



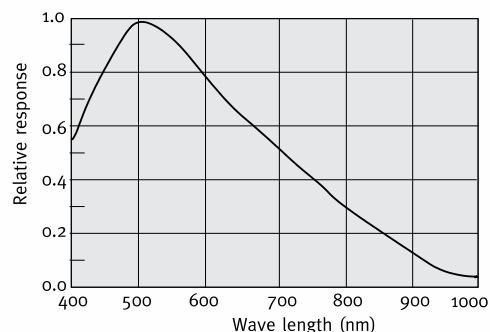
BM-500 GE, OP-22-5-1 **BB-500 GE, OP-22-5-1**



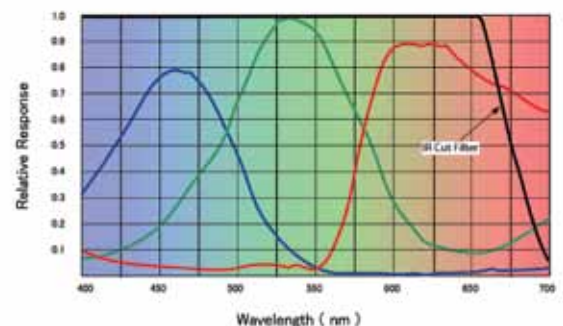
- **5-megapixel CCD camera certified for extended temperature operation (-40°C to +65°C)**
- **2/3" progressive scan CCD (3.45 µm square pixels)**
- **2456 (h) x 2058 (v) @ 15 fps**
- **Monochrome or Bayer color models**
- **Increased frame rate with partial scanning modes**
- **2X vertical binning available on monochrome model**
- **Draft mode (1/8 decimated) color readout at 37.5 fps**
- **GigE Vision interface with 12-, 10-, or 8-bit output**
- **Pre-set, programmable or auto-shutter control**
- **Manual or automatic gain control (-3 to +12 dB)**
- **Built-in Bayer white balance and one-push channel balancing**
- **Programmable look-up table for dynamic range control**
- **Analog video output for auto-iris lens control**
- **Comprehensive SDK and control tool software provided**

* Standard temperature range is -5°C to +45°C

BM-500 GE Spectral Response



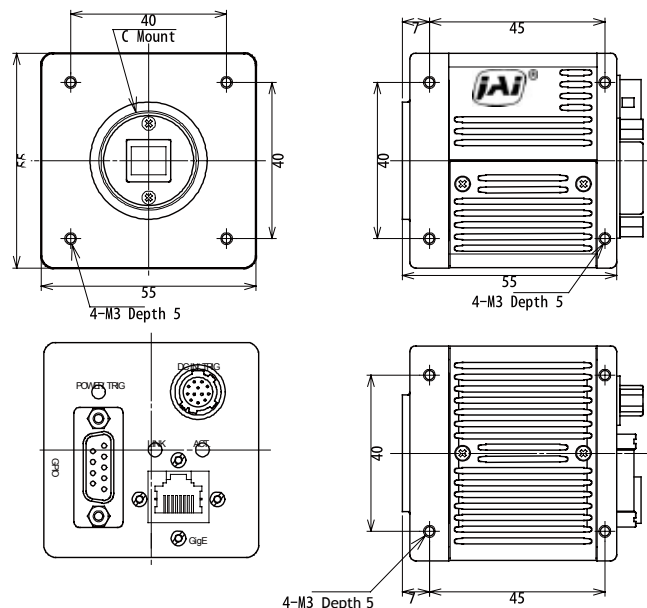
BB-500 GE Spectral Response



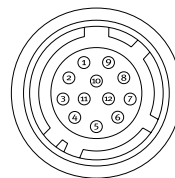
Specifications

Sensor	2/3" progressive scan interline transfer CCD (ICX625ALA & ICX625AQA)
Active area	8.45mm x 7.07mm
Active pixels	2456 (H) x 2058 (V)
Cell size	3.45 μm x 3.45 μm
Frame rate - full frame	15 fps
Readout modes	Full 2456 (H) x 2058 (V) 15 fps 2/3 partial scan 2456 (H) x 1372 (V) 20 fps 1/2 partial scan 2456 (H) x 1028 (V) 24 fps 1/4 partial scan 2456 (H) x 514 (V) 34 fps 1/8 partial scan 2456 (H) x 258 (V) 43 fps Draft mode 2456 (H) x 257 (V) 37.54 fps† Vertical binning 2456 (H) x 1029 (V) 22.88 fps*
Region of interest (ROI)	User definable memory readout †Note: BB-500GE only *Note: BM-500GE only
Synchronization	Internal/external hardware trigger via GPIO Software trigger via GigE Vision
Pixel clock	60.00 MHz
S/N ratio	>50 dB. (0 dB gain, standard temp.)
Sensitivity	Mono 0.34 lux (on sensor, max gain, shutter off, 50% video) Color 1.0 lux (on sensor, max gain, shutter off, 50% video)
Video output	GigE Vision selectable (8-bit/10-bit/12-bit)
Auto-iris lens video output	0.7 Vp-p, enabled by internal switch
Color (BB-500GE only)	Raw Bayer output for host-based interpolation
GPIO Module	Input/output switch Configurable 16-in / 12-out switch Clock generator (1) 12-bit counter based on pixel clock Pulse generators (2) 19-bit counter programmable for length, start point, stop point, reset
Electronic shutter	Pre-set shutter 1/15 (off) to 1/10,000 sec in 10 steps Programmable exposure 2L (64 μs) to 2072L (66.44 ms) in 1L steps Pulse-width 64 μs to 2 sec.
Pre-processing functions	Programmable LUT (Gamma 1.0 std), Bayer white balance, L/R channel balancing, blemish compensation
Lens mount	C-mount
Power	12V DC $\pm$ 10%. 493 mA / 5.9W (typical at 25°C)
Operating temperature	-40°C to +65°C (Some reduced performance may occur when operating outside the -5°C to +45°C range)
Storage temperature	-50°C to +70°C
Vibration	10G rms (20Hz to 200Hz XYZ)
Shock	70G, 11 ms half sine
Dimensions (HxWxL)	55 mm x 55 mm x 55 mm
Weight	226 g (without tripod mount)

Dimensions



Connector Pin-out

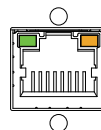


HIROSE HR10A-10R-12PB-01

- | | |
|---------------------------------|------------------|
| 1 GND | 7 Opt OUT 1(-) |
| 2 +12V DC input | 8 Opt OUT 1(+) |
| 3 Opt IN 2(-) / GND* | 9 Opt OUT 2(-) |
| 4 Opt IN 2(+) / Iris Video out* | 10 Opt OUT 2(+) |
| 5 Opt IN 1(-) | 11 +12V DC input |
| 6 Opt IN 1(+) | 12 GND |

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

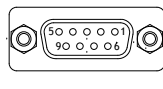
GigE Vision interface



Accepts RJ-45 with thumbscrews

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

D-sub 9-pin



No	I/O	Name	No	I/O	Name
1	I	LVDS In1-	6		NC
2	I	LVDS In1+	7		NC
3†	I	TTL IN 1	8	O	TTL Out 2
4	O	TTL Out 1	9		GND
5		GND			

† Can be changed to 750 ohm Terminator by internal DIP switch

Ordering Information

Camera	
RoHS Compliant	BM-500 GE, OP22-5-1 (mono)
RoHS Compliant	BB-500 GE, OP22-5-1 (color)
Optional Accessories (must be ordered separately)	
Power Supply	PD-12UUP (includes power connector)
Tripod Mounting Plate	MP-41

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