GV-51F1ACP-M-GL Rev.1.2 (1009871)

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

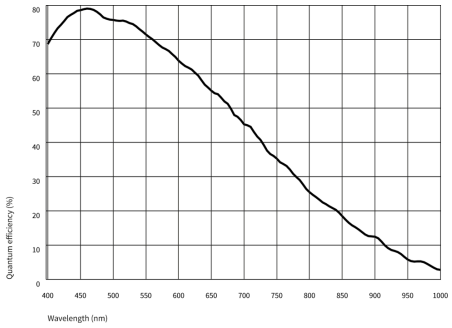




Specification

Sensor

Sensor type	CMOS Mono
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	5 MP
Resolution	5.10 Mpix
Resolution (h x v)	2472 x 2064 Pixel
Aspect ratio	5:4
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.8"
Optical Size	6.773 mm x 5.655 mm
Optical sensor diagonal	8.82 mm 1/1.8"
Pixel size	2.74 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX547-AAMJ-C
Gain (master/RGB)	16x/-
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	increased frame rate
Binning vertical	increased frame rate
Binning method	Horizontal: addition / Vertical: addition
Binning factor	2x2
Decimation (subsampling) horizontal	increased frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



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Model

Frame rate freerun mode	24 fps
Frame rate trigger (continuous)	24 fps
Frame rate trigger (maximum)	26 fps
Exposure time (minimum - maximum)	0.02 ms - 2000 ms
Long exposure (maximum)	120000 ms
Line rate freerun mode (line scan)	612 1/s
Line rate trigger mode (line scan)	618 1/s
Lines per frame (line scan)	8000
Power consumption	1.5 W - 4.2 W
Image memory	128 MB

Ambient conditions

For PCB versions, refer to the separate hints in the respective documentation.

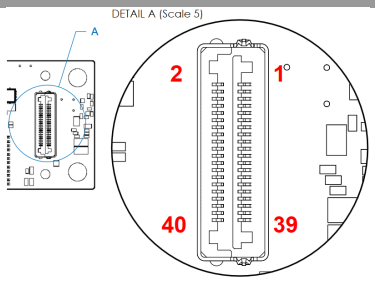
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed device temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	Samtec LSHM 40-pin
I/O connector	40-pin header (Samtec LSHM-120-L2.5-L-DV-A-S-K-TR)
Power supply	12 V - 24 V

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Pin assignment I/O connector



1	Input power supply (VCC) 12-24 V DC ± 10 %
2	Do not connect (for future use)
3	Input power supply (VCC) 12-24 V DC ± 10 %
4	Do not connect (for future use)
5	Ground (GND)
6	Do not connect (for future use)
7	Flash output without optocoupler 3.15 V 8 mA
8	Do not connect (for future use)
9	Trigger input without optocoupler 3.15 V
10	Ground (GND)
11	Do not connect (for future use)
12	Ground (GND)
13	Do not connect (for future use)
14	Do not connect (for future use)
15	I2C SDA (signal data) 3.15 V
16	Do not connect (for future use)
17	I2C SCL (signal clock) 3.15 V
18	Do not connect (for future use)
19	Do not connect (for future use)
20	RJ45 MX0 (-)
21	Do not connect (for future use)
22	RJ45 MX0 (+)
23	General Purpose I/O (GPIO) 2, 3.15 V 8 mA
24	Do not connect (for future use)
25	General Purpose I/O (GPIO) 1, 3.15 V 8 mA
26	RJ45 MX1 (-)
27	Ethernet, LED green, output 3.15 V
28	RJ45 MX1 (+)
29	Power, LED green, output 3.15 V
30	Do not connect (for future use)
31	Power, LED red, output 3.15 V
32	RJ45 MX2 (+)
33	Ethernet, LED red, output 3.15 V
34	RJ45 MX2 (-)
35	Do not connect (for future use)
36	Do not connect (for future use)
37	Do not connect (for future use)
38	RJ45 MX3 (+)
39	Ground (GND)
40	RJ45 MX3 (-)

Design

Lens Mount	C-Mount
IP code	-
Dimensions H/W/L	84.0 mm x 40.0 mm x 29.7 mm
Mass	34 g
Housing material	-

Features

List of on-camera image pre-processing features.
All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

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Image Acquisition	Freerun	✓
	Software trigger	✓
	Hardware trigger	✓
	Trigger controlled exposure	✓
	Denoiser	✓
	Long exposure	✓
	Line scan	✓
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	3.31

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