

**GB-Series Specifications - Preliminary**

**Specifications**

	GB650 / GB650C	GB660 / GB660C	GB1380 / GB1380C	GB2450 / GB2450C
Resolution	659x493	659x493	1360x1024	2448 x2050
Sensor	1/3" CCD progressive scan Sony ICX424	1/4" CCD ExView HAD progressive scan Sony ICX618	2/3" CCD ExView HAD progressive scan Sony ICX285	2/3" CCD Super HAD progressive scan Sony ICX625
Pixel Size (um)	7.4 X 7.4	5.6 x 5.6	6.45 x 6.45	3.45 x 3.45
Maximum Frame Rate (full resolution)	120 fps	119 fps	30 fps	15 fps
Lens Mount	C-mount with adjustable back focus	C-mount with adjustable back focus	C-mount with adjustable back focus	C-mount with adjustable back focus
Digital Interface*	GigE Vision 1.0	GigE Vision 1.0	GigE Vision 1.0	GigE Vision 1.0
Interface Type	IEEE 802.3 1000baseT	IEEE 802.3 1000baseT	IEEE 802.3 1000baseT	IEEE 802.3 1000baseT
Exposure Range	10us to 60s	10us to 60s	10us to 60s	25us to 60s
Gain Range	0 to 19dB	0 to 34 dB	0 to 27dB	0 to 24 dB
Region of Interest (ROI)	Independent x and y control; 1 pixel resolution	Independent x and y control; 1 pixel resolution	Independent x and y control; 1 pixel resolution	Independent x and y control; 1 pixel resolution
Frame Rate at 100 x 100 ROI**	300 fps	316 fps	85 fps	68 fps
Binning	Independent H and V control; 1 pixel resolution	Independent H and V control; 1 pixel resolution	Independent H and V control; 1 pixel resolution	Independent H and V control; 1 pixel resolution
Horizontal Binning Range	1 to 8 columns	1 to 8 columns	1 to 8 columns	1 to 8 columns
Vertical Binning Range	1 to 493 rows	1 to 16 rows	1 to 14 rows	1 to 14 rows
2x2 binning max. framerate**	160 fps	196 fps	52 fps	25 fps
Imaging Modes	External Trigger, Fixed frame rate, Software trigger	External Trigger, Fixed frame rate, Software trigger	External Trigger, Fixed frame rate, Software trigger	External Trigger, Fixed frame rate, Software trigger
Fixed Frame Rate Control	0.001 fps to maximum frame rate	0.001 fps to maximum frame rate	0.001 fps to maximum frame rate	0.001 fps to maximum frame rate
External Trigger Modes	Rising edge, Falling edge, Any edge, Level high, Level low	Rising edge, Falling edge, Any edge, Level high, Level low	Rising edge, Falling edge, Any edge, Level high, Level low	Rising edge, Falling edge, Any edge, Level high, Level low
External Sync Modes	Trigger ready, Trigger input, Exposing, Readout, Imaging, Strobe, GPO	Trigger ready, Trigger input, Exposing, Readout, Imaging, Strobe, GPO	Trigger ready, Trigger input, Exposing, Readout, Imaging, Strobe, GPO	Trigger ready, Trigger input, Exposing, Readout, Imaging, Strobe, GPO
Trigger Delay Control Range	0 to 60s in 1 us increments	0 to 60s in 1 us increments	0 to 60s in 1 us increments	0 to 60s in 1 us increments
Trigger Latency	1.0 us	2 us	3.7 us	2 us
Trigger Jitter	+/-20ns	+/-20ns	+/-20ns	+/-20ns
External Trigger/Sync Connection	14-pin mini-DSub	14-pin mini-DSub	14-pin mini-DSub	14-pin mini-DSub
Monochrome Modes	Mono8, Mono16†	Mono8, Mono16†	Mono8, Mono16†	Mono8, Mono16†
Color Modes	Bayer8, Bayer16, RGB24, YUV411, YUV422, YUV444, BGR24, RGBA24, BGRA24	Bayer8, Bayer16, RGB24, YUV411, YUV422, YUV444, BGR24, RGBA24, BGRA24	Bayer8, Bayer16, RGB24, YUV411, YUV422, YUV444, BGR24, RGBA24, BGRA24	Bayer8, Bayer16
GPIO	1 isolated TTL input, 1 isolated TTL output, 1 non-isolated TTL input, 1 non-isolated TTL output, RS232 I/O	1 isolated TTL input, 1 isolated TTL output, 1 non-isolated TTL input, 1 non-isolated TTL output, RS232 I/O	1 isolated TTL input, 1 isolated TTL output, 1 non-isolated TTL input, 1 non-isolated TTL output, RS232 I/O	1 isolated TTL input, 1 isolated TTL output, 1 non-isolated TTL input, 1 non-isolated TTL output, RS232 I/O
Power Consumption	3 W (12V)	3 W (12V)	3.5W (12V)	3.8 W (12V)
Max. Operating Temperature	70 C	70 C	70 C	70 C
Board Size(WxL)	51 x 89 mm	51 x 89 mm	51 x 89 mm	51 x 89 mm
Weight	54 g	53 g	59 g	54 g
Conformity	RoHS	RoHS	RoHS	RoHS
Digitization	12 bits	12 bits	12 bits	12 bits
Spectral Sensitivity Range	400 - 1000 nm	400 - 1000 nm	400 - 1000 nm	400 - 1000 nm

**Notes**

Specifications are subject to change without notice

\*GigE Vision™ is a trademark of the Automated Imaging Association.

\*\*These figures are given as an example. There are a wide range of settings and speeds possible. Smaller ROI and/or higher binning modes will give even faster maximum framerates.

†Mono16 is available on monochrome models only.

‡Mono8 and Mono16 are available on the monochrome models only.



**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6, Canada  
Tel: 416-674-2804 Fax: (416) 674-1827

**Quebec & Eastern Canada**  
Tel: 450-662-9889  
Fax: 450-662-9063

**Website:** [www.bockoptronics.ca](http://www.bockoptronics.ca)  
**E-mail:** [sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)