GV-5990FA-C-HQ Rev.1.2 (AB13510)

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

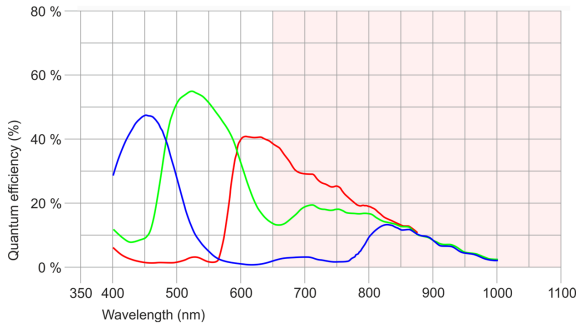




Specification

Sensor

Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	20 MP
Resolution	20.36 Mpix
Resolution (h x v)	4512 x 4512 Pixel
Aspect ratio	1:1
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.1"
Optical Size	12.363 mm x 12.363 mm
Optical sensor diagonal	17.48 mm 1.1"
Pixel size	2.74 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX541-AAQJ-C
Gain (master/RGB)	16x/16x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	256 / 2
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	2 / 2
Binning horizontal	-
Binning vertical	-
Binning method	Horizontal: addition / Vertical: addition
Binning factor	-
Decimation (subsampling) horizontal	increased frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



IDS Imaging Development Systems Inc.
800 W Cummings Park Ste 2950 · Woburn, MA 01801-7221 · Phone +1 (781) 787-0048 · E-Mail usasales@ids-imaging.com

Model

Frame rate freerun mode	5.4 fps
Frame rate trigger (continuous)	5.4 fps
Frame rate trigger (maximum)	5.4 fps
Exposure time (minimum - maximum)	0.042 ms - 2000 ms
Long exposure (maximum)	104573 ms
Power consumption (Power over Ethernet)	4.8 W
Power consumption (external power supply)	4 W
Image memory	128 MB

HDR

Mode	Sequencer

Ambient conditions

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

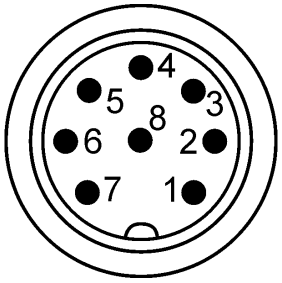
Allowed device temperature during operation	-20 °C - 55 °C / -4 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	0 % - 100 %

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	IP66, IP67, IP69, IPx9K
Dimensions H/W/L	41.0 mm x 53.0 mm x 42.7 mm
Mass	173 g
Housing material	Aluminum

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).

IDS Imaging Development Systems Inc.
800 W Cummings Park Ste 2950 · Woburn, MA 01801-7221 · Phone +1 (781) 787-0048 · E-Mail usasales@ids-imaging.com

GV-5990FA-C-HQ Rev.1.2 (AB13510)

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	BayerRG8 BayerRG10p BayerRG12 BayerRG12p BayerRG10
	Region of interest	✓
	Decimation (FPGA)	✓
	Decimation (Sensor)	2x2
	Binning (FPGA)	✓
	Binning (Sensor)	
Others	IP settings	✓
	Bandwidth management	✓
	Chunks	✓
	Sequencer	✓
	PTP	✓
	Firmware update	✓
	1st supported firmware version	2.10

IDS Imaging Development Systems Inc.
800 W Cummings Park Ste 2950 · Woburn, MA 01801-7221 · Phone +1 (781) 787-0048 · E-Mail usasales@ids-imaging.com