



❖ 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



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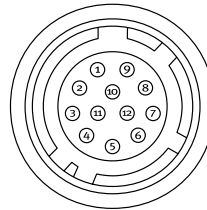


Specifications for CV-M9 GE

| 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 R and B | -3 to +12 dB -6 to +6 dB |
| Synchronization | External hardware trigger via GPIO Software trigger via GigE Vision |
| GPIO Module | Configurable 12-in / 9-out switch 12-bit counter (based on 25 MHz 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, ROI) |
| Electronic shutter | 1/30 to 1/50,000 in 12 steps |
| Pre-set shutter 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) Pulse Width Control | μsec – user definable. Same range as PE 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 | -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 (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 | 800 g |

Connection Pin-out

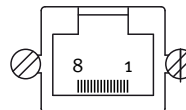
DC In / GPIO



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

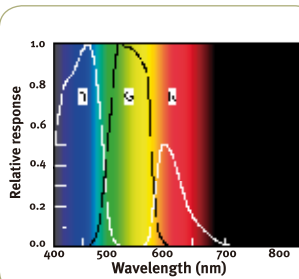
GigE Vision Interface RJ-45 with locking screws



GigE

- 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

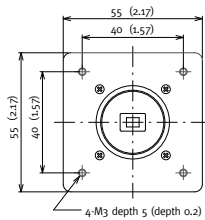


Ordering Information

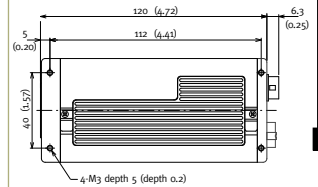
CV-M9 GE 1/3" 3 CCD Progressive Scan RGB Color Camera.

Dimensions

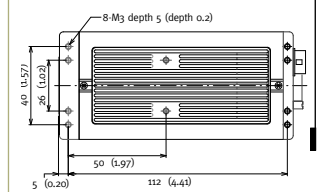
Front view



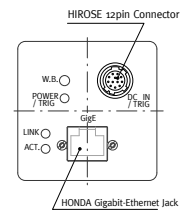
Side view



Bottom view



Rear view



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