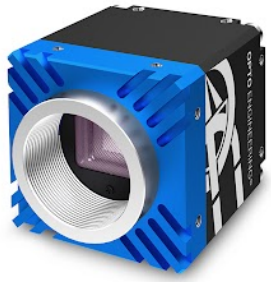
ITA204-GC-20C | DATASHEET

OPTO ENGINEERING

Area scan camera 20.36MP, Sony IMX541, CMOS Global shutter, 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 1288 EMVA Standard Compliant

CE FC UKCA KC RoHS REACH DOSSIER PATENTED

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 | 12-BIT DEPTH | BURST | IMAGE COMPRESSION | 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 | ARM

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SPECIFICATIONS

Sensor Specification

Megapixel		20.36
Resolution		4512 x 4512
Sensor format		1.1"
Sensor diagonal	(mm)	17.5
Pixel size	(µm)	2.74
Sensor model		IMX541
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
Enconder interface		yes, incremental
Power supply	(V)	12-24, PoE (IEEE 802.3af class 2)
Max power consumption[2]	(W)	4.4

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 or higher
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)	5.8
Frame rate burst	(fps)	10.8
Exposure time		1.01 µs - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	70.7
Gain range	(dB)	0-48
SNR	(dB)	39.8
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_UYYVYY
Chunk data		yes
User sets		3
Timers/Counters		2/4
Synchronization		Free run, software trigger, hardware trigger, PTP (IEEE 1588)

Environment

Operating temperature[3]	(°C)	-25 - +65
Storage temperature[4]	(°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

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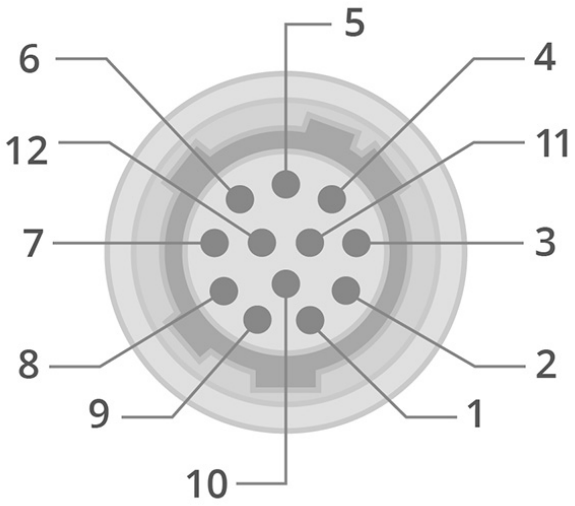
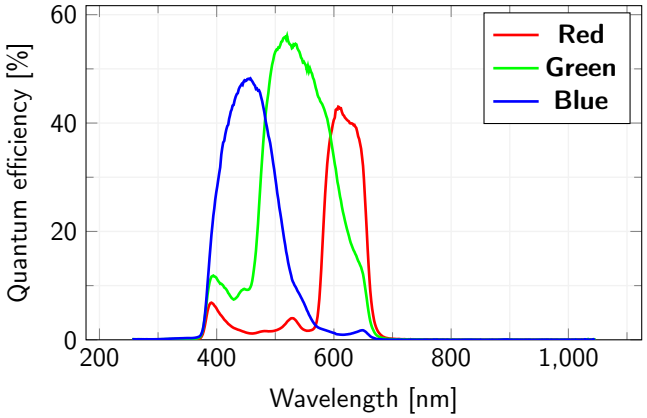
HIROSE PINOUT

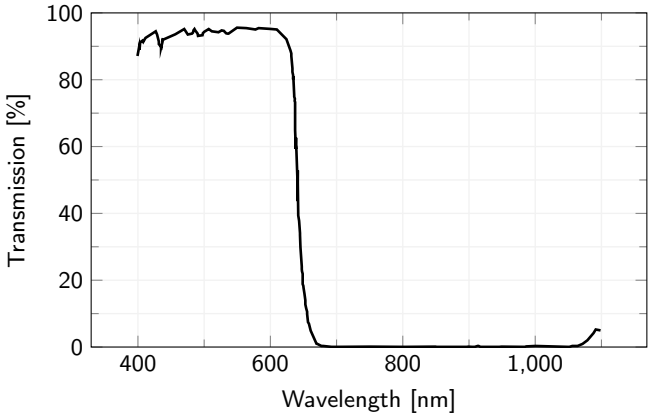


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

SENSOR QUANTUM EFFICIENCY



FILTERS TRANSMISSION



RECOMMENDED ACCESSORIES

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

- **RT-A72-0418-05**, Ethernet cable, CAT6A, industrial level,high flexible cable with screw, 5 m
- **RT-A65-7105-05**, I/O cable, side 1 HIROSE 12 pin, side 2 cable end, 5 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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