

CM-030 GE-RH Progressive Scan

C3 Camera Suite
Unlimited
Digital
Switchability



adept
electronic solutions

The Machine Vision and
Imaging Specialists

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- *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

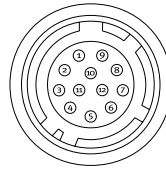
| Specifications | CM-030 GE-RH |
|--|---|
| Sensor | 1/3" monochrome progressive scan CCD |
| Pixel Clock | 58 MHz |
| Frame rate full frame | 120 frames/second (511 lines/frame) |
| Active area | 4.9 (h) x 3.7 (v) mm |
| Cell size | 7.4 (h) x 7.4 (v) μ m |
| Active pixels | 656 (h) x 494 (v) |
| Read-out 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 μ s) to 51L (8.299ms) in 1L steps Exposure Time (Abs) Same range as PE Pulse Width 2L to 240 frames (32.48 μ 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

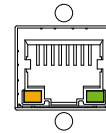
DC In / GPIO



HIROSE HR10A-10R-12PB-01

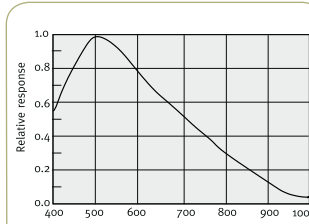
- Connector Pin-out
- | | |
|-------|---------------|
| Pin 1 | GND |
| 2 | +12V DC input |
| 3 | Opto in2(-) |
| 4 | Opto in2(+) |
| 5 | Opto in1(-) |
| 6 | Opto in1(+) |
| 7 | Opto out1(-) |
| 8 | Opto out1(+) |
| 9 | Opto out2(-) |
| 10 | Opto out2(+) |
| 11 | +12V DC input |
| 12 | GND |

GigE Vision interface Accepts RJ-45 with thumbscrews

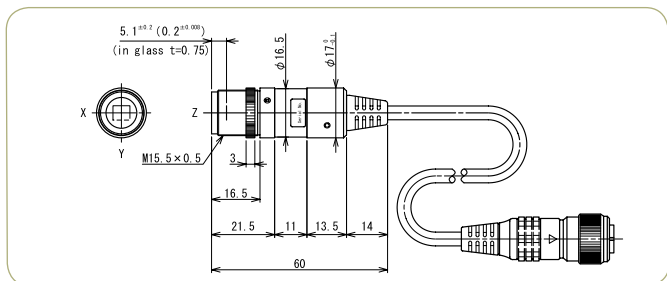


- | | | | |
|-------|---------|---|---------|
| Pin 1 | TRD+(o) | 5 | TRD-(2) |
| 2 | TRD-(o) | 6 | TRD-(1) |
| 3 | TRD+(1) | 7 | TRD+(3) |
| 4 | TRD+(2) | 8 | TRD-(3) |

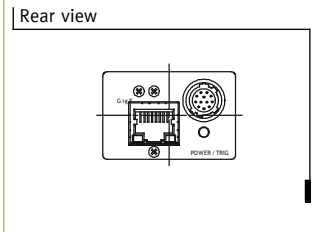
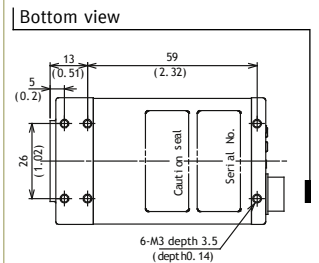
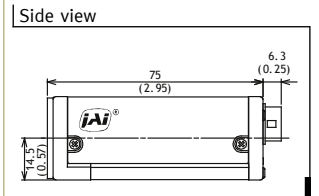
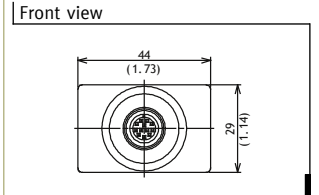
Spectral Response CM-030GE-RH



CM-030GE-RH Remote head



Dimensions



C3 Camera Suite Unlimited Digital Switchability

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