ITA315-10GM-10J | DATASHEET

OPTO ENGINEERING

Area scan camera 31.5MP, Sony IMX342, CMOS Global shutter, APS-C, Mono, 10 GigE, POE, M42x1 FD 12 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®.

KEY FEATURES

10 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
OPTO ISOLATED I/O
ENCODER
DUAL SERIAL INTERFACE
MODBUS
API C
API C++
API C#
API Python
WINDOWS
LINUX

SPECIFICATIONS

Sensor Specification

Megapixel		31.5
Resolution		6480 x 4860
Sensor format		APS-C
Sensor diagonal	(mm)	27.9
Pixel size	(µm)	3.45
Sensor model		IMX342
Sensor type		CMOS
Shutter		Global
Chroma		Mono

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

Camera Specification

Filter		AR glass
Frame rate[1]	(fps)	21.7
Frame rate burst	(fps)	21.7
Exposure time		2.40 µs - 10 s
ADC resolution	(bit)	10/12
Dynamic range	(dB)	70.6
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
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		-
Warranty	(years)	5

Environment

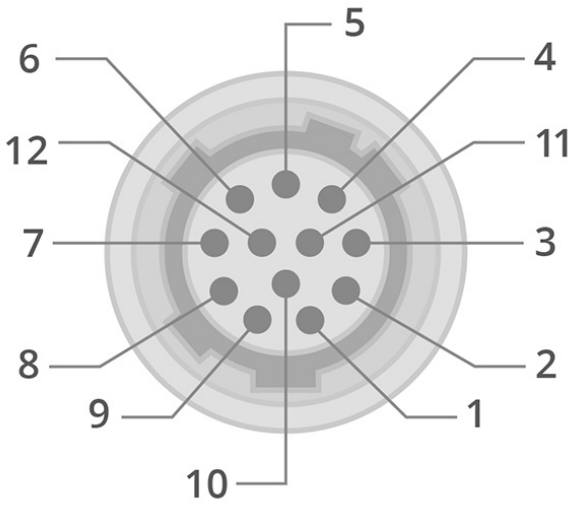
Operating temperature[3]	(°C)	-25 - +65
Storage temperature[4]	(°C)	-10 - +60
Operating relative humidity	(%)	20-80, non condensing
IP rating		IP30

Mechanical Specifications

Mount		M42x1 FD 12
Dimensions	(mm)	52.5 x 52.5 x 64.7
Clamping system		16x M3 threaded holes (on all sides)
Mass	(g)	292

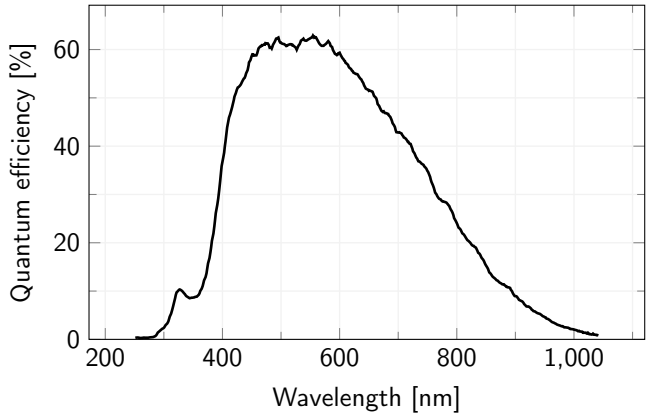
[1] Color-model's fps are calculated using BayerRG8 pixel format
[2] Measured with 24V power supply
[3] Case temperature, measured on the front part of the camera body
[4] Ambient temperature

HIROSE PINOUT

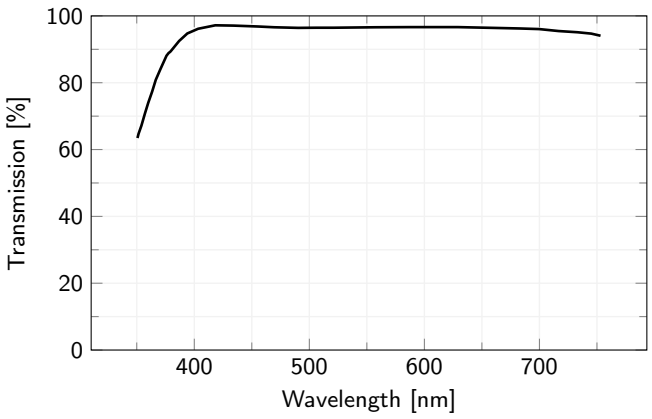


Pin	Signal
1	GND
2	+VIN
3	Opto OUT 3
4	Opto IN 0
5	Opto OUT 2
6	Opto OUT 0
7	Opto REF GND
8	RS232 RX
9	RS232 TX
10	Opto REF V+
11	Opto IN 1
12	Opto OUT 1

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.