ITA81-10GC-20C | DATASHEET

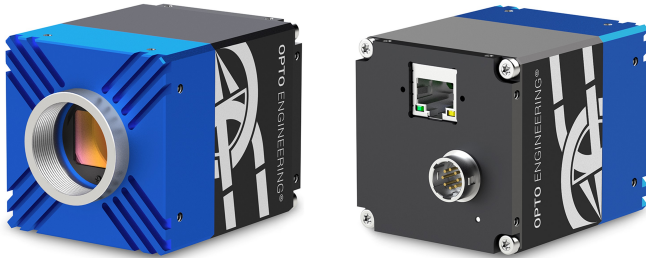OPTO ENGINEERING®

Area scan camera 8.1MP, Sony IMX536, CMOS Global shutter, 2/3", Color, 10 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

The **ITALA-10G series** is a series of GigE Vision industrial cameras designed and manufactured in Italy by Opto Engineering®.

GEN<i>CAM

GigE VISION

1288
EMVA Standard Compliant

CE | FCC | UKCA | RoHS | REACH DOSSIER

KEY FEATURES

10 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**	
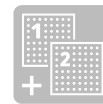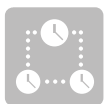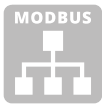
OPTO ENGINEERING

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		IMX536
Sensor type		CMOS
Shutter		Global
Chroma		Color

Connectivity

Data connector		RJ45
Data interface		10 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)	14

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)	52.5 x 52.5 x 65.4
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	280

Camera Specification

Filter		IR cut
Frame rate[1]	(fps)	144.8
Frame rate burst	(fps)	152.2
Exposure time		1.02 µs - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	69.8
Gain range	(dB)	0-48
SNR	(dB)	39.9
Image buffer	(MB)	896
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

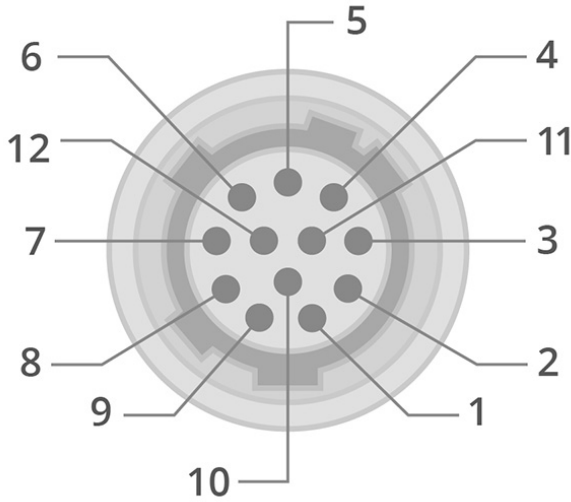|		
Operating temperature[3]	(°C)	-25 - +65
Storage temperature[4]	(°C)	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP30

[1] Color-model's fps are calculated using BayerRG8 pixel format
[2] Measured with 24V power supply
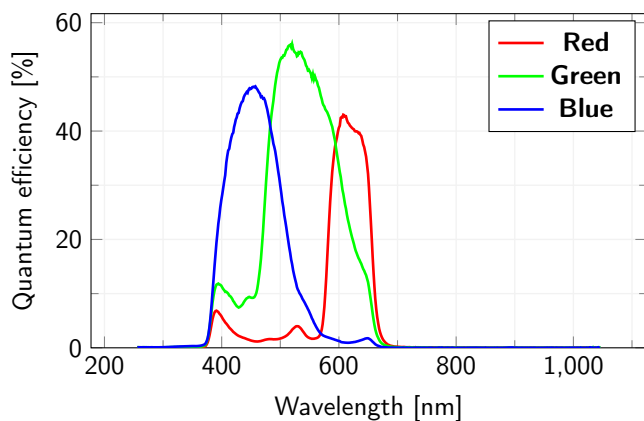[3] Case temperature, measured on the front part of the camera body
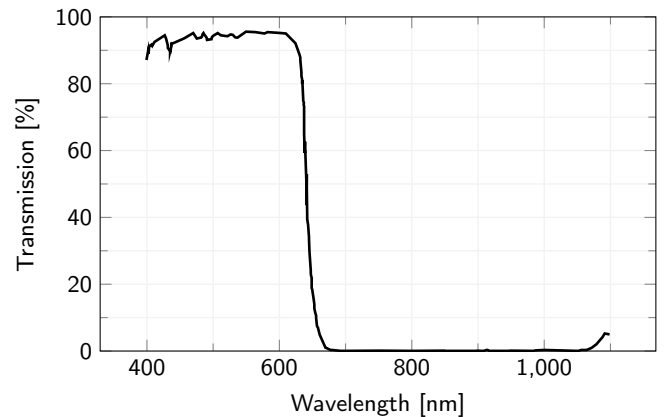[4] Ambient temperature

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-POE60U-560-X-R**, 60W Single Port Power-over-Ethernet IEEE802.3bt Power Injector

COMPATIBLE PRODUCTS

Full list of compatible products available *here*.

A wide selection of innovative machine vision components.

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