



OPTO ENGINEERING

ITA124-GC-20C | DATASHEET

Area scan camera 12.4MP, Sony IMX545, CMOS Global shutter, 1/1.1", Color, 1 GigE, POE, C 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



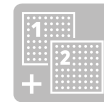
12-BIT DEPTH



BURST



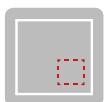
FAST TRIGGER MODE



DUAL EXPOSURE



SCHEDULED ACTION COMMAND



REGION OF INTEREST



BINNING AND DECIMATION



CHUNK DATA



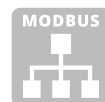
OPTO ISOLATED I/O



DUAL SERIAL INTERFACE



ENCODER



MODBUS



AUTO WHITE BALANCE



COLOR CORRECTION MATRIX



API C



API C++



API C#



WINDOWS



LINUX

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SPECIFICATIONS

Sensor Specification

Megapixel		12.4
Resolution		4128 x 3008
Sensor format		1/1.1"
Sensor diagonal	(mm)	14.0
Pixel size	(μm)	2.74
Sensor model		IMX545
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 ²	(W)	4

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)	40.5 x 40.5 x 51.2
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	142

Camera Specification

Filter		IR cut
Frame rate ¹	(fps)	9.5
Frame rate burst	(fps)	12.8
Exposure time		2.47 μs - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	69.8
Gain range	(dB)	0-48
SNR	(dB)	39.8721644843381
Image buffer	(MB)	384
Image processing		Binning, decimation, ROI, gamma, black level, LUT, defective pixel correction, white balance, color corection matrix
Pixel formats		Mono 8/10/12, 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 ³	($^{\circ}\text{C}$)	-25 - +65
Storage temperature ⁴	($^{\circ}\text{C}$)	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP30

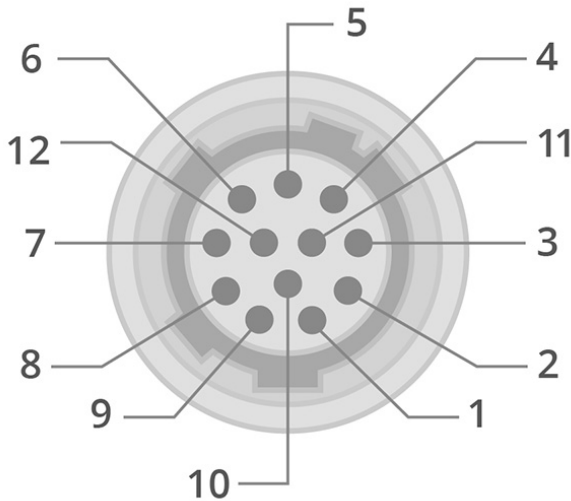
¹ Color-model's fps are calculated using BayerRG8 pixel format

² Measured with 24V power supply

³ Case temperature, measured on the front part of the camera body

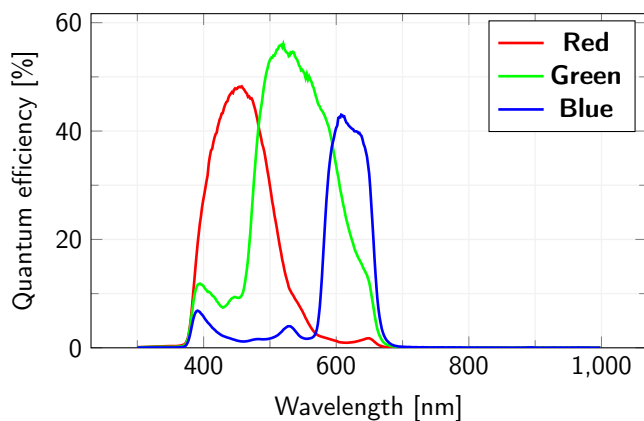
⁴ Ambient temperature

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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