



# COE50CUSB3SK-K | DATASHEET

Area scan camera CMV50000, CMOS, Global shutter, 7920 x 6004, 48 MP, 4.6 µm/pix, Full Frame, Color, 6.8 fps, USB 3.0, M58x0.75 FD 12.96 mount, AR



## KEY ADVANTAGES

### High quality rugged design

Using the latest industrial components, these cameras are built to last and allow for extended temperature ranges.

### Available in USB3 and Camera Link

USB3 offers high speed and easy installation, while Camera Link guarantees maximum performance and direct access to the camera sensor.

### Excellent image quality

Built-in features include pixel correction, column defect correction, white balancing, flat-field correction.

### Optics to match

Many Opto Engineering® Telecentric lenses match these 35mm sensors for the best optical performance.

**COE High Resolution Area Scan cameras** are designed to provide high-resolution images, using the latest High Res sensors that offer both quality and speed.



## SPECIFICATIONS

### Sensor Specification

|                      |             |
|----------------------|-------------|
| Megapixel            | 48          |
| Resolution           | 7920 x 6004 |
| Sensor format        | Full Frame  |
| Sensor diagonal (mm) | 45.7        |
| Pixel size (µm)      | 4.6         |
| Sensor model         | CMV50000    |
| Sensor type          | CMOS        |
| Shutter              | Global      |
| Chroma               | Color       |

### Camera Specification

|                      |   |
|----------------------|---|
| Filter               | AR  |
| Framerate (fps)      | 6.8   |
| Exposure time        | > 110 µsec  |
| ADC resolution (bit) | 12  |
| Dynamic range (dB)   | 64  |
| Gain range           | 1-4x  |
| Image Processing     | ROI, Shading correction, Image Storage, Defect pixel correction |
| Synchronization      | Free run, software trigger, hardware trigger                    |

### Connectivity

|  |                     |
|--|---------------------|
| Data connector                         | USB 3.0 Micro-B     |
| Data interface                         | USB 3.0             |
| I/O connector                          | 6-pin Hirose        |
| I/O interface                          | 1x input, 1x output |
| Serial interface                       | no                  |
| Econder interface                      | no                  |
| Power requirements (V)                 | 6-14                |
| Max power consumption <sup>1</sup> (W) | 8                   |

### Compliance

|                     |   |
|---------------------|---|
| Client software     | COE-HR-USB3 Demo viewer, Camera Control Application |
| Operating systems   | 32/64-bit Windows XP/7/10                           |
| Shock and vibration | 10G (20-200Hz) XYZ; 70G 10ms                        |
| Warranty (years)    | 1   |

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.

**Mechanical Specifications**

|                         |                                   |
|-------------------------|-----------------------------------|
| Mount                   | M58x0.75 FD 12.96                 |
| Dimensions <sup>2</sup> | (mm) 85 x 80 x 67                 |
| Clamping system         | 8x M3 threaded holes (on 4 sides) |

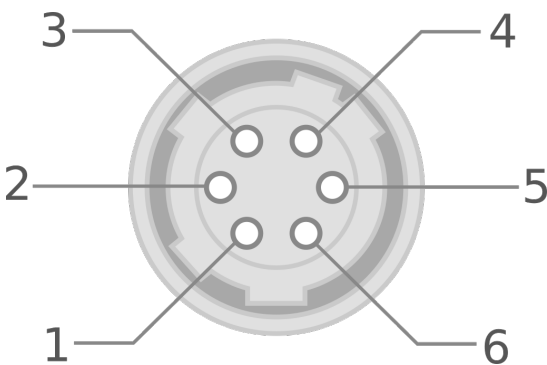
**Environment**

|                             |      |                       |
|-----------------------------|------|-----------------------|
| Operating temperature       | (°C) | 0-60                  |
| Storage temperature         | (°C) | -40-+70               |
| Operating relative humidity | (%)  | 20-80, non condensing |

<sup>1</sup> Measured at 12 VDC

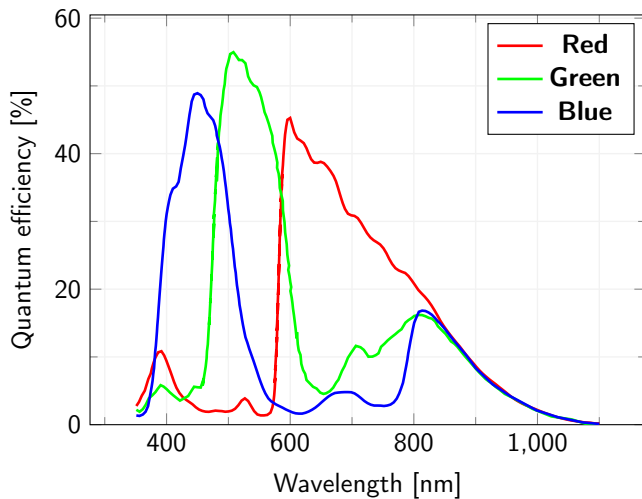
<sup>2</sup> Width measured without fan grid

**HIROSE PINOUT**



| Pin | Signal Name |
|-----|-------------|
| 1   | +12V        |
| 2   | DC Ground   |
| 3   | Trigger IN  |
| 4   | STROBE OUT  |
| 5   | NO CONNECT  |
| 6   | NO CONNECT  |

**SENSOR QUANTUM EFFICIENCY**



**RECOMMENDED POWER SUPPLY**

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

- **COE-6P-MALE**, 6 pin Male cable for COE HR AS series, 2 meters.
- **COE-PS-UNIVERSAL**, Power supply for COE HR AS series cameras.

**COMPATIBLE PRODUCTS**

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



A wide selection of innovative machine vision components.

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