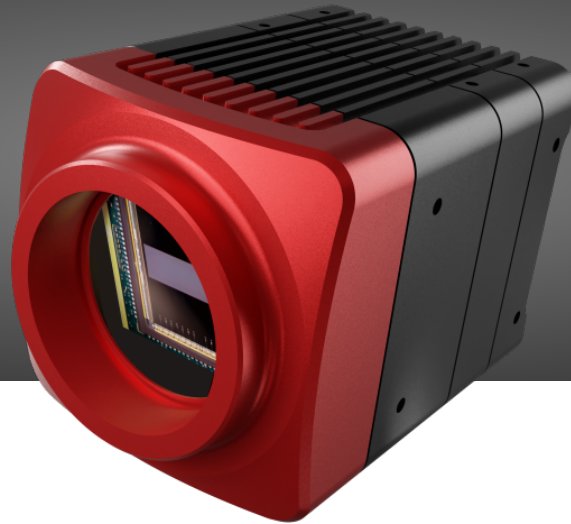


C7-CA Series Data Sheet

PN: 602346137, Model: C7-S8-3070W-CA-S10-T-5G



The CA series stands out with maximum flexibility and powerful performance for a wide range of industrial image processing applications. With a resolution of 3072 pixels, it is ideally suited for a variety of demanding tasks. Integration into existing systems is exceptionally fast and convenient, thanks to the advanced 5G ethernet interface. The innovative LaserLink interface allows common lasers to be connected directly to the camera, further expanding the range of possible applications. Support for the GenICam standard, as well as various Scheimpflug configurations and model variants, make the CA series the ideal choice for complex multi-sensor applications.

- **High-resolution 3D industrial camera with 3072 pixels**
- **Versatile for a wide range of industrial applications**
- **Ultra-fast 5G Ethernet interface**
- **Direct connection of common lasers via LaserLink interface**
- **Input and encoder signal levels (TTL or HTL) can be configured**

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Model Information

| | |
|-------------|-------------------------|
| Model name | C7-S8-3070W-CA-S10-T-5G |
| Part number | 602346137 |

Detector/Performance specifications

| | |
|---------------------------|-----------------------|
| Detector | CMOS Global Shutter |
| Resolution | 3072 x 1020 pixels |
| Physical size | 20.275 x 6.732 mm |
| Pixel size | 6.6 x 6.6 μ m |
| Points per profile | 3072 |
| Profile speed at 200 rows | 39968.0 Hz |
| Maximum profile speed | 87873.0 Hz |

Interface specifications

| | |
|-----------------|---|
| Ethernet | 5GBase-T up to 5000.0 Mbit/s |
| Encoder | A, B, Z RS-422 HTL TTL |
| Digital inputs | 2x isolated digital inputs 5V - 24V DC |
| Digital outputs | 2x isolated digital outputs 5V - 24V DC |
| Analog output | 1x analog output 0V - 5V DC |

Electrical/Mechanical specifications

| | |
|----------------------------|---|
| Power supply | 12V - 24V DC 27V DC Max. |
| Power consumption | Max. 15 W |
| Connectors | Power&I/O: M12-Connector 17-pin A-coded Ethernet: M12-Connector 8-pin X-coded LaserLink: M8-Connector 8-pin A-coded |
| Housing material | Anodized aluminum |
| Dimensions (L x W x H) | 79.8 mm x 55.0 mm x 55.0 mm |
| Weight | 350.0 g |
| Internal Scheimpflug angle | 10° |
| Lens mount | TFL-Mount |

Environmental conditions

| | |
|----------------------|---|
| Temperature | Operating: 0 °C - +40 °C Storage: -20 °C - +80 °C |
| Humidity | 20 % - 80 % (non-condensing) |
| Vibration resistance | Sinusoidal: DIN EN 60068-2-6:2008-10: 2g 10 Hz - 150 Hz Random: DIN EN 60068-2-64:2020-09: 7g 10 Hz - 500 Hz |
| Shock resistance | DIN EN 60068-2-27: 2010-02: 15 g 3 ms |
| Protection class | IP54 With optional lens protection IP67 According to IEC 60529 |

Software/Features

| | |
|---------------------|--|
| Supported standards | GenICam GigEVision |
| Firmware features | RegionTracking RegionSearch MultiRegion MultiPart AutoStart HistoryBuffer MultiSlope MultiPeak |
| Software | SolutionPackage MetrologyPackage cxSDK with wrappers for C, C++, Python and Matlab |

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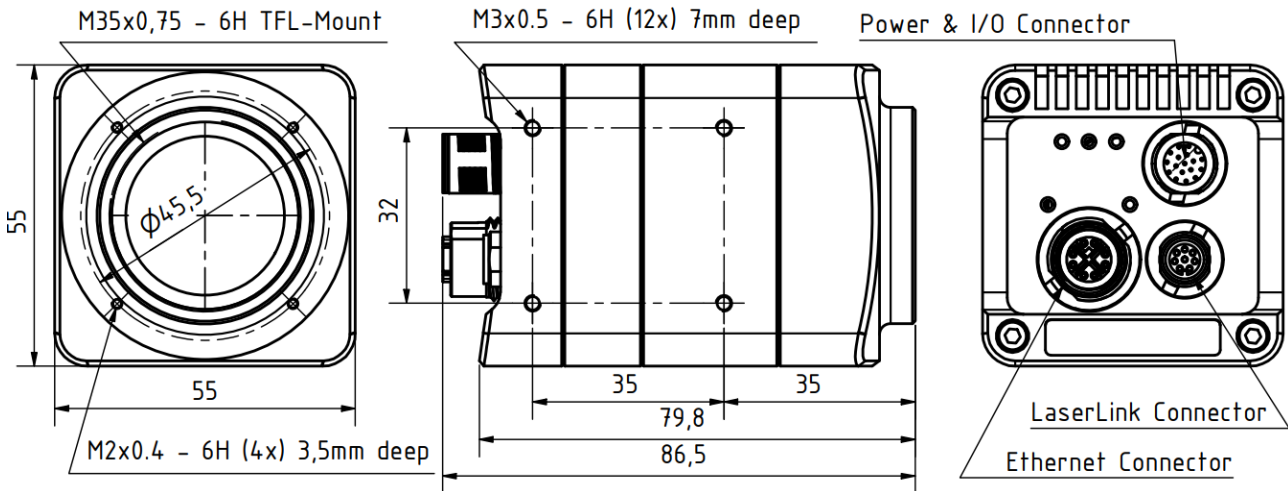
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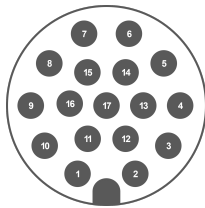
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Mechanical dimensions



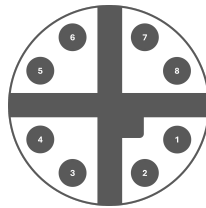
Connector layout and pin assignment

Power & I/O Connector: M12 17-Pin A-Coded Male



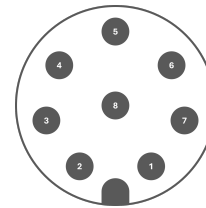
| | | |
|--------|---------|---|
| 1 | Z- | Encoder input Z- (RS-422, D-HTL) |
| 2 | L-VCC | Laser supply voltage (5-24V DC) |
| 3 | Z+ | Encoder input Z+ (RS-422, TTL, D/SE-HTL) |
| 4 | B+ | Encoder input B+ (RS-422, TTL, D/SE-HTL) |
| 5 | GND | Camera and Laser supply ground |
| 6 | B- | Encoder input B- (RS-422, D-HTL) |
| 7 | A- | Encoder input A- (RS-422, D-HTL) |
| 8 | VCC | Camera supply voltage |
| 9 | GND | Camera and Laser supply ground |
| 10 | A+ | Encoder input A+ (RS-422, TTL, D/SE-HTL) |
| 11 | IN-GND | Reference ground for Encoder/Digital inputs |
| 12 | OUT2 | Digital output 2, level defined by OUT-VCC |
| 13 | IN1 | Digital input 1 (5-24V DC) |
| 14 | IN2 | Digital input 2 (5-24V DC) |
| 15 | OUT-VCC | Output supply voltage (5-24V DC), refers to OUT-GND |
| 16 | OUT1 | Digital output 1, level defined by OUT-VCC |
| 17 | OUT-GND | Reference ground for digital outputs |
| Shield | SHIELD | Connected to device housing |

Ethernet Connector: M12 8-Pin X-Coded Female



| | | |
|--------|--------|-------------------------------|
| 1 | MDI1+ | Data Pair 1, positive contact |
| 2 | MDI1- | Data Pair 1, negative contact |
| 3 | MDI2+ | Data Pair 2, positive contact |
| 4 | MDI2- | Data Pair 2, negative contact |
| 5 | MDI4+ | Data Pair 4, positive contact |
| 6 | MDI4- | Data Pair 4, negative contact |
| 7 | MDI3+ | Data Pair 3, positive contact |
| 8 | MDI3- | Data Pair 3, negative contact |
| Shield | SHIELD | Connected to device housing |

LaserLink Connector: M8 8-Pin A-Coded Female



| | | |
|--------|--------|---|
| 1 | GND | Camera and Laser supply ground |
| 2 | VCC | Fused camera supply voltage output (5-24V DC) |
| 3 | L-VCC | Fused laser supply voltage output (5-24V DC) |
| 4 | AO | Analog output (0-5V) |
| 5 | DO | Digital output (5V) |
| 6 | TX | Transmit data output (RS-232) |
| 7 | RX | Receive data input (RS-232) |
| 8 | DI/AI | Digital/Analog input (0-5V) |
| Shield | SHIELD | Connected to device housing |

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