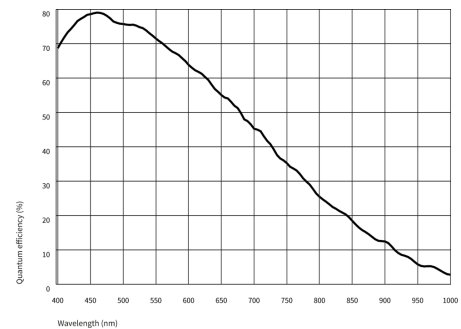


GV-51J0FA-M-GL Rev.1.2 (1009797)
In series

The model is in series and available for the long term.


Specification
Sensor

Sensor type	CMOS Mono
Shutter	Global Shutter
Sensor characteristic	Linear
Readout mode	Progressive scan
Pixel Class	8 MP
Resolution	8.13 Mpix
Resolution (h x v)	2856 x 2848 Pixel
Aspect ratio	1:1
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	2/3"
Optical Size	7.825 mm x 7.804 mm
Optical sensor diagonal	11.05 mm (1/1.45")
Pixel size	2.74 μm
Micro lens shift	0.00
Manufacturer	Sony
Sensor Model	IMX546AAMJ-C
Gain (master/RGB)	15.9x/-
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	256 / 2
AOI image height / step width	1 / 1
AOI position grid (horizontal/vertical)	2 / 1
Binning horizontal	same frame rate
Binning vertical	same frame rate
Binning method	M/C automatic
Binning factor	2 / 4 / 8
Subsampling horizontal	same frame rate
Subsampling vertical	same frame rate
Subsampling method	M/C automatic
Subsampling factor	2, 4, 8



Subject to technical modifications (2023-12-12)

Model

Frame rate freerun mode (in 8-bit mode)	15 fps
Frame rate trigger (continuous)	15 fps
Frame rate trigger (maximum)	17 fps
Exposure time (minimum - maximum)	0.023 ms - 2000 ms
Long exposure (maximum)	120000 ms
Power consumption	2 W - 4 W
Image memory	128 MB

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

Device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Device temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	0 % - 100 %

Connectors

Interface connector	GigE M12, screwable
I/O connector	8-pin Binder connector (Binder series 712: 09-0427-020-08)
Power supply	12 V - 24 V or PoE

Pin assignment I/O connector

1	Trigger input with optocoupler (+) - Line 0
2	Input power supply (VCC) 12-24 V DC
3	General Purpose I/O (GPIO) 1 - Line 2
4	Ground (GND)
5	Flash output with optocoupler (+) - Line 1
6	Flash output with optocoupler (-) - Line 1
7	Trigger input with optocoupler (-) - Line 0
8	General Purpose I/O (GPIO) 2



Design

Lens Mount	C-Mount
IP code	IP65/67
Dimensions H/W/L	41.0 mm x 53.0 mm x 42.7 mm
Mass	178 g

Features

Image Acquisition

Freerun	✓
Software trigger	✓
Hardware trigger	✓
Trigger controlled exposure	✓
Denoiser	✓
Long exposure	✓
Line scan	✓
Line scan highspeed	-

Flashing

Flashing	✓
PWM flashing	✓

Image Adjustments

Auto exposure	✓
Auto gain	✓
Auto whitebalance	-
Color correction	-
Gamma	✓
LUT	✓
Mirror/flip	X/Y

On-board Image Processing

Pixel formats	Mono8 Mono10 Mono10p Mono12 Mono12p
Region of interest	✓
Decimation (FPGA)	✓
Decimation (Sensor)	2x2
Binning (FPGA)	✓
Binning (Sensor)	2x2 Increases frame rate.

Others

IP settings	✓
Bandwidth management	-
Chunks	✓
Sequencer	✓
PTP	✓
Firmware update	✓
1st supported firmware version	3.20