

# Seriously Fast.

RIC10 with 10 Gigabit Ethernet for  
High-Resolution & High-Speed Imaging



# Extreme Bandwidth, GigE Vision Compliant, Up to 100 m Cable



The RIC10 has a rigid aluminum body and industry-standard M12 interfaces for power supply, 10 Gigabit Ethernet, and digital IOs.

## IP65/67 Housing for Harsh Environments

The RIC10 is made for high-speed, high-resolution applications in industrial environments, and its compact aluminum enclosure is made to last. All camera components including the lens and the connectors are dust tight, protected against water jets, and water immersion resistant.

## High-Resolution Image Sensors

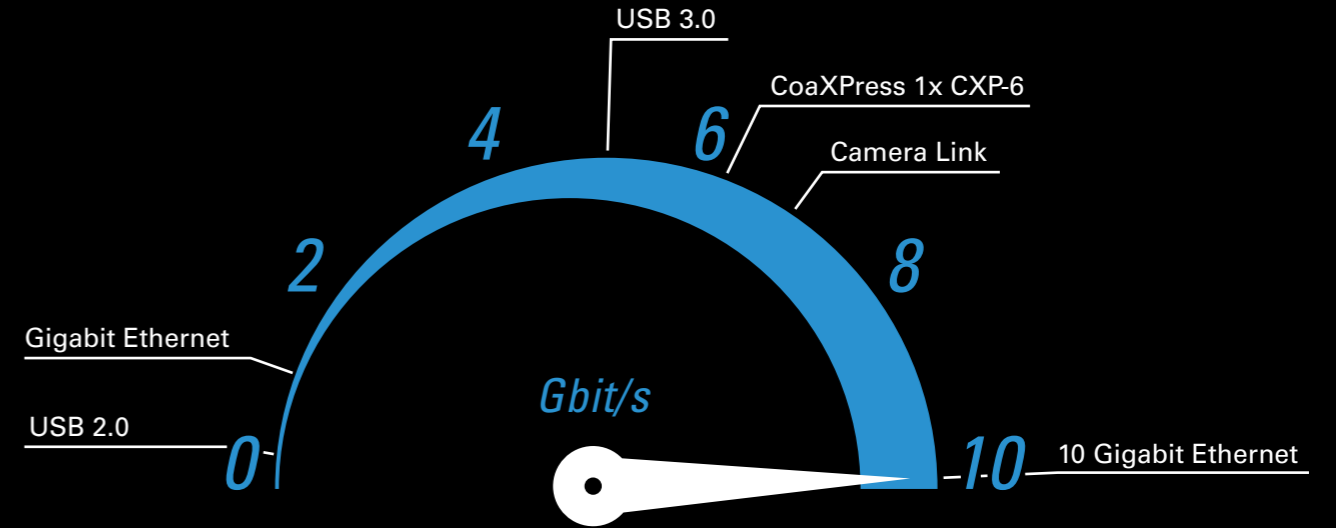
Three new image sensors from the Sony Pregius family are available for the RIC10, the IMX250 with 5 MP, the IMX253 with 12 MP, and the IMX255 with 8.9 MP. These outstanding CMOS global shutter sensors deliver crisp, clear, and high-resolution images at high frame rates.

## High-Speed Image Sensors

If your focus lies on high-speed vision applications, the RIC10 in combination with the CMOSIS CMV2000 or CMV4000 image sensors is the right choice. With frame rates of 340 fps (2.2 MP) and 180 fps (4.2 MP), respectively, these global shutter sensors are perfect for high speed industrial production processes.

## Easy Integration into Industry Applications

With its 24V DC supply, 10 Gigabit Ethernet, digital IOs, and standard M12 connectors, the RIC10 allows for a hassle-free integration into your existing infrastructure. Connectivity with reduced bandwidth networks is also possible thanks to the RIC10's support of 2.5G and 5G NBASE-T networks.



Comparison of digital data transmission standards commonly used in industrial vision applications

## 10 Gigabit Ethernet – Fast, Reliable, and Cost-Efficient

### Fast

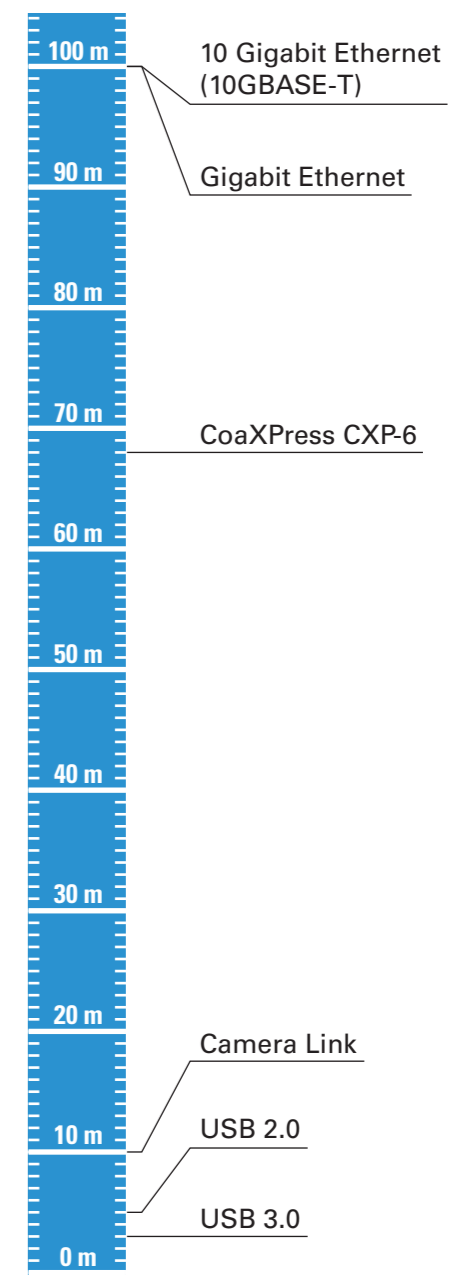
With a data rate of up to 1.25 GB/s, 10 Gigabit Ethernet (10 GbE) ranks as one of the fastest available interfaces for industrial image processing. In comparison to USB 3.0, 10 GbE can transfer data twice as fast over a distance of up to 100 meters using standard CAT6A Ethernet cable.

### Reliable

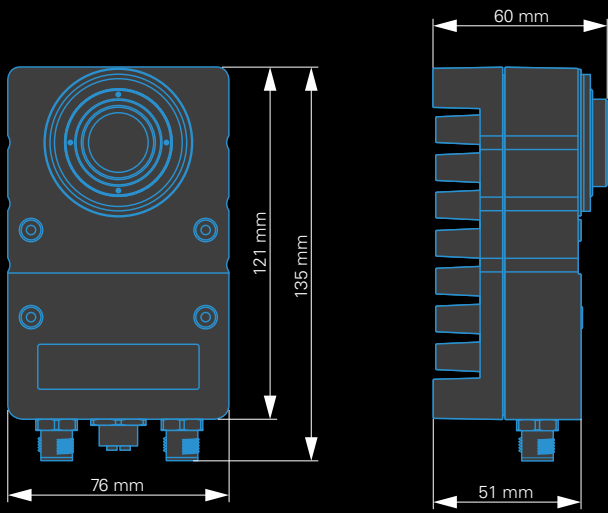
The data transmitted via 10GbE is encoded in such a way that bit errors are detected and corrected, thereby avoiding data loss. This error correction capability is inherent to the Ethernet standard and has proven itself to be reliable in industrial environments all over the world. Additionally, the packet resend feature of GigE Vision makes it possible to recover lost frames.

### Cost-Efficient

The RIC10 transmits image data up to 100 meters using the same standard and widely available CAT6A Ethernet cables used in commercial network installations. This type of cable is considerably less expensive than CameraLink or fibre optic cables. Further, GigE Vision and 10 GbE allow connectivity via commercially available network components rather than expensive frame grabbers.



Comparison of the maximum cable lengths without repeaters or optical extenders



### Product Highlights

- 10 Gigabit Ethernet with GigE Vision support; also supports 2.5G and 5G NBASE-T
- Available with Sony Pregius high-resolution and CMOSIS high-speed image sensors
- Rugged IP65/67 aluminum housing with diverse mounting options
- 24 V supply
- Digital, opto-isolated I/Os
- Industry-standard M12 connectors
- C-Mount lens mount with optional IP67 lens tube

## Technical Data

Interfaces	
Ethernet	1/2.5/5/10 Gigabit Ethernet
IO	4 digital inputs, opto-isolated 3 digital outputs, opto-isolated
Power	24 V DC +/- 10% Typical power consumption 10 W

Physical Characteristics	
Dimensions	135x76x60 mm
Connectors	Power: M12 4-pin A-coded male IO: M12 12-pin A-coded male Ethernet: M12 8-pin X-coded female
Certification	CE, FCC
IP Rating	IP65/IP67 with optional tube IP40 without optional tube

Accessories	
DIN rail power supply	40.8 W, 24 V DC, 1.7 A
IP67 tube	
IP67 tube extension	
0 or 90 degree mounting plate	
Camera power cable	5 m
CAT6A Ethernet cable	5 m
I/O cable	5 m
Sealing caps for the M12 connectors	

## Image Sensors

Sensor ID	24	44	54	56	58
Sensor Type	CMOSIS CMV2000	CMOSIS CMV4000	Sony IMX250	Sony IMX255	Sony IMX253
Sensor / Shutter Type	CMOS / global	CMOS / global	CMOS / global	CMOS / global	CMOS / global
Chromaticity	mono / color	mono / color	mono / color	mono / color	mono / color
Sensor Size	2/3"	1"	2/3"	1"	1.1"
Resolution	2048x1088 px	2048x2048 px	2448x2048 px	4096x2160 px	4096x3000 px
Pipelined Trigger	yes	yes	no	no	no
Pixel Size	5.5x5.5 µm	5.5x5.5 µm	3.45x3.45 µm	3.45x3.45 µm	3.45x3.45 µm
Max. Frame Rate *	338 Hz	180 Hz	144 Hz	88 Hz	64 Hz

\* Frame rate at maximum region of interest.

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