ITA24-GM-10C-EL | DATASHEET

OPTO ENGINEERING

Area scan camera 2.4MP, Sony IMX392, CMOS Global shutter, 1/2.3", Mono, 1 GigE, POE, C mount, with integrated liquid lens controller

KEY ADVANTAGES

MADE IN ITALY
Cameras designed and manufactured in Italy by Opto Engineering.

EASY INSTALLATION
Built-in liquid lens control: no external driver needed.

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-G.EL series is a series of GigE Vision industrial cameras with integrated liquid lens control designed and built in Italy by Opto Engineering®.

KEY FEATURES

1 GIGE
12-24 VOLT
POWER OVER ETHERNET
12-BIT DEPTH
BURST
FAST TRIGGER MODE
DUAL EXPOSURE
SEQUENCER
PRECISION TIME PROTOCOL
SCHEDULED ACTION COMMAND
REGION OF INTEREST
BINNING AND DECIMATION
CHUNK DATA
LIQUID LENS CONTROLLER
OPTO ISOLATED I/O
ENCODER
API C
API C++
API C#
WINDOWS
LINUX

SPECIFICATIONS

Sensor Specification

Megapixel		2.4
Resolution		1936 x 1216
Sensor format		1/2.3"
Sensor diagonal	(mm)	7.9
Pixel size	(µm)	3.45
Sensor model		IMX392
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 1x opto-isolated output
Serial interface		no
Liquid lens controller		yes (EL-3-10, EL-16-40)
Enconder interface		yes, incremental
Power supply	(V)	12-24, PoE (IEEE 802.3af class 2)
Max power consumption[2]	(W)	5.5

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 18.04/20.04/22.04
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

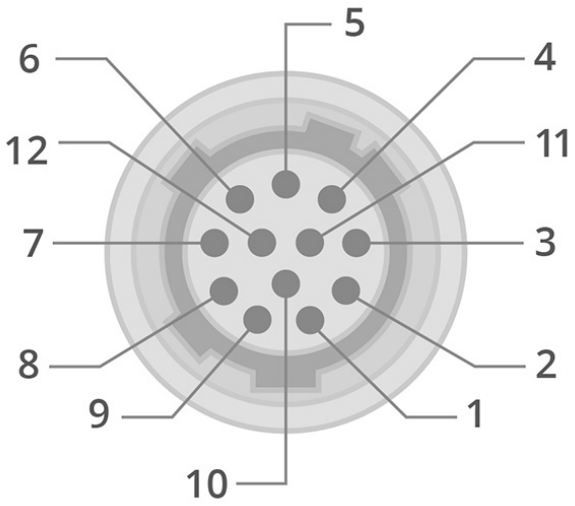
Filter		AR glass
Frame rate[1]	(fps)	49.9
Frame rate burst	(fps)	89.3
Exposure time		1 µs - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	71.2
Gain range	(dB)	0-48
SNR	(dB)	40.0348071026504
Image buffer	(MB)	384
Image processing		Binning, decimation, ROI, gamma, black level, LUT, defective pixel 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

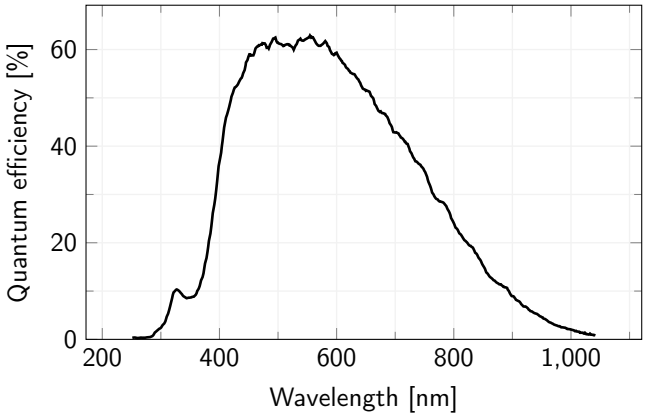
[1] Color-model's fps are calculated using BayerRG8 pixel format
[2] Measured with 24V power supply and liquid lens connected to the camera
[3] Case temperature, measured on the front part of the camera body
[4] Ambient temperature

HIROSE PINOUT

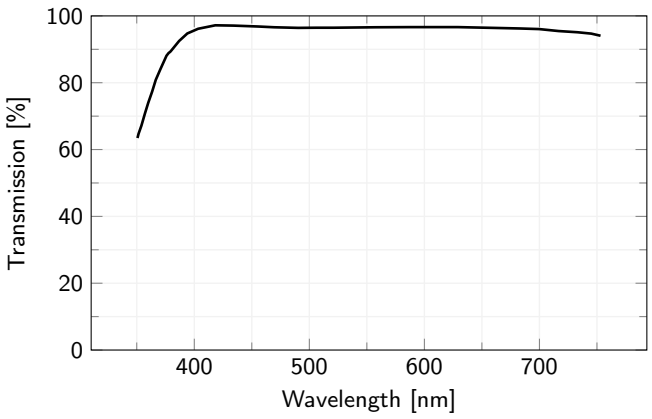


Pin	Signal
1	GND
2	+VIN
3	Lens -
4	Opto IN 0
5	Lens +
6	Opto OUT 0
7	Opto REF GND
8	Lens SCL
9	Lens SDA
10	Opto REF V+
11	Opto IN 1
12	Lens +3.3V

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
- **CBGPEL12P6P-03M**, I/O cable, side 1 HIROSE 12 pin, side 2 HIROSE 6 pin, 0.3 m
- **CBGPIO12PY6P-3M**, I/O cable, side 1 HIROSE 12 pin, side 2 HIROSE 6 pin, side 3 cable end, 3m+0.3m
- **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.