

## AD-o8o GE

2 CCD Multi-spectral camera

**C3** Camera Suite  
 Unlimited  
 Digital  
 Switchability



- Multi-spectral 2-channel CCD camera
- Advanced series 2 x 1/3" progressive scan camera
- Simultaneously captures Visible and Near-IR through the same optical path
- 1024 (h) x 768 (v) active pixels per channel
- 4.65  $\mu\text{m}$  square pixels
- 30 frames/second with full resolution
- Increased frame rate with partial scan
- Programmable exposure from 20 $\mu\text{s}$  to 33ms
- Pre-select and Pulse width trigger modes
- LVAL Synchronous/-asynchronous operation (auto-detect)
- LUT (Look-up Table)
- AGC (Automatic Gain Control)
- Auto-iris lens video output allows a wider range of light
- RGB 24-bit/30-bit or Raw Bayer 10 or 8-bit output for visible
- 12, 10 or 8-bit output for Near-IR
- Sequence trigger mode and Frame delay trigger mode
- SDK for Windows XP/Vista

**GiGE**<sup>™</sup>  
 VISION



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

See the possibilities

# Specifications for AD-o8o GE

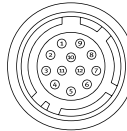
Specifications		AD-o8o GE
Sensor	Visible Near-IR	1/3" color Bayer mosaic IT CCD 1/3" Monochrome interline transfer CCD
Pixel Clock		33.75 MHz
Frame rate full frame		30 frames/sec.
Active area		4.76 (h) x 3.57 (v) mm
Cell size		4.65 (h) x 4.65 (v) μm
Active pixels		1024 (h) x 768 (v)
Color visible		Raw Bayer output, or RGB 24-bit, 30-bit
Read-out modes	Full 1/2 partial scan	1024 (h) x 768 (v) 30 fps Scan height 8~768L Start line 1~760L (Bayer color 2 lines step)
Sensitivity	Visible	0.5 Lux (On sensor, max. gain, shutter off, 50% video)
Sensitivity	Near-IR	1.0 μW/cm <sup>2</sup> at 800nm (On sensor, max. gain, shutter off, 50% video)
S/N ratio		>54dB (Gain 0 dB, shutter off)
Video output	Visible Near-IR	30/24-bits RGB or raw Bayer output 8, 10, or 12-bit
Auto-iris lens video		0.7 Vp-p
Gain		-3dB to +21dB
Synchronization		Int. X-tal
Inputs		Hirose 12-pin: OPT x 2 Hirose 6-pin: TTL x 2, LVDS x 1
Outputs		Hirose 12-pin: OPT x 2 Hirose 6-pin: TTL x 1
Trigger modes		Edge Pre-select, Pulse Width control, RCT, Frame delay, Sequence
Electronic shutter	Auto shutter Programmable exposure Exposure Time (Abs) Pulse Width Control	1/30 to 1/10000 sec 20 μs to 792L (33.3ms) in 1L step μsec - user definable. Same range as PE Max. 2 sec (fine setting with GPIO and pulse width control)
White balance		Only RGB 24-bit and 30-bit output Gain range: -3dB to +6dB Manual: 3000K to 6500K One-push: 3000K to 6500K Continuous: 3000K to 6500K
Knee function		For 24-bit/30-bit output (visible) Near-IR 8, 10 or 12-bit Knee point, Knee slope
LUT/Gamma		1.0/0.6/0.45/LUT
Control interface		Register based, GigE Vision
Functions controlled via GigE Vision interface		Gain, shutter, trigger modes, read-out modes, bit depth, black level, GPIO, ROI
Indicators on rear panel		LED for power/trigger input GigE link, GigE activity
Operating Temperature		-5°C to +45°C
Humidity (operation)		20 - 80% non-condensing
Storage temp./humidity		-25°C to +60°C / 20 to 80%
Vibration		3 G (20Hz to 200 Hz XYZ)
Shock		50G
Regulations		CE (EN 61000-6-2, EN-61000-6-3), FCC part 15 class B, RoHS/WEEE
Power		12-24V DC ± 10%. 7 W
Lens mount		C-mount (use 3CCD type with no IR filter, Max 4.0 mm thread)
Dimensions (H x W x L)		55(H) x 55(W) x 98.3(D) mm
Weight		320 g

## Ordering Information

AD-o8oGE Digital 2CCD Progressive Scan Multi-Spectral Camera

## Connector pin-out

### DC In / GPIO

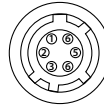


HIROSE HR10A-10R-12PB-01

- |        |                         |
|--------|-------------------------|
| Pin 1  | Ground                  |
| Pin 2  | +12V DC input           |
| Pin 3  | OPT In 2 (-)/GND (*)    |
| Pin 4  | OPT In 2 (+)            |
| Pin 5  | Auto Iris video out (+) |
| Pin 6  | OPT In 1 (-)            |
| Pin 7  | OPT In 1 (+)            |
| Pin 8  | OPT Out 1 (-)           |
| Pin 9  | OPT Out 1 (+)           |
| Pin 10 | OPT Out 2 (-)           |
| Pin 11 | OPT Out 2 (+)           |
| Pin 12 | +12V DC input<br>Ground |

\* Select by SW700

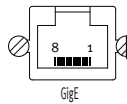
### GPIO



HIROSE 6-pin

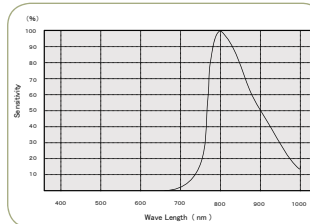
- |       |               |
|-------|---------------|
| Pin 1 | LVDS In 1 (-) |
| Pin 2 | LVDS In 1 (+) |
| Pin 3 | TTL In 1      |
| Pin 4 | TTL Out 1     |
| Pin 5 | TTL In 2      |
| Pin 6 | GND           |

### GigE Vision Interface RJ-45 with locking screws

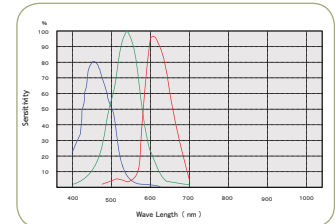


- |       |         |       |         |
|-------|---------|-------|---------|
| Pin 1 | TRD+(0) | Pin 5 | TRD-(2) |
| Pin 2 | TRD-(0) | Pin 6 | TRD-(1) |
| Pin 3 | TRD+(1) | Pin 7 | TRD+(3) |
| Pin 4 | TRD+(2) | Pin 8 | TRD-(3) |

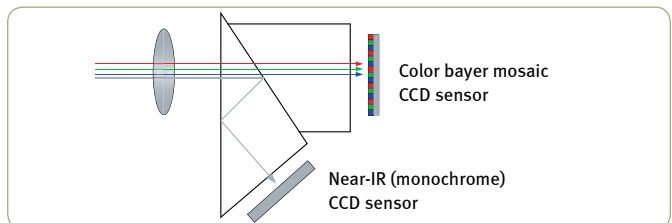
## Near-IR Response AD-o8o GE



## Visible Response AD-o8o GE



## 2CCD Prism



See the possibilities