

## ➤ CM-o8o GE / CB-o8o GE Progressive Scan

**C<sub>3</sub> Camera Suite**  
Unlimited  
Digital  
Switchability



- Member of C<sub>3</sub> Compact series, covering VGA to UXGA resolution
- 1032 (h) x 778 (v) 4.65µm square pixels
- 1/3" progressive scan - Monochrome and Bayer mosaic color versions
- 30 frames/second with full resolution in continuous operation
- Increased frame rate with vertical binning (CM-o8o GE) and partial scan
- Exposure time from 84µs to 2 sec. using Pulse Width trigger mode
- Programmable exposure from 84µs to 33ms in Full Frame scan
- Sequence trigger mode for on-the-fly change of gain, exposure and ROI
- LVAL Synchronous/-asynchronous operation (auto-detect)
- Auto iris lens video output allows a wider range of light
- GigE Vision interface with 10 or 8-bit output
- Programmable GPIO with opto-isolated inputs and outputs
- Comprehensive software tools and SDK for Windows XP/Vista

**GigE**<sup>TM</sup>  
VISION

[www.jai.com](http://www.jai.com)



See the possibilities

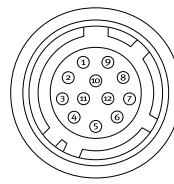
# Specifications for CM-o8o GE / CB-o8o GE

Specifications	CM-o8o GE / CB-o8o GE
Sensor	1/3" progressive scan CCD
Pixel Clock	33.75 MHz
Frame rate full frame	30 frames/second
Active area	4.85 (h) x 3.66 (v) mm
Cell size	4.65 (h) x 4.65 (v) μm
Active pixels	1032 (h) x 778 (v)
Color (CB-o8o GE)	Raw Bayer output, host-based interpolation
Read-out modes	Full 1032 (h) x 778 (v) 30.08 fps 1/2 partial scan 1032 (h) x 390 (v) 47.82 fps 1/4 partial scan 1032 (h) x 194 (v) 68.10 fps 1/8 partial scan 1032 (h) x 98 (v) 85.80 fps 2/3 partial scan 1032 (h) x 518 (v) 40.08 fps Vertical binning 1032 (h) x 389 (v) 49.14 fps*
Region-of-interest (ROI)	User Definable. Memory read-out *Note: Vertical binning is for CM-o8o GE only
Sensitivity (CM-o8o GE)	0.3 Lux (On sensor, max. gain, shutter off, 50% video)
Sensitivity (CB-o8o GE)	1.7 Lux (On sensor, max. gain, shutter off, 50% video)
S/N ratio	>50 dB (0 dB gain)
Video output	GigE Vision, 8-bit or 10-bit
Auto-iris lens video output	0.7 Vp-p, enabled by internal switch
Gain	Manual -3dB to +24 dB
Synchronization	Internal X-tal, External hardware trigger via GPIO Software trigger via GigE Vision
GPIO Module	Configurable 14-in/9-out switch (LUT) 12-bit counter based on 25MHz clock or Pixel Clock
Input/output switch	
Clock generator (one)	
Pulse generators (four)	20-bit counters programmable for length, start point, end point, repeat
Hardware trigger modes	Continuous, Pre-Select, Pulse Width, Frame delay, Sequence (Gain, Shutter, ROI)
Electronic shutter	
Pre-set shutter	1/30 to 1/10,000 in 9 steps
Programmable exposure	2L(84.148 μs) to 790L (33.238ms) in 1L steps
Exposure Time (Abs)	μsec – user definable. Same range as PE
Pulse Width	max. 2 sec. (can be set by 100μs unit or Pixel Clock unit)
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 (1428 to 4040bytes), 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 (operation)	20 - 85% non-condensing
Storage temp./humidity	-25°C to +60°C / 20 to 85%
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	12-24V DC +/-10%. 3.6W (@12V)**
Lens mount	C-mount
Dimensions (H x W x L)	29 x 44 x 75 mm
Weight	125 g

\*\*NOTE: voltages above 13.2V DC only supported on CM-o8o models with serial numbers of 800856 or higher and on CB-o8o models with serial numbers of 800576 or higher

## Connector pin-out

### DC In / GPIO



HIROSE HR10A-10R-12PB-01

### Connector Pin-out

- Pin 1 GND  
2 +12 VDC input  
3 Opto in 2(-)/GND  
4 Opto in 2(+)\* /Auto iris lens  
5 Opto in 1(-)  
6 Opto in 1(+)  
7 Opto out 1(-)  
8 Opto out 1(+)  
9 Opto out 2(-)  
10 Opto out 2(+)  
11 +12V DC input  
12 GND

\* Pins 3 and 4 can be configured by internal switch selection

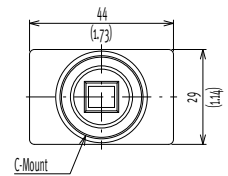
### GigE Vision interface Accepts RJ-45 with thumbscrews



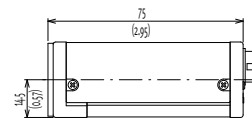
- Pin 1 TRD+(o) 5 TRD-(2)  
2 TRD-(o) 6 TRD-(1)  
3 TRD+(1) 7 TRD+(3)  
4 TRD+(2) 8 TRD-(3)

## Dimensions

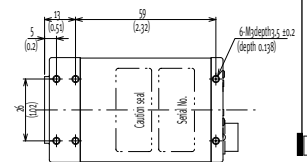
### Front view



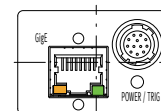
### Side view



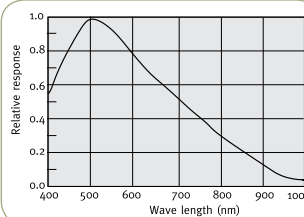
### Bottom view



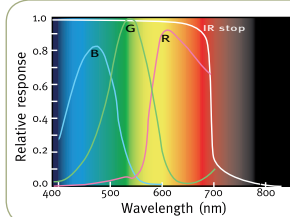
### Rear view



## Spectral Response CM-o8o GE



## Spectral Response CB-o8o GE



## Ordering Information

- CM-o8o GE 1/3" Monochrome Progressive Scan Camera  
CB-o8o GE 1/3" Bayer Mosaic Color Progressive Scan Camera



See the possibilities