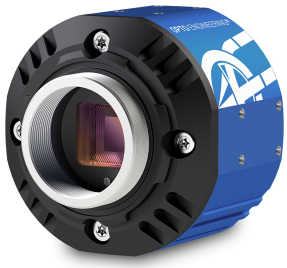
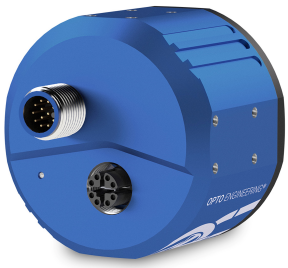
ITA204-GM-20C-IP | DATASHEET

OPTO ENGINEERING

Area scan camera 20.36MP, Sony IMX541, CMOS Global shutter, 1.1", Mono, 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.

KEY FEATURES

IP67 | 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 | OPTO ISOLATED I/O | ENCODER | DUAL SERIAL INTERFACE

MODBUS | API C | API C++ | API C# | API Python | WINDOWS | LINUX

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		Mono

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

Camera Specification

Filter		AR glass
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)	70.6
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
Pixel formats		Mono 8/ 10p/ 10Packed/ 12p/12Packed
Chunk data		yes
User sets		3
Timers/Counters		2/4
Synchronization		Free run, software trigger, hardware trigger, PTP (IEEE 1588)

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

Environment

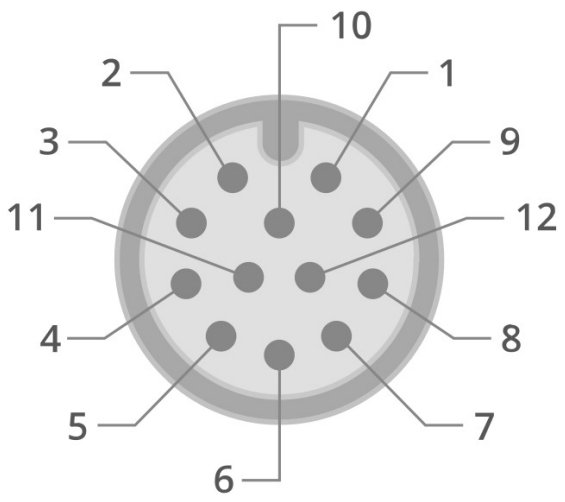
Operating temperature[3]	(°C)	-25 - +65
Storage temperature[4]	(°C)	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP67

[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

Mechanical Specifications

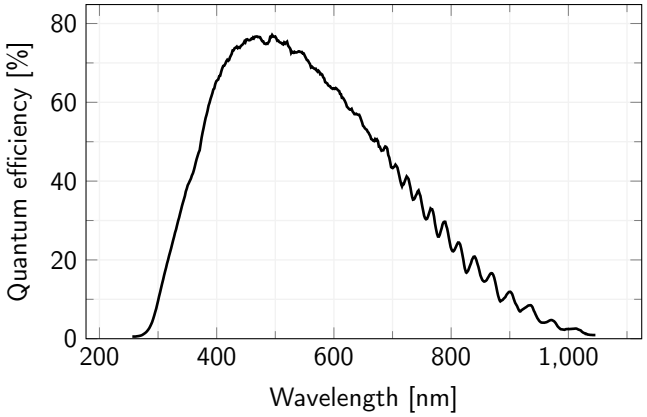
Mount		C
Dimensions	(mm)	54 x 54 x 51.3
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	200

M12 PINOUT

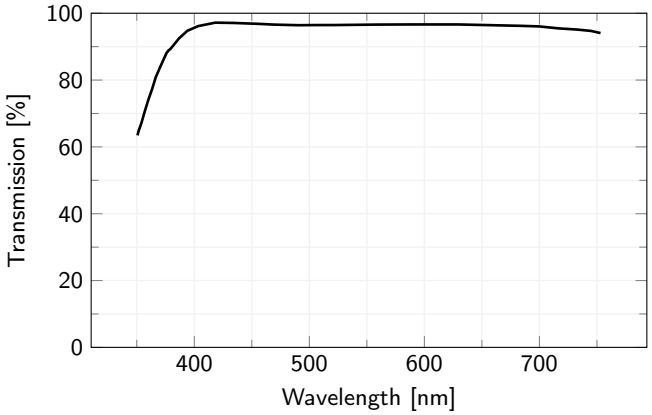


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

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.