

Dual USB3 / USB3 Vision Camera

USB3
VISION

12.3
MP

62
fps

DDU1207M Series

Pregius

12.3
MP

32
fps

DU1207M Series

6.5
MP

55
fps

DU657M Series

New IP Core

High Image Quality

Original CMOS sensor*

*: DU657M series

B/W Color

40 × 40 × 35 mm 90 g



Dual USB3
DDU1207M



● Band : 10Gbps

Single USB3
DU1207M, DU657M



● Band : 5Gbps

Feature

- **Dual USB3** : Due to the 2 channels of the USB3.1 Gen1 interface, **the transfer frequency is doubled**
- High speed response with new IP Core “Teli Core Technology” (no CPU) system
- With Sony’s high image quality CMOS sensor (12.3Mp) / Teli’s original CMOS sensor (6.5Mp)
- 12.3Mp (IMX253) 1.1 type : 62 fps (**Dual**) or 32 fps (Single) / 4,096(H) x 3,000(V) pixels
- 6.5Mp (Teli original) 1.1 type : 55 fps / 2,560(H) x 2,560(V) pixels
- Global shutter type
- Pixel size : DDU1207M, DU1207M series = 3.45(H) x 3.45(V) μ m
DU657M series = 5.0(H) x 5.0(V) μ m
- Correspond with “TeliCamSDK” (Software development kit, free supply)

Toshiba Teli Corporation

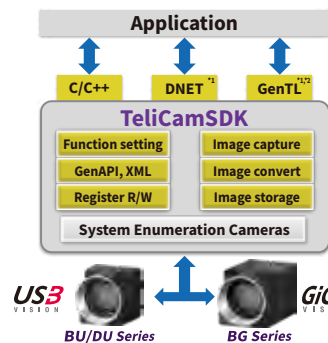
<https://www.toshiba-teli.co.jp/en/>



Specifications

B/W or COLOR	B/W		COLOR		B/W		COLOR	
Pixels	6.5 M				12.3 M			
ITEM	MODEL	DU657M	DU657MC	DU1207MG	DU1207MCG DU1207MCF	DDU1207MG	DDU1207MCG DDU1207MCF	
Interface	USB 3.1 Gen 1 (USB3.0, Only SuperSpeed is supported)							
Imager	1.1 type GS-CMOS (TELI Original)				1.1 type GS-CMOS (IMX253)			
Resolution	2,560 (H) X 2,560 (V) pixels				4,096 (H) X 3,000 (V) pixels			
Max. Frame Rate (all pixels readout)	Mono 8 : 55 fps		Bayer 8 : 55 fps		Mono 8 : 32 fps Mono 10 / 12 : 16 fps		Bayer 8, Mono 8 : 31 fps, YUV411 : 21 fps, YUV422, Bayer 10 / 12 : 16 fps RGB, BGR : 10 fps	
Pixel Size	5.0 (H) X 5.0 (V) μm				3.45 (H) X 3.45 (V) μm			
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	10 μs to 200 ms (MANUAL), 10 μs to 200 ms (Edge or Bulk Mode), 10 μs to trigger width (Level Mode)				30 μs to 16 s (MANUAL), 30 μs to 1 s (AE), 30 μs to 16 s (Edge or Bulk Mode), 30 μs to trigger width (Level Mode)			
Scan Method	Progressive							
On-chip Color Filter	-		RGB primary color mosaic		-		RGB primary color mosaic	
Dust-proof Glass / IR Cut Filter	-		-		G : with Dust-proof Glass		CG : with Dust-proof Glass CF : with IR Cut Filter	
Standard Sensitivity (Gain : 0dB)	900 lx, F5.6, 1/60 s		2,200 lx, F5.6, 1/60 s		860 lx, F5.6, 1/32 s		CG : 1,150 lx, F5.6, 1/31 s CF : 1,425 lx, F5.6, 1/31 s	
Minimum Sensitivity (Video Level:50%)	16 lx (F2.8, Gain x8)		40 lx (F2.8, Gain x8)		2 lx (F1.4, Gain +24 dB)		CG : 3 lx, CF : 3 lx (F1.4, Gain +24 dB)	
Gain	Digital, x1 to x8 (MANUAL)				Analog, 0 to +24 dB (MANUAL, AGC)			
Black Level	-25 to +25 %							
White Balance	-		Manual, One push 3,500 to 6,500 K		-		Manual, One push CG : not specify, CF : 2,500 to 6,500 K	
Gamma / LUT	γ=1.0 to 0.45 / In 10 bit, Out 10 bit							
Sharpness	-							
HUE	-							
Saturation	-							
ALC Control	-							
Test Pattern	-				✓			
Image Buffer / Number of Frames	64 MB / 10 frames (all pixels readout)				256 MB / 21 frames (all pixels readout)			
Image Time Stamp	-							
Event Notification	FrameTrigger / FrameTriggerError / FrameTriggerWait / FrameTransferStart / FrameTransferEnd / ExposureStart / ExposureEnd / Timer0Start / Timer0End							
Chunk	-							
Image Output Format	Mono 8 bit		Bayer 8 bit		Mono 8 / 10 / 12 bit		YUV 24 bit, BGR 24 bit, YUV411 12 bit, YUV422 16 bit, Bayer 8 / 10 / 12 bit, Mono 8 bit	
Readout Mode	All pixel, Scalable, Binning, Mirroring / Flip		All pixel, Scalable, Binning, Mirroring / Flip		All pixel, Scalable, Binning, Decimation, Mirroring / Flip		All pixel, Scalable, Binning, Decimation, Mirroring / Flip	
External Trigger Input / Level	1 channel / +2.0 V to +24 V				1 channel / +2.0 V to +24 V			
GPIO Input Output / Level	2 channels / 5 V CMOS				In / Out : 1 channel (selectable) / 5 V CMOS (each), Out : 1 channel / 5 V CMOS		e-CON connector : 1 channel / +2.0 V to +24 V Round connector : 2 channel / +3.3 V to +24 V (Photo-coupler) e-CON connector : In / Out : 1 channel (selectable) / 5 V CMOS (each), Out : 1 channel / 5 V CMOS Round connector : Out : 2 channel / Open-collector	
Power Supply	DC +5 V ± 5 % (from USB connector)							
Power Consumption	Max. 3.6 W		Max. 3.6 W		Max. 4.0 W		Max. 4.5 W	
Lens Mount	C Mount							
Dimensions / Mass	40 (W) × 40 (H) × 35 (D) mm (Not including protrusion) / 85 g				40 (W) × 40 (H) × 35 (D) mm (Not including protrusion) / 90 g			
Operation Assurance	Temperature : -5 °C to 45 °C, Humidity : 10 % to 90 % (no condensation)				Temperature : -5 °C to 45 °C (below 65 °C on cabinet surface), Humidity : 10 % to 90 % (no condensation)		Temperature : -5 °C to 45 °C (below 60 °C on cabinet surface), Humidity : 10 % to 90 % (no condensation)	
Conformity	CE, FCC, WEEE, USB3 Vision (Ver1.0), GenCam (DU657M/MC : Ver2.3, other : Ver2.4, Ver3.0), IIDC2 (DU657M/MC : Ver1.0.0, other : Ver1.1.0)							
Product Availability	Available		Available		Available		Available	

TeliCamSDK



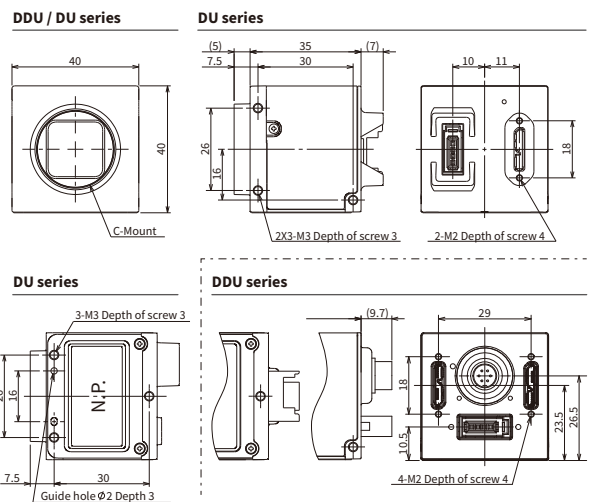
- Easy to capture image
- GEN<i>CAM available
- Varieties of functions for easy programming
- Abundant sample code
- Easy to understand manuals
- Unified SDK for USB3.0 & GigE

TeliCamSDK for Linux supported ARM architectures.
- Jetson TK1 - Jetson TX2
- Odroid XU4^(*) - Raspberry pi 3^(*),^(*)

bit	Windows					Linux		
	XP SP3	Vista	7	8.1	10	Ubuntu 14.04 LTS	Debian 8.1.0	Linux ARM
32	✓ ^{*3}	✓ ^{*3}	✓	✓	✓	✓ ^{*4}	✓ ^{*4}	✓ ^{*4}
64	-	✓ ^{*3}	✓	✓	✓	✓	✓	✓ ^{*4}

*1: for Windows / *2: USB only / *3: Corresponds to old version / *4: Please contact us /
*5: With a GigE Vision camera, image might be missed depending on PC specifications. / *6: USB3 Vision camera cannot be used.

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

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

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