

New Camera Link Camera

CAMERA
Link

5
MP

36
fps

BC505LM series

PoCL

3.1
MP

56
fps

BC302LM series

Pregius

New IP Core

High Image Quality

Teli



29 × 29 × 26.5 mm 44 g

Feature

- Super high speed response with new IP Core 'TELI Core Technology' (no CPU) system
- With Sony's ultra high image quality CMOS sensor
- 5.0M (IMX264) : 36fps (8bit/3tap) 2,448(H)×2,048(V) pixels
- 3.1M (IMX265) : 56fps (8bit/3tap) 2,048(H)×1,536(V) pixels
- Pixel size : 3.45(H)×3.45(V) μm
- Global shutter type
- External Power or PoCL (Power over Camera Link) / Base Configuration
- Comm. protocol : Legacy (Legacy register), GenCP (IIDC2 register)

Toshiba Teli Corporation

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Specifications

B/W or COLOR		B/W		COLOR		B/W		COLOR			
Pixels		3.1M		5M		3.1M		5M			
ITEM	MODEL	Camera Link Version 1.2 (PoCL / Non-PoCL) / Base configuration									
		BC302LMG				BC302LMCG BC302LMCF		BC505LMG		BC505LMCG BC505LMCF	
Interface		1/1.8 type GS-CMOS (IMX265) / 2/3 type GS-CMOS (IMX264)									
Imager		2,048 (H) x 1,536 (V)				2,448 (H) x 2,048 (V)					
Resolution		56.13 fps (Mono8 / 3tap / 83MHz)		56.13 fps (Bayer8 / 3tap / 83MHz)		36 fps (Mono8 / 3tap / 83MHz)		36 fps (Bayer8 / 3tap / 83MHz)			
Max. Frame Rate (all pixels readout)		52 fps (Mono8 / 2tap / 83MHz)		52 fps (Bayer8 / 2tap / 83MHz)		32.6 fps (Mono8 / 2tap / 83MHz)		32.6 fps (Bayer8 / 2tap / 83MHz)			
Aspect Ratio		4 : 3				6 : 5					
Pixel Size		3.45 (H) x 3.45 (V) μm									
Scan Method		Progressive									
On-chip Color Filter		-				RGB primary color mosaic		-		RGB primary color mosaic	
Electronic Shutter		MANUAL (Global Shutter) / Random Trigger Shutter (Global Shutter)									
Standard Sensitivity (Gain : 0dB)		700 lx, F5.6, 1/52 s		CG : (TBD) lx, F5.6, 1/52 s CF : (TBD) lx, F5.6, 1/52 s		400 lx, F5.6, 1/32.62 s		CG : 1,150 lx, F5.6, 1/32.62 s CF : 1,400 lx, F5.6, 1/32.62 s			
Minimum Sensitivity (Video Level:50%)		6 lx (F1.4, Gain +24 dB)		CG=(TBD) lx, CF=(TBD) lx (F1.4, Gain +24 dB)		3 lx (F1.4, Gain +24 dB)		CG : 3 lx, CF : 3 lx (F1.4, Gain +24 dB)			
Image Output Format		Base configuration									
Tap Number		1 / 2 / 3 tap									
Data Format		Mono 8 / 10 / 12 bit		Bayer 8 / 10 / 12 bit		Mono 8 / 10 / 12 bit		Bayer 8 / 10 / 12 bit			
Data Bit Depth		8 / 10 / 12 bit									
Pixel Clock (Camera Link)		41.5 / 64 / 83 MHz									
Pixel Readout Mode		All pixel, Scalable, Binning									
Trigger Type		External Trigger									
Trigger Shutter Mode		Edge / Level / Bulk (max. 255 times)									
Sequential Shutter		16 entry (max)									
Exposure Time		30 μs to 16 s (MANUAL), 30 μs to 16 s (Edge or Bulk Mode), 50 μs to Trigger width (Level Mode)									
Gain		0 to +24 dB (MANUAL)									
Black Level		-25 to +25 %									
White Balance		-				Manual, One push, AWB CG : N/A, CF : 2,500 to 6,500 K		-		Manual, One push, AWB CG : N/A, CF : 2,500 to 6,500 K	
Gamma / LUT		$\gamma = 1.0$ to 0.45 / In 12 bit, Out 12 bit									
Sharpness		✓		-		-		✓		-	
Image Rotation		Mirroring, Flip									
Test pattern		✓									
Communication Protocol		Legacy / GenCP-IIDC2 mode									
Baud Rate		9,600 / 115,200 / 921,600 bps (Data: 8 bit, No parity, Start bit: 1 bit, Stop bit: 1 bit, No flow control)									
External Trigger Input		1 channel (CC1)									
GPIO Input Output		In : 1 channel / LVTTTL - 24V, In/Out : 1 channel (selectable) / 5V-CMOS, Out : 1 channel / 5V-CMOS									
GPO Output signals		TIMER0 ACTIVE / USER OUTPUT / EXPOSURE ACTIVE / FRAME ACTIVE / FRAME TRANSFER / FRAME TRIGGER WAIT									
Power Supply		DC +12 V $\pm 10\%$ (PoCL or HIROSE connector)									
Power Consumption		1.8 W		(TBD) W		1.8 W		2.2 W			
Lens Mount		C Mount									
Dust-proof Glass / IR Cut Filter		G : with Dust-proof Glass (AR coating)		CG : with Dust-proof Glass (AR coating) CF : with IR Cut Filter		G : with Dust-proof Glass (AR coating)		CG : with Dust-proof Glass (AR coating) CF : with IR Cut Filter			
Dimensions / Mass		29 (W) x 29 (H) x 26.5 (D) mm (Not including protrusion) / approx. 44 g									
Operation Assurance		Temperature : -5 $^{\circ}\text{C}$ to 45 $^{\circ}\text{C}$, Humidity : 10 % to 90 % (no condensation)									
Conformity		CE, FCC, KC, RoHS, WEEE, GenCam (GenCP Ver1.0), IIDC2 (Ver1.1.0)									
Product Availability		Available		Planning		Available		Available			

Main Point

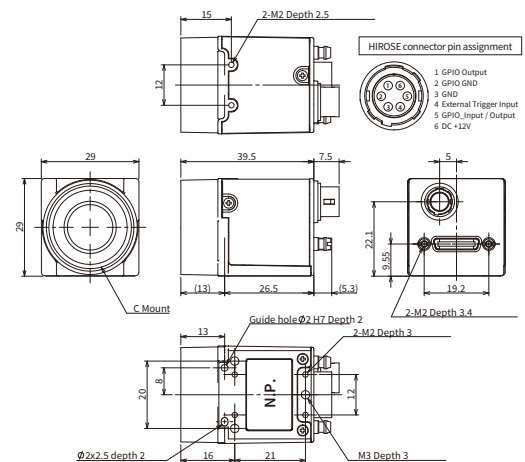
- Replacement with new camera model makes higher speed and higher sensitivity!

Model	BC302LMG	CSCU30BC18	BC505LMG	CSCQS15BC23
Imager	3.1Mp CMOS (IMX265)	2Mp CCD (ICX274)	5Mp CMOS (IMX264)	5Mp CCD (ICX625)
Resolution	2,048 x 1,536 pix	1,628 x 1,236 pix	2,448 x 2,048 pix	2,456 x 2,058 pix
Pixel Size	3.45 x 3.45 μm	4.4 x 4.4 μm	3.45 x 3.45 μm	3.45 x 3.45 μm
Optical Size	1/1.8 type	1/1.8 type	2/3 type	2/3 type
Maximum Frame Rate	40.6 fps* (1tap / 83MHz)	30 fps (1tap / 72MHz)	25.3 fps (2tap / 64MHz)	15 fps (2tap / 60MHz)
Relative Std. Sensitivity	808 lx (F5.6, 1/60s)	1,200 lx (F5.6, 1/60s)	736 lx (F5.6, 1/60s)	1,600 lx (F5.6, 1/60s)

* : Set to 1,628 x 1,236 pixels by Scalable function. The relative optical size is changed.

- Supports three types of pixel clock (PCLK = 41.5 / 64 / 83 MHz) :
⇒ Connectable to the Frame Grabber Board for low-speed clock
- Useful data transfer with high efficiency :
⇒ Output data format - Base Configuration 1 / 2 / 3 tap(s)

Outline Drawing



Notes on Safety

- Before using this product, please read "Operation Manual" carefully in order to use this product safely and correctly.
- If this product should be used in the extraordinary conditions or environments, or if you have any questions or problems, please contact our sales division.

Toshiba Teli Corporation

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