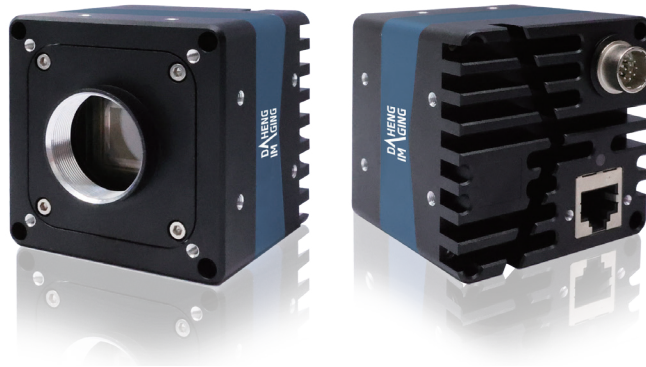


MARS-2020-42GTM/C

20MP CMOS 10GigE Area Scan Camera

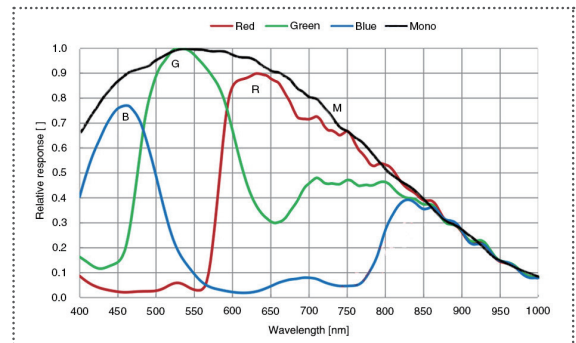


The MARS-2020-42GTM/C is a monochrome/color GigE Vision camera with the Sony IMX541 CMOS sensor. The MARS-2020-42GTM/C is capable of 10Gbit/s maximum transfer data rate, and has opto-isolated I/Os. Thanks to locking screw connectors, the MARS cameras can secure the reliability of cameras deployed in harsh environments. The MARS cameras are industrial digital cameras with high reliability and high performance ratio.

Applications

Suitable for 3C, lithium battery, photovoltaic, railway, AR and other industrial applications.

Spectral Response



Features

- Time Stamp, Horizontal Binning, Decimation, Reverse X/Y
- The Sequencer Control supports multiple sets of parameters configuration
- Gain, GainAuto, Gamma, Black Level, Digital Shift, Flat Field Correction
- Color models support Light Source Preset, Color Transformation Control and Saturation
- Static Defect Correction, Sharpness, Noise Reduction(Mono)
- Timer, Counter, LUTs and storable user sets
- Remove Parameter Limit to expand the range of Parameter
- Data storage area for saving algorithm coefficients and parameter configuration

Specifications

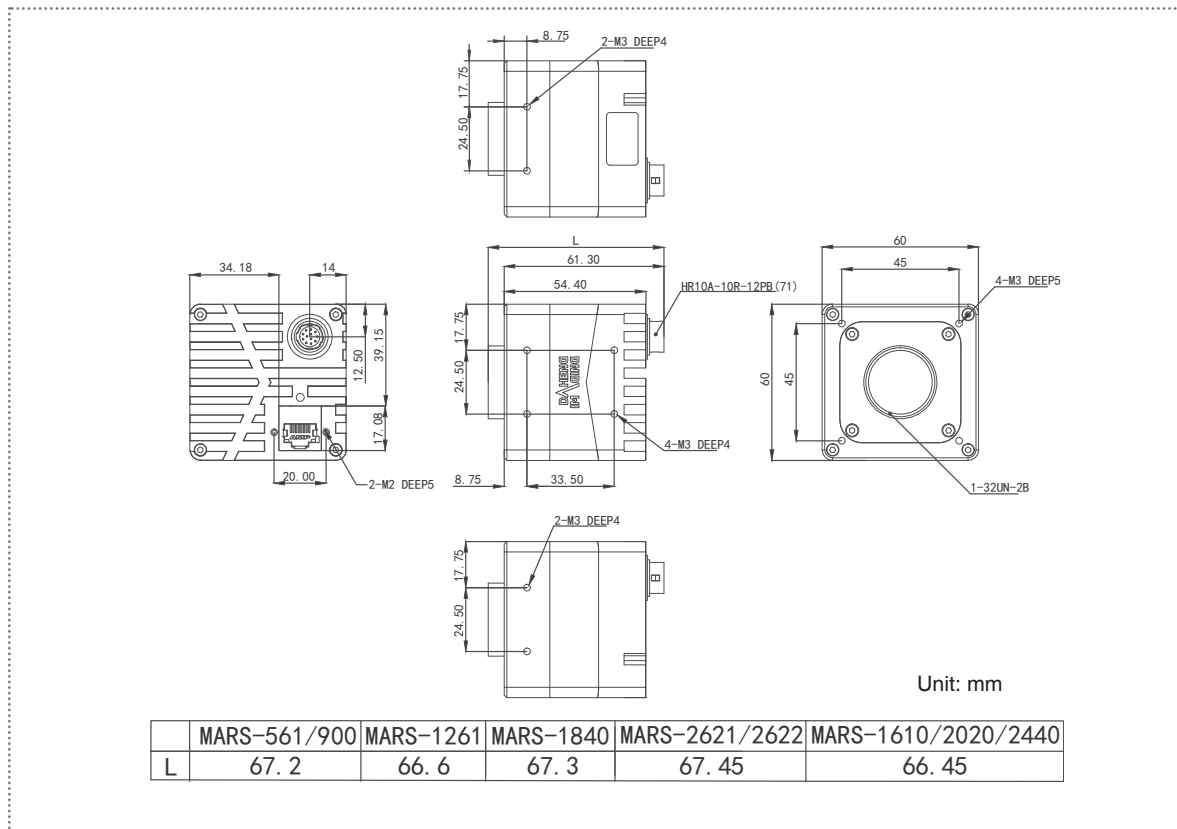
Model	MARS-2020-42GTC	MARS-2020-42GTM
Resolution	4512(H) × 4512(V)	
Sensor	Sony IMX541 Global shutter CMOS	
Sensor Format	1.1"	
Pixel Size	2.74μm × 2.74μm	
Frame Rate	42.6fps (Note: When SensorBitDepth is 8BPP, the frame rate can reach up to 42.6fps. The default factory setting of SensorBitDepth is 12BPP, with a frame rate of 28.68fps)	
ADC	12 bit	
Pixel Bit Depth	8 bit, 10 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG10 / Bayer RG12	Mono8 / Mono10 / Mono12
SNR	40.38 dB	40.11 dB
Exposure Time	UltraShort: 1μs~2.4μs, Actual Steps: 1μs; Standard: 3μs~1s, Actual Steps: 1 row period (When decimation is on or exposure time is 3μs~20μs) / 1μs (When exposure time is above 20μs)	
Gain	0dB~24dB, Default: 0dB, Step: 0.1dB	
Binning	1×1, 2×1 (No vertical Binning)	
Decimation	Sensor: 1×1, 2×2	
Synchronization	Hardware trigger, software trigger	
Acquisition Control	Single frame, Continuous, Software trigger, Hardware trigger	
Reverse X/Y	Reverse X/Y	
I/O Interface	1 input and 1 output with opto-isolated, 1 bidirectional programmable GPIO	
Data Interface	10GigE	
Power Supply	12VDC-10% ~ 24VDC+10%	
Power Consumption	< 12.8W @ 12VDC	
Operating Temp.	0° C ~ +50° C	
Storage Temp.	-20° C ~ +70° C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	60(W) × 60(H) × 54.4(L) mm (without lens adapter or connectors)	
Weight	341 g	
OS	Win10/Win11 32bit, 64bit OS, 64bit OS is recommended	
Conformity	CE, RoHS, FCC, ICES, UKCA, GigE Vision®, GenICam®	

I/O Interface



Pin	Definition	Core Color	Description
1	Line 0+	Green	Opto-isolated input +
2	GND	Blue	PWR GND & GPIO GND
3	Line 0-	Grey	Opto-isolated input -
4	POWER_IN	Purple	Camera external power 12V (-10%) ~ +24V (+10%)
5	Line 2	Orange	GPIO input/output
6	RS232 Rx	Pink	RS232 receive
7	Line 1-	White Green	Opto-isolated output -
8	Line 1+	White Blue	Opto-isolated output +
9	GND	White Grey	PWR GND & GPIO GND
10	GND	White Purple	PWR GND & GPIO GND
11	POWER_IN	White Orange	Camera external power 12V (-10%) ~ +24V (+10%)
12	RS232 Tx	White Pink	RS232 transmit

Technical Drawing



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