	Manual, R and B, -6 to +6 dB One-push automatic, 2800 to 6500K Continuous automatic Fixed 3200, 4600 and 5600K
Knee function	Knee point and slope individually for R, G, and B
Control interface	Register based. GigE Vision/GenICam compliant
Functions controlled via GigE Vision interface	Shutter, Gain, Black level, Trigger mode, Readout mode, GPIO setup, ROI (GenICam mandatory functions)
GigE Vision streaming control	Packet size, Delayed (frame) Readout, Inter-packet delay
Indicators on rear panel	Power/Hardware trigger, GigE link, GigE activity
Operating temperature	-5°C to +45°C
Humidity	20 - 80% non-condensing
Storage temp./humidity	-25°C to +60°C / 20 to 80%
Vibration	3G (20Hz to 200Hz XYZ)
Shock	50G
Regulations	CE (EN 61000-6-2, EN-61000-6-3), FCC part 15 class B, RoHS/WEEE
Power	12V DC ± 10%. 9.6 W
Lens mount	C-mount (Max 4.0 mm thread)
Dimensions (H x W x L)	55 x 55 x 120 mm
Weight	425 g

Connection Pin-out

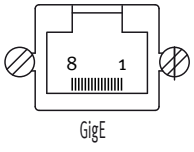
DC In / GPIO



HIROSE HR10A-10R-12PB-01

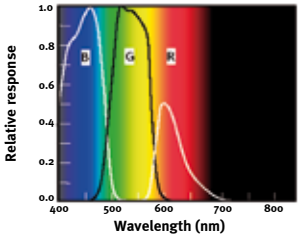
Pin		
	1	GND
	2	+12V DC input
	3	GND
	4	Iris video
	5	GND
	6	LVDS +/TTL IN 1
	7	LVDS -/TTL IN 2
	8	TTL OUT 1
	9	TTL OUT 2
	10	TTL IN 3
	11	+12V DC input
	12	GND

GigE Vision Interface
RJ-45 with locking screws



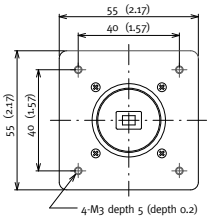
Pin		
	1	TRD+(0)
	2	TRD–(0)
	3	TRD+(1)
	4	TRD+(2)
	5	TRD–(2)
	6	TRD–(1)
	7	TRD+(3)
	8	TRD–(3)

Spectral Response

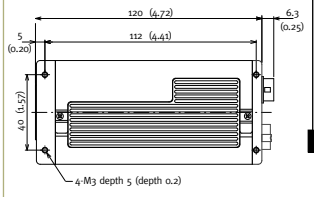


Dimensions

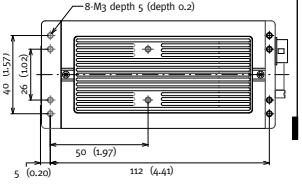
Front view



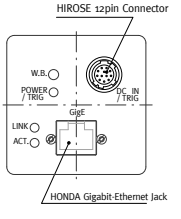
Side view



Bottom view



Rear view



Ordering Information

CV-M9 GE 1/3" 3 CCD Progressive Scan RGB Color Camera.

Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners.
JAI A/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.

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

Visit our web site on www.jai.com

See the possibilities

November 2012