

## CM-030 GE-RH Progressive Scan

**C3** Camera Suite  
Unlimited  
Digital  
Switchability



- *1/3" progressive scan – monochrome Ø17 mm Remote Head camera*
- *Member of C3 Compact series, covering VGA to UXGA resolution*
- *656 (h) x 494 (v) 7.4 µm square pixels*
- *120 frames/second with external trigger and full resolution*
- *Increased frame rate with vertical binning and partial scan*
- *Exposure time from 32.48 µs to 2 sec. using Pulse Width control*
- *Programmable exposure from 32.48 µs to 8.299 ms in Full Frame scan*
- *Sequencer trigger mode for on-the-fly change of gain, exposure and ROI*
- *LVAL-synchronous/-asynchronous operation (auto-detect)*
- *GigE Vision interface with 10 or 8-bit output*
- *Programmable GPIO with opto-isolated inputs and outputs*
- *Comprehensive JAI SDK & Control Tool for Windows XP/Vista/Windows 7*

**GigE**™  
VISION



# Specifications for CM-030 GE-RH

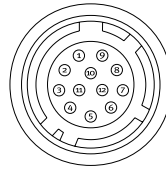
Specifications	CM-030 GE-RH
Sensor	1/3" monochrome progressive scan CCD
Pixel Clock	58 MHz
Frame rate full frame	120 frames/second (511 lines/frame)
Active area	4.9 (h) x 3.7 (v) mm
Cell size	7.4 (h) x 7.4 (v) $\mu$ m
Active pixels	656 (h) x 494 (v)
Read-out modes	Full 656 (h) x 494 (v) 120.4 fps 2/3 partial scan 656 (h) x 328 (v) 172.9 fps 1/2 partial scan 656 (h) x 246 (v) 216.8 fps 1/4 partial scan 656 (h) x 122 (v) 349.8 fps 1/8 partial scan 656 (h) x 60 (v) 504.7 fps Vertical binning 656 (h) x 247 (v) 193.8 fps Region-of-interest (ROI) User definable. Memory read-out
Sensitivity	0.41 Lux (On sensor, max. gain, shutter off, 50% video)
S/N ratio	>50dB (0 dB gain)
Video output	GigE Vision, 8-bit or 10-bit
Gain	Manual -3 to +12 dB
Synchronization	Internal X-tal, External hardware trigger via GPIO Software trigger via GigE Vision
GPIO Module	Input/output switch Configurable 14-in/9-out switch (LUT) Clock generator (one) 12-bit counter based on 25MHz clock or Pixel Clock Pulse generators (four) 20-bit counters programmable for length, start point, stop point, repeat
Hardware trigger modes	Continuous, Pre-Select, Pulse Width, Frame Delay, Reset Continuous, Sequence (Gain, Shutter, ROI)
Electronic shutter	Pre-set shutter 1/120 to 1/30,000 in 9 steps Programmable exposure 2L (32.48 $\mu$ s) to 51L (8.299ms) in 1L steps Exposure Time (Abs) Same range as PE Pulse Width 2L to 240 frames (32.48 $\mu$ s to 2 seconds)
GPIO plus Pulse Width	Register based GigE Vision (GenlCam compliant)
Functions controlled via GigE Vision interface	Shutter, Gain, Black level, Trigger mode, Readout mode, GPIO setup, ROI (GenlCam 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 (operation)	20 - 90% non-condensing
Storage temp./humidity	-25°C to +60°C / 20 to 90% non-condensing
Vibration	10 G (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%. 3.6 W
Lens mount	$\varnothing$ 17mm exclusive mount
Dimensions (H x W x L)	29 x 44 x 75 mm (ccu)
Weight	130 g + 120g (head with 2m cable)

## Ordering Information

CM-030 GE-RH 1/3" Monochrome Progressive Scan Camera

## Connector pin-out

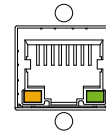
### DC In / GPIO



HIROSE HR10A-10R-12PB-01

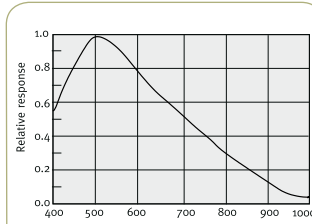
- Connector Pin-out
- Pin 1 GND
  - 2 +12V DC input
  - 3 Opto in2(-)
  - 4 Opto in2(+)
  - 5 Opto in1(-)
  - 6 Opto in1(+)
  - 7 Opto out2(-)
  - 8 Opto out2(+)
  - 9 Opto out1(-)
  - 10 Opto out1(+)
  - 11 +12V DC input
  - 12 GND

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

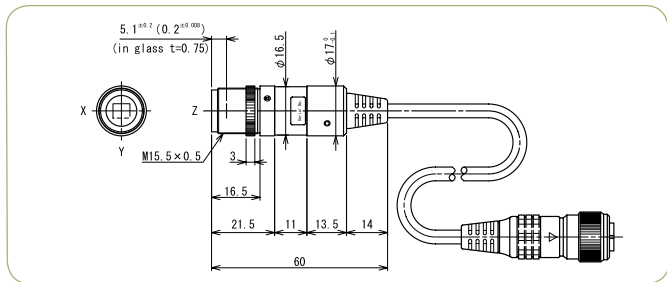


- Pin 1 TRD+(o) 5 TRD-(2)
- 2 TRD-(o) 6 TRD-(1)
- 3 TRD+(1) 7 TRD+(3)
- 4 TRD+(2) 8 TRD-(3)

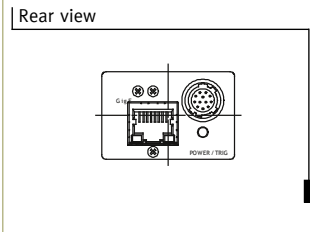
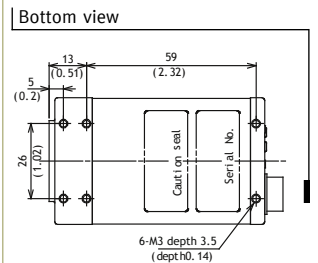
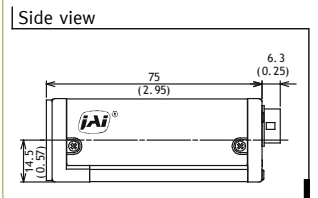
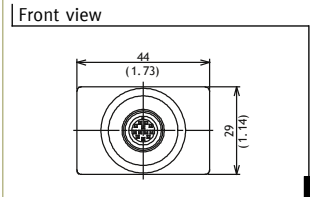
## Spectral Response CM-030GE-RH



## CM-030GE-RH Remote head



## Dimensions



## C3 Camera Suite Unlimited Digital Switchability

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