



# Toshiba BU1207MG Manual

Cmos camera



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Specifications

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Cmos camera (94 pages)

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Toshiba pdr-2300: owner manual (98 pages)

[Digital Camera Toshiba PDR-2 Quick Reference Manual](#)

Toshiba pdr-2: quick start (21 pages)

## Summary of Contents for Toshiba BU1207MG

[Page 1](#) CMOS Camera BU Series BU1207MG BU1207MCG/BU1207MCF Specifications  
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### [Page 3: Restriction For Use](#)

(\*2) :Equipment relating to maintenance of public services/functions involving factors of safety refers - Traffic control systems for air transportation, railways, roads, or marine transportation - Equipment for nuclear power generation - Equipment related to the above D4278997A  
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### [Page 4: Cases For Indemnity \(Limited Warranty\)](#)

□ Expenses we bear on this product shall be limited to the individual price of the product. □ The item that is not described in specifications of this product is off the subject of the guarantee. □ The attachment mistake of a cable. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

### [Page 5: Usage Precautions](#)

If an intense magnetic or electromagnetic field is generated near the camera or connection cable, noise may be generated on the screen. If this occurs, move the camera or the cable. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved.  
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[Page 6](#) The brightness of the upper part of the screen may be different from that of the lower part. Note that this is a characteristic of a CMOS image sensor and is not a fault. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved.  
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### [Page 7: Overview](#)

Features High frame rate Supporting high frame rate, BU1207MG 31fps, BU1207MCG/MCF 31fps for mono (Bayer) bpp8 output mode. Global shutter As it employs a global electronic shutter similar to a CCD image sensor, clear images of even fast-moving object are obtainable with less blur.

[Page 8](#) 2.12 IR -cut filter Build-in IR-cut filter models are optional for color models. Suffix [F] is attached to the model name of built-in IR-cut filter model. 2.13 EU RoHS & Chinese ROHS D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved.  
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### [Page 9: Configuration](#)

\* No application software and manuals are attached to this camera. Optional part - Camera mounting kit Model name: CPTBU, CPTBUBG \* Contact your dealer / distributor for details of option units. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved.  
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### [Page 10: Functions](#)

Arbitrary curve and binarization are possible by using 12 bit input and 12 bit output LUT. Exposure Time Manual exposure time control is available Exposure time is adjustable by micro-second unit. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved.  
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[Page 11](#) R/B gain can be set independently. 5.6.2 OPWB When OPWB is executed, the camera adjusts R/B gain automatically. Chunk It is possible to integrate some sort of information about each image with video data. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 12](#) - When the interval of the input trigger signal is extremely short, or when the trigger signal is noisy, there is a possibility of causing the malfunction. In this case, please input a proper trigger signal. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 13](#) - In Sequential Shutter mode, window size is unchangeable. 5.10 Trigger Delay You can add the delay between trigger signal input and the start of exposure. Trigger signal TriggerDelay Exposure USB Streaming Image D4278997A Copyright © 2018 TOSHIBA TELI

[Page 14](#) Delay High Valid Valid Valid Valid AntiGlitch Circuit Edge Edge Edge Edge Output Invalid Edge AntiChattering Insensible Insensible Value Time Time High AntiChattering Circuit Valid Valid Output Signal Signal D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 15](#) : End of transferring streaming data. (5) FrameTransferEnd (6) ExposureStart : Start of Exposure. : End of Exposure. (7) ExposureEnd (8) Timer0Start : Start of Timer0. (9) Timer0End : End of Timer0. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 16](#) An External trigger is input during this period, exposure starts immediately. EXT\_TRIG Exposure Sensor Output USB Streaming Delay Duration TIMER0 ACTIVE EXPOSURE ACTIVE FRAME ACTIVE FRAME TRANSFER FRAME TRIGGER WAIT \* ActiveLow D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 17](#) In the scalable mode, camera reads out only necessary area at the normal speed and reads out other area at high speed. The trigger interval can be shorter when the vertical height size is small. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 18](#) ) (@ 8-bit) Grey B : Full screen 85 LSB (01010101 ) (@ 8-bit) Horizontal ramp waveform Vertical ramp waveform Grey scale(B/W models only) Color Bar (Color models only) D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

## [Page 19: Specifications](#)

Horizontal ramp waveform, Vertical ramp waveform, Grey scale (factory setting : OFF) Power supply DC +5V±5% (from USB connector) Power consumption(\*1) 3.0W (maximum) (\*1) at the all pixel readout D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 20](#) DC +5V±5% (from USB connector) (factory setting : OFF) Power consumption(\*1) 3.1W (maximum) (\*1) at the all pixel readout Horizontal ramp waveform, Vertical ramp waveform, Color bars (factory setting : OFF) D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 21](#) Input level Low: 0 to 0.5V, High: 2.0 to 24.0V Polarity High active / Low active (factory setting : Low active) Pulse width 50µs (minimum) Input impedance High impedance D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 22](#) - The recognition of the trigger signal depends on the length, characteristic or driving current of the cable. Therefore please confirm your system about those conditions. - Please confirm the EMC adaptability in whole of your system. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 23](#) 0 to 2000000µs (factory setting : 0µs) TimerTriggerSource Line0Active, ExposureStart, FrameTrigger Note on Input Level: - Line0 and Line2 have a different input level. Please use input level within the voltage described in this specification. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 24](#) Slow flash orange (ON: 400ms, OFF: 1600ms) Data being transferred Fast flash green (ON:60ms, OFF:20ms) Error during data transfer Solid Red (Time period: 500ms) Stand-by Super slow flash orange (ON:200ms, OFF: 2800ms) D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 25](#) 29 mm(W) \* 29 mm (H) \* 16 mm (D) (Not including protrusion) Mass Lens mount C-mount Flange back 17.526mm Camera body grounding Conductive between circuit GND and camera body insulation status D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 26](#) Shielded wire UL1533 (AWG28) (Hitachi Cable, Ltd.) Connection: e-CON GPIO(Line2) GPIO(Line2) GPIO(Line1) GPIO(Line1) TRIG IN TRIG IN Please confirm the EMC adaptability when it combines with parts other than them. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 27](#) Pin assignment ↑TOP \* Above figure is connector view from insert side. Pin No. Signal Name Function Line2 GPIO Input / Output Line1 GPIO Output Ground Line0 GPIO Input D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 28](#) 6.14 Typical spectral response The lens characteristics and light source characteristics is not reflected in table. <BU1207MG> D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 29](#) <BU1207MCG> <BU1207MCF> D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

### [Page 30: Timing Chart](#)

USB Streaming Image Image Model Name Format [ms] [ms] Mono8 31.72 32.25 BU1207MG Mono10, 43.88 61.83 Mono12, 1/(Frame Rate setting) Bayer8 31.72 32.25 BU1207MCG / MCF Bayer10, 43.88 61.83 Bayer12 D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

[Page 31](#) - When the interval of the input trigger signal is extremely short, or when the trigger signal is noisy, there is a possibility of causing the malfunction. In this case, please input a proper trigger signal. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

### [Page 32: Warranty Rules](#)

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### [Page 33: Repair](#)

10. The immunity from responsibility of the product is applied in the repair completion products. \* Please refer for the inquiry about the software to our homepage or sales personnel. D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

### [Page 34: Outline Drawing](#)

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[Page 35](#)  It certainly occurs.  It sometimes occurs.  It occurs, after time passes.  Others  <For dealer use> Reception date : Receipt No. : JOB No. : Check : D4278997A Copyright © 2018 TOSHIBA TELI CORPORATION, All Rights Reserved. <http://www.toshiba-teli.co.jp/en/...>

This manual is also suitable for:

[Bu series](#)[Bu1207mcg](#)[Bu1207mcf](#)



