



# COE-200-M-USB-070-IR-C | DATASHEET

OPTO ENGINEERING

Area scan camera IMX183, CMOS, Rolling shutter, 5472 x 3648, 20.4 MP, 2.4 µm pix, 1", Mono, 19.2 fps, USB 3.0, C mount, AR filter



## KEY ADVANTAGES

### USB 3.0 connectivity

Easy connectivity to most new computers with 5Gbps bandwidth.

### USB3 Vision® protocol & GenICam® standard

Standard vision SDK platform for easy integration in existing software.

### Full GenICam® compliant: easy to integrate

GenICam® compliant SDK package provides more flexibility to Vision Systems.

### High quality sensors

New SONY Pregius CMOS Global shutter sensors provide high quality images to the camera.

### Frame Rate up to 210 fps

High frame rate ideal for high speed applications.

### Sensor Sizes from 1/2.5" to 1.1" to fit all application requirements

Find the exact sensor you need for your needs.

**The COE-U series** includes USB3 Vision® cameras equipped with the latest sensors, ranging from high speed VGA to the latest 1.1" 12MP SONY Pregius sensor, which deliver USB 3.0 connectivity with high frame rate.

## SPECIFICATIONS

### Sensor Specification

|                 |      |             |
|-----------------|------|-------------|
| Megapixel       |      | 20.4        |
| Resolution      |      | 5472 x 3648 |
| Sensor format   |      | 1"          |
| Sensor diagonal | (mm) | 15.8        |
| Pixel size      | (µm) | 2.4         |
| Sensor model    |      | IMX183      |
| Sensor type     |      | CMOS        |
| Shutter         |      | Rolling     |
| Chroma          |      | Mono        |

### Connectivity

|                                    |     |   |
|------------------------------------|-----|---|
| Data connector                     |     | USB 3.0 Micro-B   |
| Data interface                     |     | USB 3.0   |
| I/O connector                      |     | 6-pin Hirose  |
| I/O interface                      |     | 1x opto-isolated input<br>1x opto-isolated output<br>1x bi-directional non-isolated |
| Serial interface                   |     | no  |
| Encoder interface                  |     | no  |
| Power supply                       | (V) | 5-15, USB 3.0   |
| Max power consumption <sup>2</sup> | (W) | 2.9   |

### Camera Specification

|                        |       |   |
|------------------------|-------|---|
| Filter                 |       | AR  |
| Framerate <sup>1</sup> | (fps) | 19.2  |
| Exposure time          |       | 28 µs - 0.7 s                                   |
| Dynamic range          | (dB)  | 65.5  |
| Gain range             | (dB)  | 0-20  |
| SNR                    | (dB)  | 41.5  |
| Image buffer           | (MB)  | 128   |
| Pixel formats          |       | Mono 8/10/ 10Packed/<br>12/12Packed             |
| Chunk data             |       | yes   |
| User sets              |       | 3   |
| Timers/Counters        |       | 0/1   |
| Synchronization        |       | Free run, software trigger,<br>hardware trigger |

<sup>1</sup> Color-model's fps are calculated using RGB8 pixel format

<sup>2</sup> Measured at 12 VDC

All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only. Data are reported by design, actual lens performance may vary due to manufacturing tolerances.

**Compliance**

|                   |                                    |   |
|-------------------|------------------------------------|---|
| Standards         | USB3 Vision, GenICam               |   |
| Client software   | OECS or other USB3 Vision software |   |
| Operating systems | 32/64-bit Windows XP/7/10          |   |
| Warranty          | (years)                            | 1 |

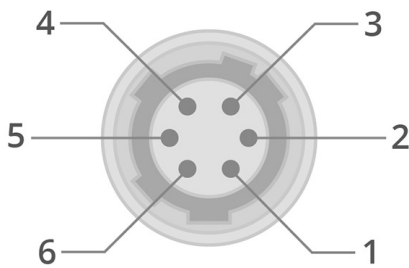
**Environment**

|                             |      |                       |
|-----------------------------|------|-----------------------|
| Operating temperature       | (°C) | 0-50                  |
| Storage temperature         | (°C) | -30-+70               |
| Operating relative humidity | (%)  | 20-80, non condensing |
| IP rating                   |      | IP30                  |

**Mechanical Specifications**

|                         |                                    |              |
|-------------------------|------------------------------------|--------------|
| Mount                   | C                                  |              |
| Dimensions <sup>2</sup> | (mm)                               | 44 x 29 x 68 |
| Clamping system         | 4x M3 threaded holes (on one side) |              |
| Mass                    | (g)                                | 100          |

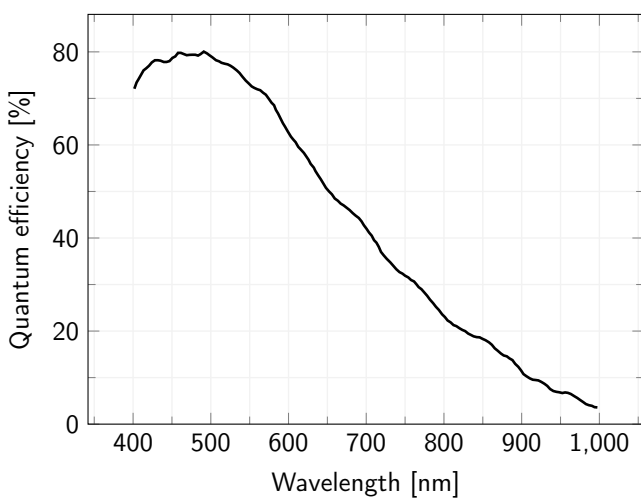
**HIROSE PINOUT**



Device side

| Pin | Signal      | I/O    | Description                          |
|-----|-------------|--------|--------------------------------------|
| 1   | 12V         | Input  | DC 12V                               |
| 2   | Opt-Iso In  | Input  | Opto-isolated input                  |
| 3   | GPIO        | I/O    | Can be configured as input or output |
| 4   | Opt-Iso Out | Output | Opto-isolated output                 |
| 5   | I/O Ground  | Input  | Opto-isolated I/O grounding          |
| 6   | GND         | Input  | Power and GPIO grounding             |

**SENSOR QUANTUM EFFICIENCY**



**RECOMMENDED ACCESSORIES**

Opto-Engineering® suggests the following accessories to power the camera:

- **CBUSB3001**, Passive USB 3.0 cable, industrial level, horizontal screw locking, 3 m
- **COE-6P-OPEN1-030-01**, HIROSE 6-pin/Open end cable, 3 meters

**COMPATIBLE PRODUCTS**

Full list of compatible products available [here](#).



A wide selection of innovative machine vision components.

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