CV-A10 GE / CV-A70 GE

Progressive Scan

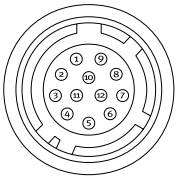
- *1/2" progressive scan camera*
- *Monochrome and Bayer color versions*
- *782 (h) x 582 (v) 8.37µm square pixels*
- *60 fps with full resolution*
- *250 fps with 1/8 partial scan*
- *Vertical binning for higher frame rates and sensitivity*
- *High speed shutter from 1/60 to 1/300,000 second*
- *8 or 10-bit output*
- *Edge pre-select, and pulse width trigger modes*
- *Sequencer trigger mode for on-the-fly change of shutter, and gain*
- *Auto exposure and smearless mode*
- *Auto-Iris lens video output, auto shutter and AGC allow a wider light range*
- *Programmable GPIO*
- *Comprehensive software suite and SDK for Windows XP*

Specifications for CV-A10 GE / CV-A70 GE

Specifications	CV-A10 GE / CV-A70 GE
Sensor	1/2" progressive scan IT CCD
Pixel clock	36.15 MHz
Frame rate full frame	60 frames/sec. (1125 lines/frame)
Active area	6.4 (h) x 4.8 (v) mm
Cell size	8.3 (h) x 8.3 (v) µm
Active pixels	767 (h) x 576 (v)
Color (CV-A70 GE)	Raw Bayer output host-based interpolation
Read-out modes Full 1/2 partial scan 1/3 partial scan 1/4 partial scan 2x Vert. binning* 3x Vert. binning* 4x Vert. binning* Region-of-interest(ROI)	 767 (h) x 576 (v) 60 fps 767 (h) x 287 (v) 112 fps 767 (h) x 143 (v) 177 fps 767 (h) x 71 (v) 250 fps 767 (h) x 287 (v) 107 fps 767 (h) x 191 (v) 144 fps 767 (h) x 143 (v) 174 fps User definable. Memory read-out * NOTE: CV-A70 GE does not support binning
Sensitivity (CV-A10 GE)	0.1 Lux (On sensor Max. gain, shutter off, 50% video)
Sensitivity (CV-A70 GE)	1.2 Lux (On sensor, max gain, shutter off, 50% video)
S/N ratio	>55 dB (Gain 0 dB, shutter off)
Video output	GigE Vision, 8 or 10 bits
Auto-iris lens video output	0.7 Vpp
Gain	Manual/Automatic Range. -3 to +12 dB
Synchronization	External hardware trigger via GPIO Software trigger via GigE Vision
GPIO Module Input / output switch Clock generator (one) Pulse generators (four)	 Configurable 12-in / 9-out switch (LUT) 12-bit counter (based on 25MHz clock or pixel clock) 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)
Electronic shutter Preset shutter Programmable exposure Auto exposure Exposure time (Abs) Pulse width control	 1/60 to 1/300,000 sec. in 14 steps 1/8 line to 628 lines (3.3µs to 16.7ms) 1/60 to 1/25,000 second (cont. mode only) µsec - user definable. Same range as PE 66.7µs to 2 sec.
Control interface	Register based GigE Vision (GenICam compliant)
Functions controlled via GigE Vision interface	Shutter, Trigger mode, Readout mode, GPIO setup, ROI ,Gain, Black level (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	-10°C to +45°C
Humidity	20 – 90% non-condensing
Storage temp./humidity	-25°C to +60°C/20% to 90%
Vibration	10G (20Hz to 200Hz XYZ)
Shock	70G
Regulations	CE (EN61000-6-2 and EN61000-6-3), FCC part 15 class B RoHS / WEEE
Power	12V DC ± 10%. 5.5 W
Lens mount	C-mount
Dimensions (H x W x L)	55 x 55 x 55 mm
Weight	220 g

Connector Pin-out

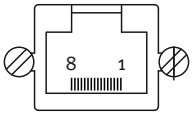
DC In / GPIO



HIROSE HR10A-10R-12PB-01

Pin		
	1	GND
	2	+12 V 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	N/C
	12	GND

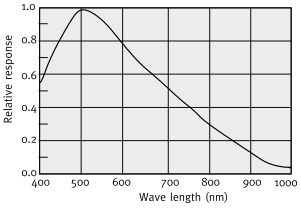
GigE Vision interface RJ-45 with locking srews

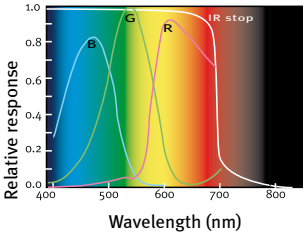


GigE

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

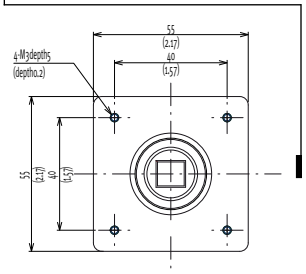
Spectral Response



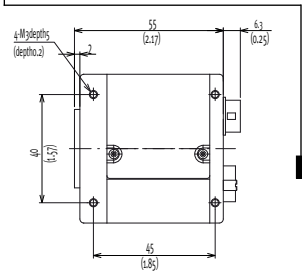


Dimensions

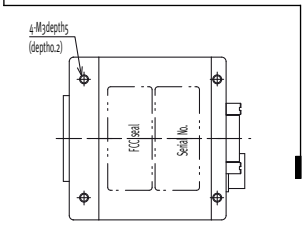
Front view



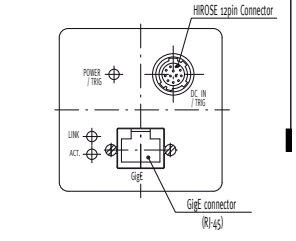
Side view



Bottom view



Rear view



Ordering Information

CV-A10 GE 1/2" monochrome progressive scan camera
CV-A70 GE 1/2" Bayer mosaic color progressive scan camera

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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