



OPTO ENGINEERING

# ITA315-GC-10J | DATASHEET

Area scan camera 31.5MP, Sony IMX342, CMOS Global shutter, APS-C, Color, 1 GigE, POE, M42x1 FD 12 mount



### KEY ADVANTAGES

#### MADE IN ITALY

Cameras designed and manufactured in Italy by Opto Engineering.

#### TOP QUALITY SERVICE

5 years warranty.

#### HIGH ROBUSTNESS

Aluminum body & steel lens mount, shock & vibration certified, wide temperature range.

#### MAXIMUM CONNECTIVITY

Isolated PoE supply, broad range of I/Os, serial communication.

#### HIGH PROCESSING CAPABILITY

Large on-board image buffer, large FPGA.

#### EXCELLENT QUALITY/PRICE RATIO

GEN*i*CAM

GigE VISION



The **ITALA-G series** is a series of GigE Vision industrial cameras designed and manufactured in Italy by Opto Engineering®.

### KEY FEATURES



1 GIGE



12-24 VOLT



POWER OVER ETHERNET



PRECISION TIME PROTOCOL



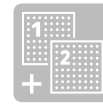
12-BIT DEPTH



BURST



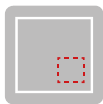
FAST TRIGGER MODE



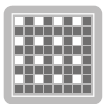
DUAL EXPOSURE



SCHEDULED ACTION COMMAND



REGION OF INTEREST



BINNING AND DECIMATION



CHUNK DATA



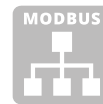
OPTO ISOLATED I/O



DUAL SERIAL INTERFACE



ENCODER



MODBUS



AUTO WHITE BALANCE



COLOR CORRECTION MATRIX



API C++



WINDOWS

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## SPECIFICATIONS

### Sensor Specification

Megapixel		31.5
Resolution		6480 x 4860
Sensor format		APS-C
Sensor diagonal	(mm)	27.9
Pixel size	( $\mu\text{m}$ )	3.45
Sensor model		IMX342
Sensor type		CMOS
Shutter		Global
Chroma		Color

### Connectivity

Data connector		RJ45
Data interface		1 GigE
I/O connector		12-pin Hirose
I/O interface		2x opto-isolated input 4x opto-isolated output
Serial interface		RS232, RS485
Liquid lens controller		no
Encoder interface		yes, incremental
Power supply	(V)	12-24, PoE (IEEE 802.3af class 2)
Max power consumption <sup>2</sup>	(W)	6

### Compliance

Standards		GigE Vision 2.2, GenICam, GenTL
Client software		ITALA View or other GigE Vision 2.x software
Operating systems		64-bit Windows 10/11
Shock and vibration <sup>3</sup>		n.a.
Warranty	(years)	5

### Mechanical Specifications

Mount		M42x1 FD 12
Dimensions	(mm)	52.5 x 52.5 x 56.6
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	250

### Camera Specification

Filter		IR cut
Frame rate <sup>1</sup>	(fps)	1.3
Frame rate burst	(fps)	7.4
Exposure time		2.80 $\mu\text{s}$ - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	70.0
Gain range	(dB)	0-48
SNR	(dB)	40.2
Image buffer	(MB)	384
Image processing		Binning, decimation, ROI, gamma, black level, LUT, defective pixel correction, white balance, color correction matrix
Pixel formats		Mono 8/10/12, RGB8, Bayer GR 8/10p/10Packed/12p/12Packed, YUV 422Packed
Chunk data		yes
User sets		3
Timers/Counters		2/4
Synchronization		Free run, software trigger, hardware trigger, PTP (IEEE 1588)

### Environment

Operating temperature <sup>4</sup>	( $^{\circ}\text{C}$ )	-25 - +65
Storage temperature <sup>5</sup>	( $^{\circ}\text{C}$ )	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP30

<sup>1</sup> Color-model's fps are calculated using RGB8 pixel format

<sup>2</sup> Measured with 24V power supply

<sup>3</sup> To be measured after pre-series production

<sup>4</sup> Case temperature, measured on the front part of the camera body

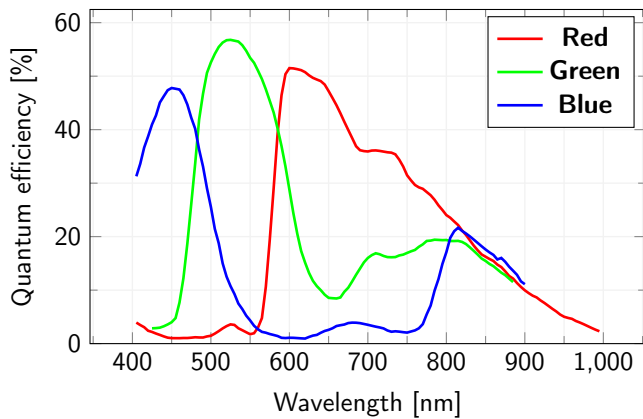
<sup>5</sup> Ambient temperature

**HIROSE PINOUT**

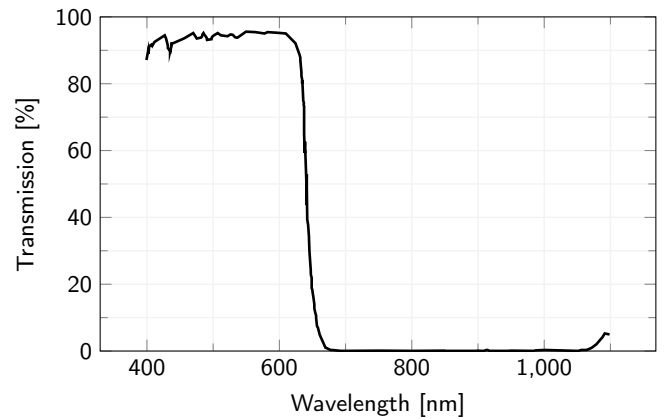


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

**SENSOR QUANTUM EFFICIENCY**



**FILTERS TRANSMISSION**



**RECOMMENDED ACCESSORIES**

Opto-Engineering® suggests the following accessories to power the camera:

- **CBETH003**, Ethernet cable, CAT6, industrial level, high flexible cable with screw, 5 m
- **CBGPIO001**, I/O cable, side 1 HIROSE 12 pin, side 2 cable end, 3 m
- **RT-POE15M-1AFE-R**, 15.4W Single Port Power-over-Ethernet IEEE802.3af Power Injector

**COMPATIBLE PRODUCTS**

Full list of compatible products available [here](#).



A wide selection of innovative machine vision components.

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