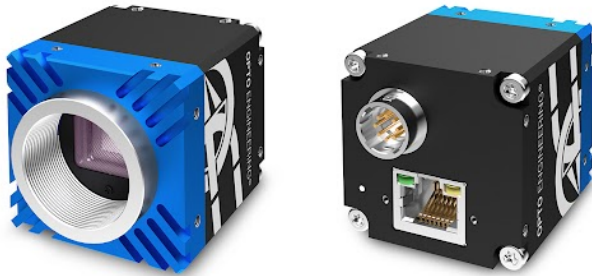




OPTO ENGINEERING

ITA81-GM-20C | DATASHEET

Area scan camera 8.1MP, Sony IMX546, CMOS Global shutter, 2/3", Mono, 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



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



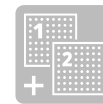
BURST



IMAGE COM-
PRESSION



FAST
TRIGGER
MODE



DUAL
EXPOSURE



SEQUENCER



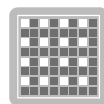
PRECISION
TIME
PROTOCOL



SCHEDULED
ACTION
COMMAND



REGION OF
INTEREST



BINNING
AND
DECIMATION



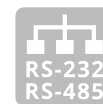
CHUNK DATA



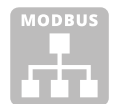
OPTO
ISOLATED I/O



ENCODER



DUAL SERIAL
INTERFACE



MODBUS



API C



API C++



API C#



API Python



WINDOWS



LINUX

SPECIFICATIONS

Sensor Specification

Megapixel	8.1
Resolution	2856 x 2848
Sensor format	2/3"
Sensor diagonal (mm)	11.1
Pixel size (μm)	2.74
Sensor model	IMX546
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
Encoder interface	yes, incremental
Power supply (V)	12-24, PoE (IEEE 802.3af class 2)
Max power consumption ² (W)	3.5

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	AR glass
Frame rate ¹ (fps)	14.4
Frame rate burst (fps)	25.6
Exposure time	1.02 μs - 10 s
ADC resolution (bit)	10/12
Dynamic range (dB)	69.7
Gain range (dB)	0-48
SNR (dB)	39.7
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)

Environment

Operating temperature ³ (°C)	-25 - +65
Storage temperature ⁴ (°C)	-10 - +60
Operating relative humidity (%)	20-80, non condensing
IP rating	IP30

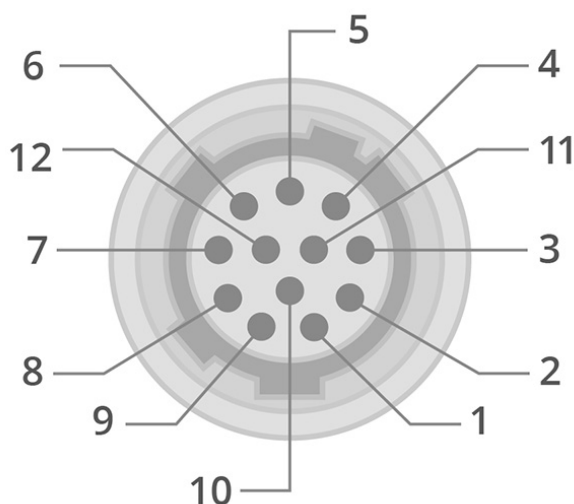
¹ Color-model's fps are calculated using BayerRG8 pixel format

² Measured with 24V power supply

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

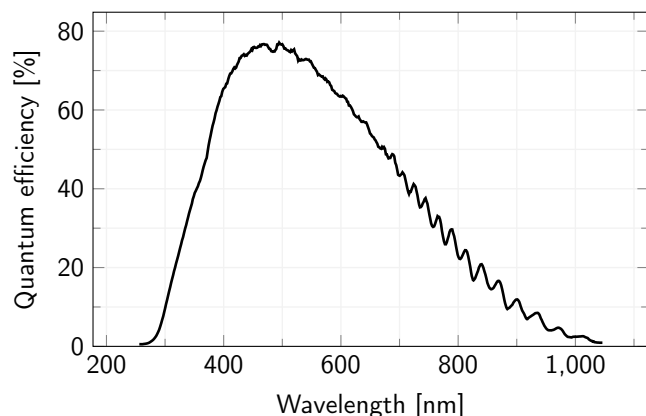
⁴ Ambient temperature

HIROSE PINOUT

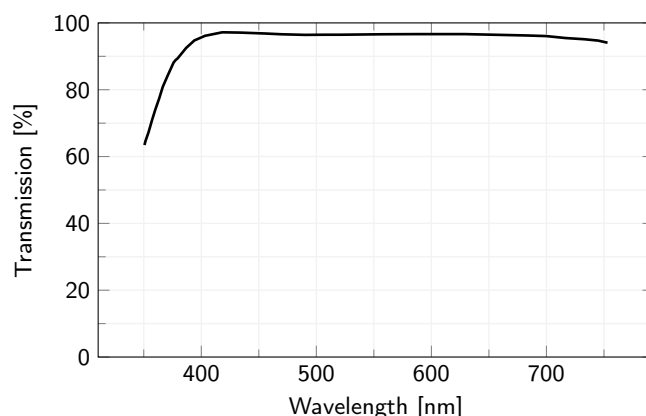


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

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.