



OPTO ENGINEERING

# ITA16-GC-10C-IP | DATASHEET

Area scan camera 1.6MP, Sony IMX273, CMOS Global shutter, 1/2.9", Color, 1 GigE, POE, C mount



## KEY ADVANTAGES

### IP67-rated housing

Protection against water and dust.

### MADE IN ITALY

Cameras designed and manufactured in Italy by Opto Engineering.

### TOP QUALITY SERVICE

5 years warranty.

### Ruggedized

-25° C to 65° operating temperature. Stainless steel mount, milled aluminum body. Tested for shock and vibration resistance.

### 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

**ITALA-G.IP series** is a series of GigE vision PoE area scan cameras featuring an IP67-rated housing. By adding sealed lens tubes from IPT series and IP67 cables, ITALA G.IP cameras ensure protection against solid particles like dust, dirt, and sand and water.

GEN*i*CAM

**GigE**  
VISION

1288  
EMVA Standard Compliant



## KEY FEATURES



IP67



1 GIGE



12-24 VOLT



POWER OVER  
ETHERNET



12-BIT DEPTH



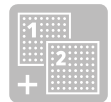
BURST



IMAGE COM-  
PRESSION



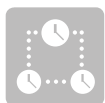
FAST  
TRIGGER  
MODE



DUAL  
EXPOSURE



SEQUENCER



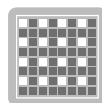
PRECISION  
TIME  
PROTOCOL



SCHEDULED  
ACTION  
COMMAND



REGION OF  
INTEREST



BINNING  
AND  
DECIMATION



CHUNK DATA



AUTO WHITE  
BALANCE



COLOR  
CORRECTION  
MATRIX



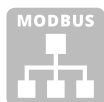
OPTO  
ISOLATED I/O



ENCODER



DUAL SERIAL  
INTERFACE



MODBUS



API C



API C++



API C#



API Python



WINDOWS



LINUX

All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only. Data are reported by design, actual lens performance may vary due to manufacturing tolerances.

## SPECIFICATIONS

### Sensor Specification

Megapixel		1.6
Resolution		1456 x 1088
Sensor format		1/2.9"
Sensor diagonal	(mm)	6.2
Pixel size	( $\mu\text{m}$ )	3.45
Sensor model		IMX273
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)	3.6

### 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 Ubuntu 18.04/20.04/22.04
Shock and vibration		EN 60068-2-27 EN 60068-2-6 EN 60068-2-64
Warranty	(years)	5

### Mechanical Specifications

Mount		C
Dimensions	(mm)	54 x 54 x 51.3
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	200

### Camera Specification

Filter		IR cut
Frame rate <sup>1</sup>	(fps)	74.2
Frame rate burst	(fps)	126.6
Exposure time		1 $\mu\text{s}$ - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	70.1
Gain range	(dB)	0-48
SNR	(dB)	40.0
Image buffer	(MB)	384
Image processing		Binning, decimation, ROI, gamma, black level, LUT, defective pixel correction, white balance, color corection matrix
Pixel formats		Mono 8, RGB8, Bayer GR 8/10p/10Packed/12p/12Packed, YUV 422_8, YUV411_8_UYVYVY
Chunk data		yes
User sets		3
Timers/Counters		2/4
Synchronization		Free run, software trigger, hardware trigger, PTP (IEEE 1588)

### Environment

Operating temperature <sup>3</sup>	( $^{\circ}\text{C}$ )	-25 - +65
Storage temperature <sup>4</sup>	( $^{\circ}\text{C}$ )	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP67

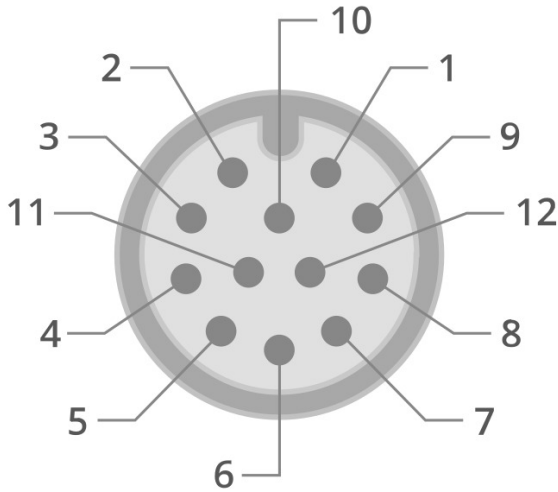
<sup>1</sup> Color-model's fps are calculated using BayerRG8 pixel format

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

<sup>3</sup> Case temperature, measured on the front part of the camera body

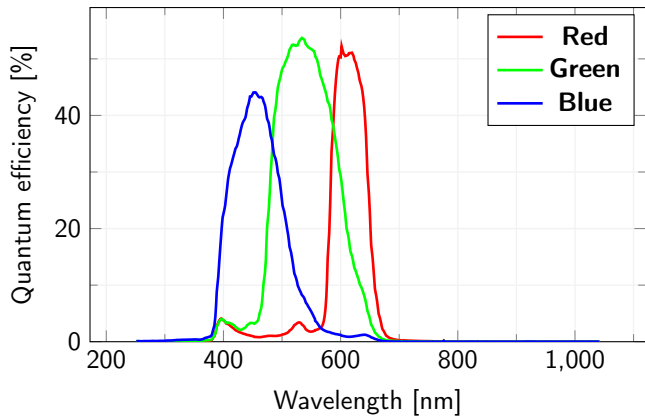
<sup>4</sup> Ambient temperature

**M12 PINOUT**

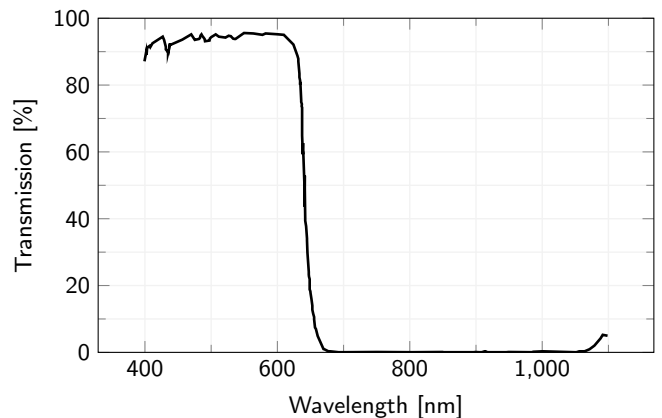


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

**SENSOR QUANTUM EFFICIENCY**



**FILTERS TRANSMISSION**



**RECOMMENDED ACCESSORIES**



Opto-Engineering® offers sealed lens tubes of different diameters to be used with varying lens sizes (IPT-Series) and sealed M12 cables (CB series) to complete your vision system.

**COMPATIBLE PRODUCTS**

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



A wide selection of innovative machine vision components.

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