

MER2-060-642U3M(-L)

MERCURY2 Series 0.6MP CMOS USB3.0 Area Scan Camera



The MER2-060-642U3M(-L) camera is a monochrome USB3.0 Vision camera with the CMOS sensor. Thanks to the extremely compact (29mm × 29mm), robust metal housings and locking screw connectors, the MERCURY2 cameras can secure the reliability of cameras deployed in harsh environments. The MER2-060-642U3M(-L) camera is powered over the USB3.0 interface. Compared to the MER2-060-642U3M, the MER2-060-642U3M-L has no I/O interfaces, so it is more light and handy. The camera has an outstanding price/performance ratio.

Applications

Suitable for machine vision applications such as industrial inspection, medical, scientific research, education and so on.

Features

- Trigger mode: Frame Start / Frame Burst Start
- The Sequencer Control supports multiple sets of parameters configuration
- Frame Buffer Control, Decimation, Binning, Digital Shift and Black Level
- Adjustable Gamma for optimizing the brightness of images
- Support Noise Reduction and Sharpness
- Programmable LUTs and User Set Control
- Support Timer and Counter
- Support Remove Parameter Limit to expand the range of exposure, gain and so on
- 512KB data storage area for saving algorithm coefficients and parameter configuration

Specifications

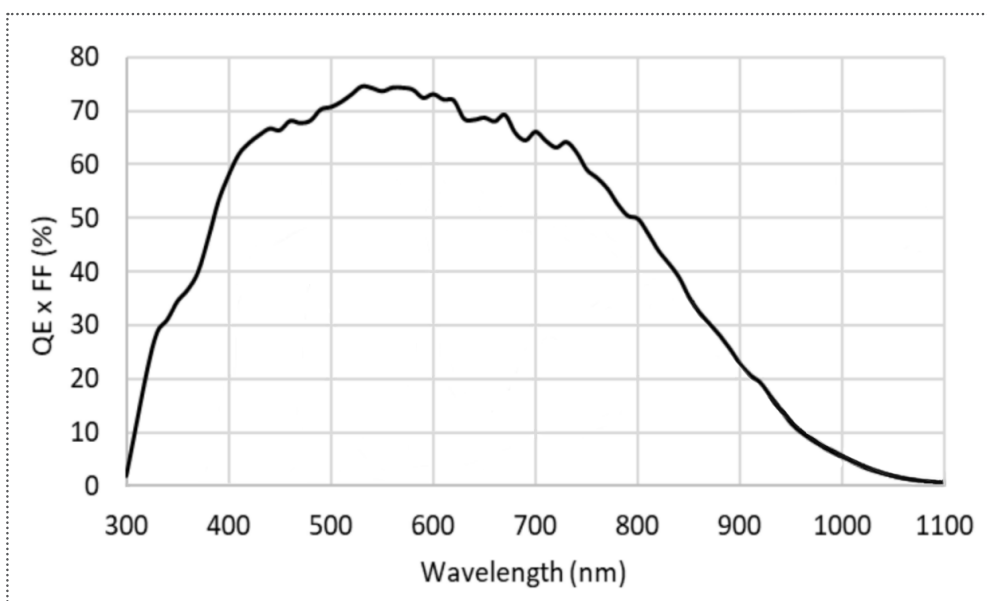
| Model | MER2-060-642U3M | MER2-060-642U3M-L |
|--------------------|--|-------------------|
| Resolution | 1024(H) × 600(V) | |
| Sensor | Global shutter CMOS | |
| Sensor Format | 1/1.7" | |
| Pixel Size | 8.0μm × 8.0μm | |
| Frame Rate | 642.6 fps @ 1024×600, 944.3 fps @ 720×540, 1051.5 fps @ 640×480 | |
| ADC | 10 bit | |
| Pixel Bit Depth | 8 bit, 10 bit | |
| Mono/Color | Mono | |
| Pixel Formats | Mono8 / Mono10 | |
| SNR | 40.53 dB | |
| Exposure Time | Standard: 7μs ~ 1s, Actual Steps: 1 μs | |
| Gain | 0dB ~ 16dB; Default: 0dB, Steps: 0.1dB | |
| Binning | 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4 | |
| Decimation | FPGA: 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4 | |
| Synchronization | Hardware trigger (MER2-U3-L: N/A), software trigger | |
| Acquisition Mode | Single frame, Continuous, Software trigger, Hardware trigger (MER2-U3-L: N/A) | |
| Reverse X/Y | Reverse X/Y | |
| I/O Interface | 1 input and 1 output with opto-isolated, 2 programmable GPIOs (MER2-U3-L: N/A) | |
| Data Interface | USB3.0 | |
| Power Supply | Power through USB3.0 interface | |
| Typical Power | 2.12 W @ 5 VDC | |
| Operating Temp. | 0°C ~ +45°C | |
| Storage Temp. | -20°C ~ +70°C | |
| Operating Humidity | 10% ~ 80% | |
| Lens Mount | C / CS | |
| Dimensions | 29(W) × 29(H) × 29(L) mm (without lens adapter or connectors) | |
| Weight | MER2-U3: 65 g; MER2-U3-L: 61 g | |
| Software | 3rd-party software such as HALCON, MERLIC and LabVIEW | |
| OS | 32bit / 64bit Windows, Linux, Android, ARMv7, ARMv8 | |
| Conformity | CE, RoHS, FCC, ICES, UKCA, UL, USB3.0 Vision®, GenICam® | |

I/O Interface

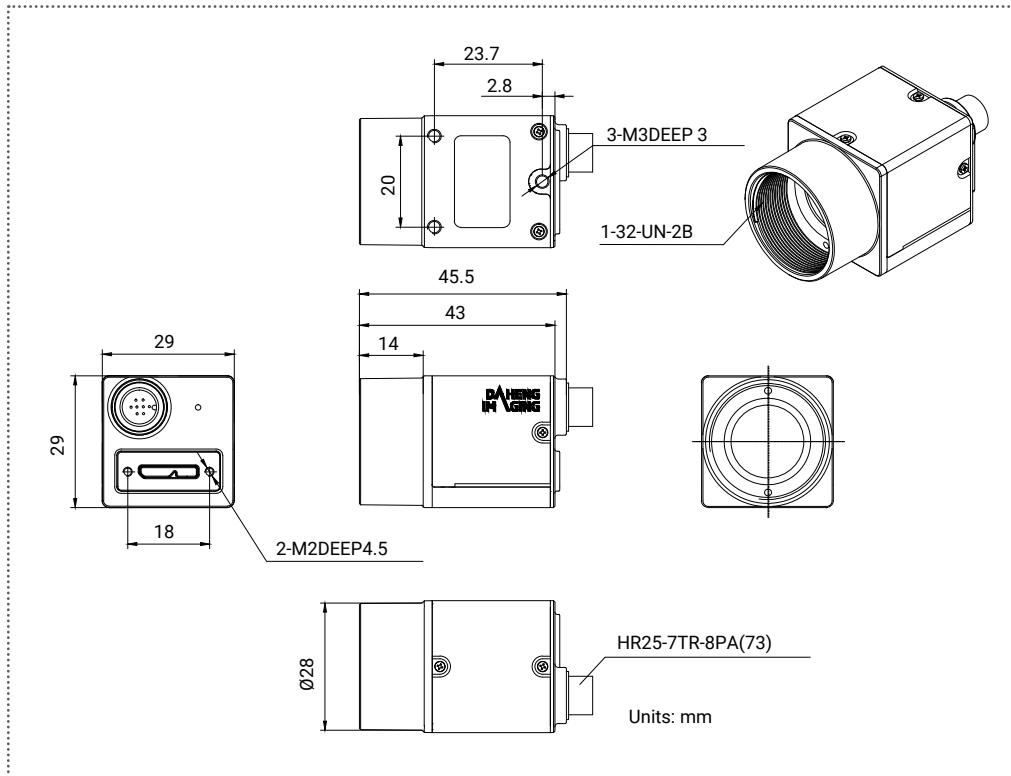


| Pin | Definition | Description |
|-----|------------|------------------------|
| 1 | Line0+ | Opto-isolated input + |
| 2 | GND | GPIO GND |
| 3 | Line0- | Opto-isolated input - |
| 4 | NC | NC |
| 5 | Line2 | GPIO input/output |
| 6 | Line3 | GPIO input/output |
| 7 | Line1- | Opto-isolated output - |
| 8 | Line1+ | Opto-isolated output + |

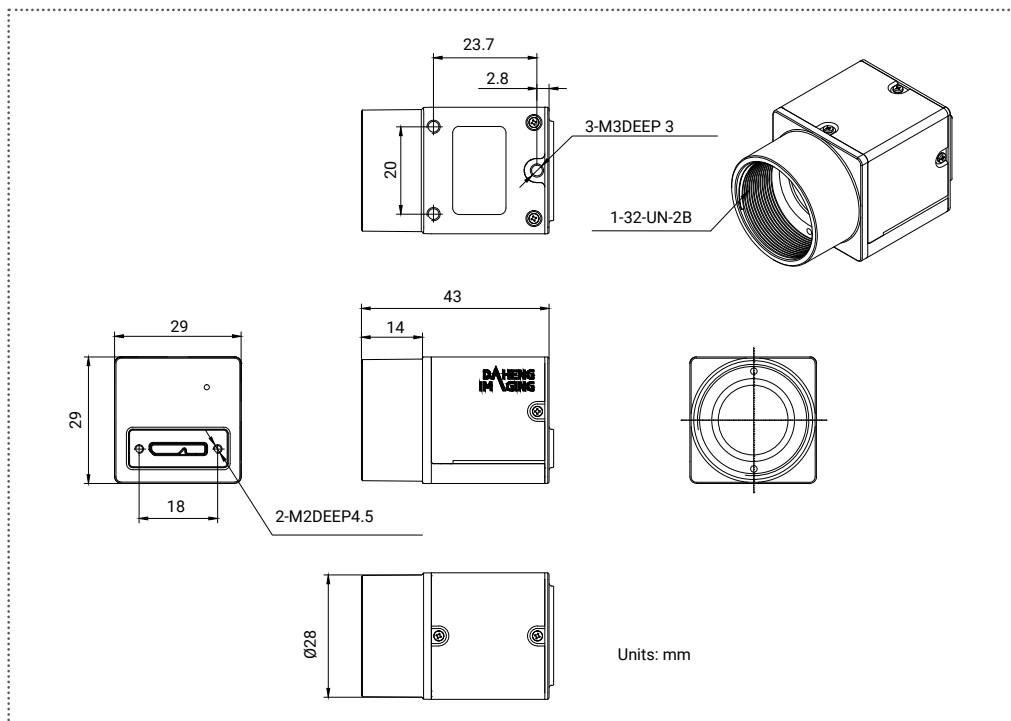
Spectral Response



Technical Drawing



MER2-060-642U3M



MER2-060-642U3M-L

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