

New USB3 Vision Camera

USB3
VISION

1.6
MP

226
fps

BU160M Series

0.4
MP

437
fps

BU040M Series

Pregius

Low Pix., High fps

Instead of CCD



29 × 29 × 16 mm

33g

Feature

- Super high speed response with new IP Core 'TELI Core Technology'
- With Sony's ultra high image quality global shutter type CMOS sensor
- 1.6M (IMX273) : 226 fps / 1,440(H) x 1,080(V) pixels
- 0.4M (IMX287) : 437 fps / 720(H) x 540(V) pixels
- Pixel size : BU160M = 3.45(H) x 3.45(V) μm
 BU040M = 6.90(H) x 6.90(V) μm
- Correspond with "TeliCamSDK" (Software development kit, free supply)

Pregius logo is trademark of Sony Corporation.

Toshiba Teli Corporation

<http://www.toshiba-teli.co.jp/en/>



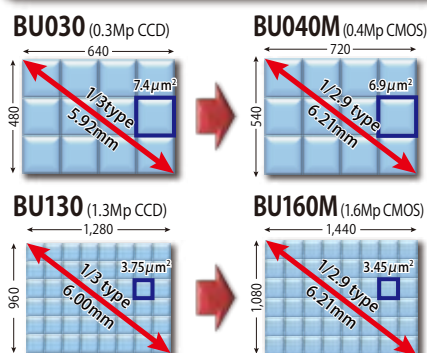
Specifications

B/W or COLOR	B/W		COLOR	
Pixels	0.4 M		1.6 M	
ITEM	BU040M BU040MG		BU040MCG BU040MCF	
MODEL	BU040MCG BU040MCF		BU160M BU160MG	
Interface	USB 3.0 (Only SuperSpeed is supported)			
Protocol	USB3 Vision (Ver1.0)			
Imager	1/2.9 type GS-CMOS (IMX287)		1/2.9 type GS-CMOS (IMX273)	
Resolution	720 (H) X 540 (V)		1,440 (H) X 1,080 (V)	
Max. Frame Rate (all pixels readout)	Mono 8 : 437 fps Mono 10 / 12 : 320 fps	Bayer 8, Mono 8 : 437 fps YUV, Bayer 10 / 12 : 320 fps RGB, BGR : TBD fps	Mono 8 : 226 fps Mono 10 / 12 : 128 fps	Bayer 8, Mono 8 : 226 fps YUV, Bayer 10 / 12 : 128 fps RGB, BGR : TBD fps
Pixel Size	6.90 (H) X 6.90 (V) μ m		3.45 (H) X 3.45 (V) μ m	
Scan Method	Progressive			
Aspect Ratio	4 : 3		4 : 3	
Electronic Shutter	MANUAL (Global Shutter) / Random Trigger Shutter (Global Shutter)			
Random Trigger Shutter Type	External Trigger / Software Trigger			
Random Trigger Shutter Mode	Edge / Level / Bulk (255 times)			
Sequential Shutter	16 entries (max)			
Exposure Time	30 μ s to 16 s (MANUAL), 30 μ s to 1 s (AE), 30 μ s to 16 s (Edge or Bulk Mode), Trigger width (Level Mode)			
Synchronization System	Internal / Bus (USB)			
On-chip Color Filter	-		RGB primary color mosaic	
Dust-proof Glass / IR Cut Filter	M : None MG : Dust-proof Glass	RGB primary color mosaic MCG : Dust-proof Glass MCF : with IR Cut Filter	M : None MG : Dust-proof Glass	RGB primary color mosaic MCG : Dust-proof Glass MCF : with IR Cut Filter
Standard Sensitivity (Gain : 0dB)	2,800 lx, F5.6, 1/500 s	MCG : 2,300 lx, F5.6, 1/500 s MCF : 2,500 lx, F5.6, 1/500 s	3,000 lx, F4, 1/250 s	MCG : TBD lx, F4, 1/250 s MCF : TBD lx, F4, 1/250 s
Minimum Sensitivity (Video Level:50%)	6 lx (F1.4, Gain +24 dB)	MCG : 1 lx, MCF : 3 lx (F1.4, Gain +36 dB)	12 lx (F1.4, Gain +24 dB)	MCG : TBD lx, MCF : TBD lx (F1.4, Gain +36 dB)
Gain (Analog)	0 to +24 dB (MANUAL, AGC)	0 to +36 dB (MANUAL, AGC)	0 to +24 dB (MANUAL, AGC)	0 to +36 dB (MANUAL, AGC)
Black Level	-25 to +25 %			
White Balance	Manual, One push MCG : not specify, MCF : 2,500 to 6,500 K		Manual, One push MCG : not specify, MCF : 2,500 to 6,500 K	
Gamma / LUT	$\gamma=1.0$ to 0.45 / In 12 bit, Out 12 bit			
Sharpness	✓			
Color Matrix Correction	✓			
ALC (AE + AGC) Control	✓			
Test Pattern	✓			
Image Buffer / Number of Frames	256 MB / 690 frames (all pixels readout)		256 MB / 172 frames (all pixels readout)	
Image Time Stamp	✓			
Event Notification	FrameTrigger, FrameTriggerError, FrameTriggerWait, FrameTransferStart, FrameTransferEnd, ExposureStart, ExposureEnd, Timer0Start, Timer0End			
Chunk	FrameBurstTriggerCount, ExposureTime, Gain, LineStatusAll, SequentialShutterNumber, SequentialShutterElement, UserArea (256 Bytes), etc.			
Image Output Format	Mono 8 / 10 / 12 bit All pixel, Scalable, Binning, Decimation, Mirroring, Flip	RGB 24 bit, BGR 24 bit, YUV411 12 bit, YUV422 16 bit, Bayer 8 / 10 / 12 bit, Mono 8 bit All pixel, Scalable, Binning, Decimation, Mirroring, Flip	Mono 8 / 10 / 12 bit All pixel, Scalable, Binning, Decimation, Mirroring, Flip	RGB 24 bit, BGR 24 bit, YUV411 12 bit, YUV422 16 bit, Bayer 8 / 10 / 12 bit, Mono 8 bit All pixel, Scalable, Binning, Decimation, Mirroring, Flip
External Trigger Input / Level	1 channel / LVTTTL to +24 V			
GPIO Input Output / Level	In / Out : 1 channel (selectable) / 5 V CMOS (each), Out : 1 channel / 5 V CMOS			
Power Supply	DC +5 V \pm 5 % (from USB connector)			
Power Consumption	2.2 W	3.2 W	2.4 W	(TBD) W
Lens Mount	C Mount			
Dimensions / Mass	29 (W) \times 29 (H) \times 16 (D) mm (Not including protrusion) / 33 g			
Operation Assurance	Temperature : 0 $^{\circ}$ C to 40 $^{\circ}$ C (below 60 $^{\circ}$ C on cabinet surface), Humidity : 10 % to 90 % (no condensation)			
Conformity	CE, FCC, RoHS, WEEE, GeniCam (Ver2.4 and Ver3.0), IIDC2 (Ver1.1.0)			
Product Availability	Available	Available	Available	(Planning)

For replacing CCD camera

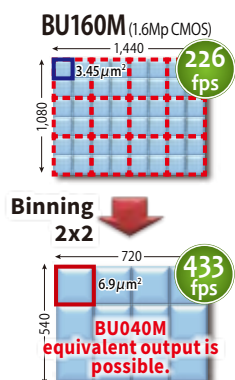
- Equivalent optical features make easy replacement!

Number and size of pixels are unchanged

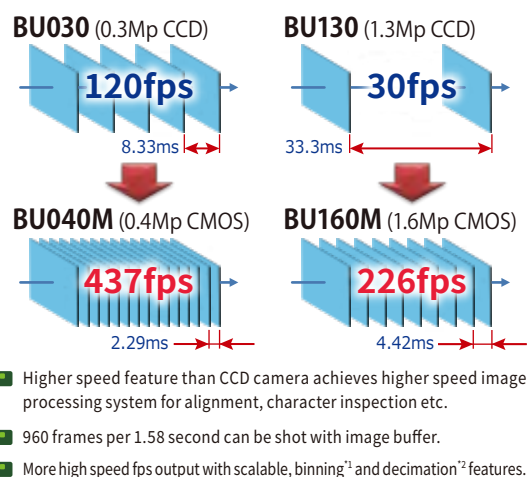


Using Binning

- Binning feature with constant image area achieves multi-purpose use.



High speed frame rate



¹, ²: Only for BU160M



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

<http://www.toshiba-teli.co.jp/en/>

teli camera Search

- The information of this catalog at the time of August 2019.
- The information of this catalog is subject to change without notice. Please see our website or ask sales division.
- Company name, product name or logo might be trademark or registered trademark of each company or organization.

4000-0118-1908