

BG Series

GigE
VISION


29mm × 29mm × 40mm

53g

Outline

BG series has Gigabit Ethernet interface for image output and camera control. Compact and light, suitable for set in equipment. 3 years warranty. Wide product range from 0.3M to 5M.

Features

Easy operation

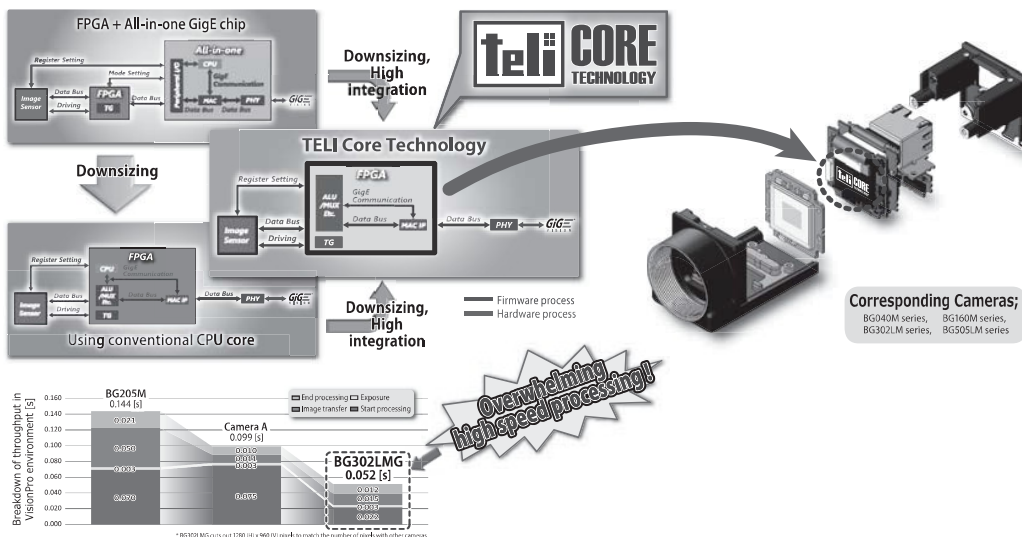
- "Gigabit Ethernet interface" makes PC connection easier.
- Power supply complies with Power over Ethernet (PoE) based on IEEE802.3af.
- Body size in most compact class is suitable for setting in equipment.
- LAN cable is adopted for flexible connection to equipment which needs long cable.
- TELI original software "TeliCamSDK" is available to free download as SDK.

Various function

- BG205M-CS, BG205MC-CS, BG205MCF-CS has CS mount. Sensible in infra-red range.
- "Scalable mode" achieve higher speed image output.^(*)
- *functions and modes of *1 above are different depend on model.

Featuring TELI original IP "TELI Core Technology"

- Achieved high integration with TELI's original technology.
- Shorten the response time!



Corresponding Cameras;
BG040M series, BG160M series,
BG302LM series, BG305LM series

All hardware processing with

**no CPU and
no software !**

Downsizing and super
high speed response
by high integration !

Accessory information (options)

LAN cable (Category 5e or more)

C-Mount lens ▶ P27 ~ 32

C/CS mount converting ring ▶ P33

Tripod attachment ▶ P25

• Spectral response ▶ P19 ~ 21

• Pin assignment ▶ P21

Specifications

B/W / COLOR	B/W							
Pixels	0.3M		0.8M	1.3M	2M		3.1M	5M
Model Name	BG030	BG031	BG080	BG130	BG202	BG205M-CS	BG302LMG	BG505LMG
Interface	Gigabit Ethernet IEEE802.3ab (1000BASE-T)							
Imager	1/3 type CCD (ICX424AL)	1/2 type CCD (ICX414AL)	1/3 type CCD (ICX204AL)	1/3 type CCD (ICX445AL)	1/1.8 type CCD (ICX274AL)	2/3 type GS-CMOS (CMV2000)	1/1.8 type GS-CMOS (IMX265)	2/3 type GS-CMOS (IMX264)
Resolution	640 (H) × 480 (V)		1,024 (H) × 768 (V)	1,280 (H) × 960 (V)	1,600 (H) × 1,200 (V)	2,048 (H) × 1,088 (V)	2,048 (H) × 1,536 (V)	2,448 (H) × 2,048 (V)
Frame Rate	125 fps		40 fps	30 fps	20 fps	50 fps	Mono 8 : 35 fps Mono 10 / 12 : 17 fps	Mono 8 : 22 fps Mono 10 / 12 : 11 fps
Pixel Size	7.4 (H) × 7.4 (V) μm	9.9 (H) × 9.9 (V) μm	4.65 (H) × 4.65 (V) μm	3.75 (H) × 3.75 (V) μm	4.40 (H) × 4.40 (V) μm	5.5 (H) × 5.5 (V) μm	3.45 (H) × 3.45 (V) μm	
Electronic Shutter	MANUAL : 10 μs to 16 s, AE : 10 μs to 16 s, Random Trigger Shutter		MANUAL : 30 μs to 16 s, AE : 30 μs to 16 s, Random Trigger Shutter			MANUAL : 10 μs to 1 s, AE : 10 μs to 1 s, Random Trigger Shutter	MANUAL : 30 μs to 16 s, AE : 30 μs to 1 s, Random Trigger Shutter	MANUAL : 32 μs to 16 s, AE : 32 μs to 1 s, Random Trigger Shutter
Scan Method	Progressive							
Color Filter	—							
Standard Sensitivity	1,700 lx, F5.6, 1/125 s		1,700 lx, F5.6, 1/40 s	1,300 lx, F8, 1/30 s	525 lx, F8, 1/20 s	1,200 lx, F11, 1/50 s	3,850 lx, F11, 1/35 s	2,600 lx, F11, 1/22 s
Minimum Sensitivity	7 lx, F1.4 (Gain +18 dB, Video level 50%)			3 lx, F1.4 (Gain +18 dB, Video level 50%)	2 lx, F1.4 (Gain +18 dB, Video level 50%)		2 lx, F1.4 (Gain +24 dB, Video level 50%)	
Gamma	$\gamma=1.0$ (OFF) to 0.45							
Gain	MANUAL : 0 to +18dB, AGC						MANUAL : 0 to +24dB, AGC	
White Balance	—							
Sync System	Internal synchronization							
Image Output Format	Mono 8 / 10 bit All pixel readout / Scalable / Binning					Mono 8 bit All pixel readout / Scalable / Decimation (Line) / Reverse (H/V)	Mono 8 / 10 bit All pixel readout / Scalable / Binning / Decimation / Reverse (H/V)	
Power Supply	PoE (Power over Ethernet) DC+12 V $\pm 10\%$							
Power Consumption	3.1 W (PoE) 2.7 W (DC+12 V)		2.9 W (PoE) 2.4 W (DC+12 V)	2.5 W (PoE) 2.2 W (DC+12 V)	3.4 W (PoE) 3.0 W (DC+12 V)	2.9 W (PoE) 2.5 W (DC+12 V)	3.2 W (PoE) 2.7 W (DC+12 V)	
Lens Mount	C-Mount					CS - Mount	C - Mount	
Dimensions	29 (W) × 29 (H) × 40 (D) mm (Not including protrusion)							
Mass	53 g					50 g	56 g	
Operation Assurance	Temperature : 0°C to 40°C (Camera housing temperature : less than 50°C)							
Conformity	CE, FCC, RoHS, WEEE, GenlCam, GigE Vision, PoE						CE, FCC, RoHS, WEEE, GenlCam, GigE Vision, PoE, IIDC2	

Model name suffix G : with Dust-proof glass, (none) : without glass or optical filter

B/W / COLOR	COLOR					
Pixels	0.3M	1.3M	2M		3.1M	5M
Item \ Model Name	BG030C/CF	BG130C/CF	BG202C/CF	BG205MC-CS/ MCF-CS	BG302LMCG/ LMCF	BG505LMCG/ LMCF
Interface	Gigabit Ethernet IEEE802.3ab (1000BASE-T)					
Imager	1/3 type CCD (ICX414AQ)	1/3 type CCD (ICX445AQ)	1/1.8 type CCD (ICX274AQ)	2/3 type GS-CMOS (CMV2000)	1/1.8 type GS-CMOS (IMX265)	2/3 type GS-CMOS (IMX264)
Resolution	640 (H) × 480 (V)	1,280 (H) × 960 (V)	1,600 (H) × 1,200 (V)	2,048 (H) × 1,088 (V)	2,048 (H) × 1,536 (V)	2,448 (H) × 2,048 (V)
Frame Rate	Bayer 8 / 10, YUV : 125 fps RGB : 120 fps	Bayer 8 / 10, YUV : 30 fps RGB : 30 fps	Bayer 8 / 10, YUV : 20 fps RGB : 19 fps	50 fps	Mono 8 : 35 fps Mono 10 / 12 : 17 fps	Mono 8 : 22 fps Mono 10 / 12 : 11 fps
Pixel Size	7.4 (H) × 7.4 (V) μm	3.75 (H) × 3.75 (V) μm	4.40 (H) × 4.40 (V) μm	5.5 (H) × 5.5 (V) μm	3.45 (H) × 3.45 (V) μm	
Electronic Shutter	MANUAL : 10 μs to 16 s, AE : 10 μs to 16 s, Random Trigger Shutter	MANUAL : 30 μs to 16 s, AE : 30 μs to 16 s, Random Trigger Shutter		MANUAL : 10 μs to 1 s, AE : 10 μs to 1 s, Random Trigger Shutter	MANUAL : 30 μs to 16 s, AE : 30 μs to 1 s, Random Trigger Shutter	MANUAL : 32 μs to 16 s, AE : 32 μs to 1 s, Random Trigger Shutter
Scan Method	Progressive					
Color Filter	RGB primary color mosaic-on-tip color filter					
Standard Sensitivity	C : 3,500 lx, F5.6, 1/125 s CF : 4,200 lx, F5.6, 1/125 s	C : 1,250 lx, F5.6, 1/30 s CF : 1,500 lx, F5.6, 1/30 s	C : 725 lx, F5.6, 1/20 s CF : 800 lx, F5.6, 1/20 s	C : 2,300 lx, F11, 1/50 s CF : 2,900 lx, F11, 1/50 slx, F11, 1/50 s	CG : (TBD) lx, F11, 1/35 s CF : (TBD) lx, F11, 1/35 s	CG : (TBD) lx, F11, 1/22 s CF : (TBD) lx, F11, 1/22 s
Minimum Sensitivity	C : 14 lx, CF : 17 lx F1.4 (Gain +18 dB, Video level 50%)	C : 5 lx, CF : 6 lx F1.4 (Gain +18 dB, Video level 50%)	C : 3 lx, CF : 4 lx F1.4 (Gain +18 dB, Video level 50%)	C : 3 lx, F1.4 (Gain +18 dB, Video level 50%) CS : 4 lx, F1.4 (Gain +18 dB, Video level 50%)	CG : (TBD) lx CF : (TBD) lx F1.4 (Gain +24 dB, Video level 50%)	
Gamma	γ=1.0 (OFF) to 0.45					
Gain	MANUAL : 0 to +18dB, AGC				MANUAL : 0 to +24dB, AGC	
White Balance	Manual, Once					
Sync System	Internal synchronization					
Image Output Format	RGB24 bit, YUV422 16 bit, YUV411 12 bit, Bayer 8 / 10 bit All pixel readout / Scalable		RGB24 bit, YUV422 16 bit, YUV411 12 bit, Bayer 8 / 10 bit All pixel readout / Scalable / Decimation	Bayer 8bit All pixel readout / Scalable / Decimation / Reverse (H/V)	RGB 24 bit, BGR 24 bit, YUV422 16 bit, YUV411 12 bit, Bayer 8 / 10 / 12 bit, Mono 8 bit All pixel readout / Scalable / Binning / Decimation / Reverse (H/V)	
Power Supply	PoE (Power over Ethernet) DC+12 V ±10%					
Power Consumption	3.3 W (PoE) 2.9 W (DC+12 V)	2.9 W (PoE) 2.5 W (DC+12 V)	3.5 W (PoE) 3.1 W (DC+12 V)	2.9 W (PoE) 2.5 W (DC+12 V)	(TBD)W (PoE) (TBD) W (DC+12 V)	
Lens Mount	C - Mount			CS - Mount	C - Mount	
Dimensions	29 (W) × 29 (H) × 40 (D) mm (Not including protrusion)					
Mass	53 g			51 g	56 g	
Operation Assurance	Temperature : 0°C to 40°C (Camera housing temperature : less than 50°C), Humidity : 10% to 90% (no condensation)					
Conformity	CE, FCC, RoHS, WEEE, GenlCam, GigE Vision, PoE				CE, FCC, RoHS, WEEE, GenlCam, GigE Vision, PoE, IICD2	

Model name suffix G : with Dust-proof glass, F : with IR-cut filter, (none) : without glass or optical filter