



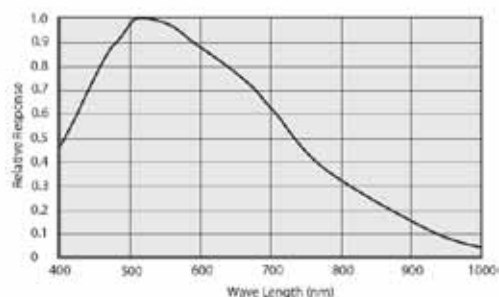
BM-500 CL, OP-22-5-1 **BB-500 CL, OP-22-5-1**



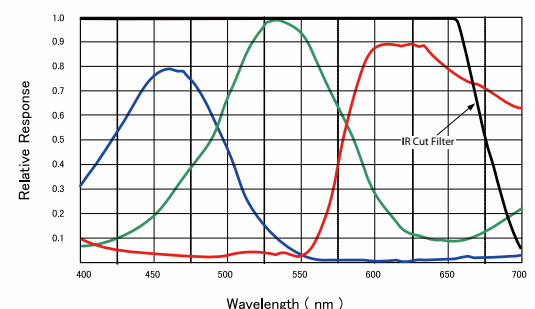
- 5-megapixel CCD camera certified for extended temperature operation (-40°C to $+65^{\circ}\text{C}$)
- $2/3''$ progressive scan CCD ($3.45\ \mu\text{m}$ square pixels)
- $2456\ (\text{h}) \times 2058\ (\text{v})$ @ 15 fps
- Monochrome or Bayer color models
- Increased frame rate with partial scanning modes
- 2X vertical binning available on monochrome model
- Draft mode ($1/8$ decimated) color readout at 37.5 fps
- Camera Link interface with 12-, 10-, or 8-bit output
- Pre-set, programmable or auto-shutter control
- Manual or automatic gain control (-3 to $+12\ \text{dB}$)
- Built-in auto white balance and one-push channel balancing
- Programmable look-up table for dynamic range control
- Analog video output for auto-iris lens control
- GUI for serial command control of all camera functions

* Standard temperature range is -5°C to $+45^{\circ}\text{C}$

BM-500 CL Spectral Response



BB-500 CL Spectral Response



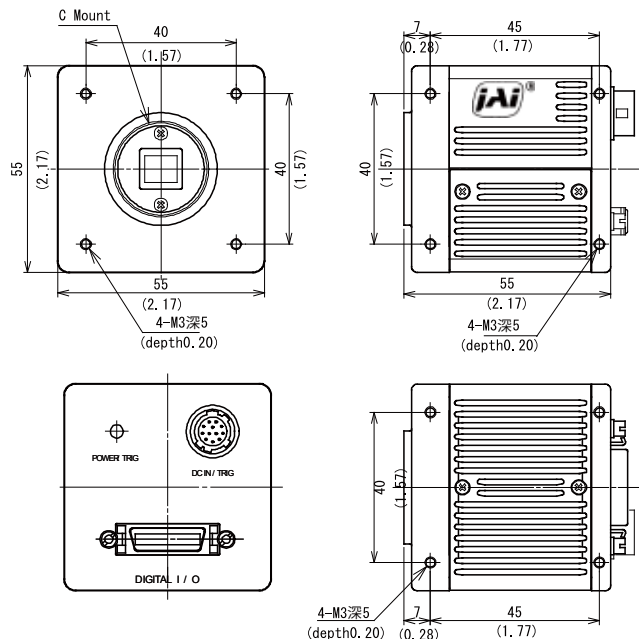
Specifications

Sensor	2/3" progressive scan interline transfer CCD (ICX625ALA & ICX625AQA)
Active area	8.45mm x 7.10mm
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 261 (V) 37.54 fps† Variable partial scan Start line from 1 to 1025, height from 8 to 1032 Vertical binning 2456 (H) x 1029 (V) 22.88 fps* †Note: BB-500CL only *Note: BM-500CL only
Synchronization	Internal or external trigger
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	Camera Link selectable (8-bit/10-bit/12-bit)
Auto-iris lens video output	0.7 Vp-p, 75 Ω
Color (BB-500CL only)	Raw Bayer output for host-based interpolation
Electronic shutter	Pre-set shutter 1/15 (off) to 1/10,000 sec in 11 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, Bayer white balance(auto pr pre-set 3200K, 4600K, 5600K), 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)

Ordering Information

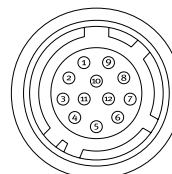
Camera	
RoHS Compliant	BM-500 CL, OP22-5-1 (mono)
RoHS Compliant	BB-500 CL, OP22-5-1 (color)
Optional Accessories (must be ordered separately)	
Cable (Camera Link)	26CL-02-26 (2m)
Power Supply	PD-12UUP (includes power connector)
Tripod Mounting Plate	MP-41

Dimensions



Connector Pin-out

DC In/GPIO



HIROSE HR10A-10R-12PB-01

1 GND	7 NC
2 +12V DC input	8 GND
3 GND	9 XEEN out
4 Iris Video out	10 Trigger in*
5 GND	11 +12V DC input
6 NC	12 GND

*Selectable via CL or 12-pin Hirose. Factory default is trigger via Camera Link.

Camera Link interface



Pin	Signal	Function
1 14	GND	—
2 15	-/+ TxOUT0	CL Data
3 16	-/+ TxOUT1	CL Data
4 17	-/+ TxOUT2	CL Data
5 18	-/+ TxClk	CL clk
6 19	-/+ TxOUT3	CL Data
7 20	-/+ RXD	Serial in
8 21	-/+ TXD	Serial out
9 22	CC1-/CC1+	Ext. trig
10 23	CC2-/CC2+	Not used
11 24	CC3-/CC3+	Not used
12 25	CC4-/CC4+	Not used
13 26	GND	—

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