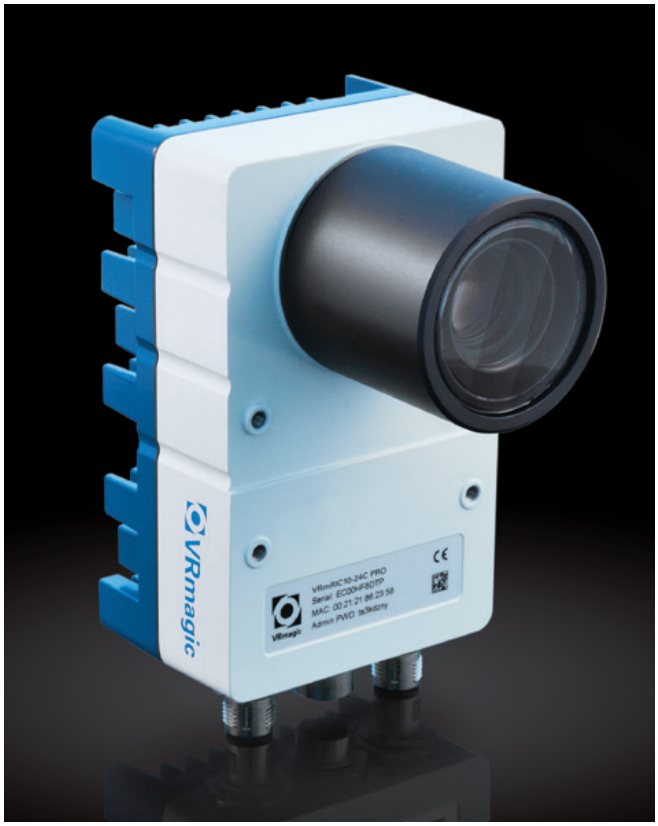
Industrial Cameras

VRmRIC10-X

Industrial 10 GigE Vision Camera



- 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

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 (with optional IP67 tube) 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 IMX255 with 8.9 MP, and the IMX253 with 12.95 MP. These outstanding CMOS global shutter sensors deliver crisp, low-noise, 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 338 fps (2.2 MP) and 180 fps (4.2 MP), respectively, these global shutter sensors are perfect for high speed industrial production processes.

Physical Characteristics	
Dimensions (WxHxD)	135 x 76 x 60 mm
Connectors	Ethernet: M12 8-pin X-coded female I/O: M12 12-pin A-coded male Power: M12 4-pin A-coded male
Certification	CE, FCC
IP Rating	IP65/IP67 with optional tube IP40 without optional tube

Specifications subject to change without notice, errors excepted.

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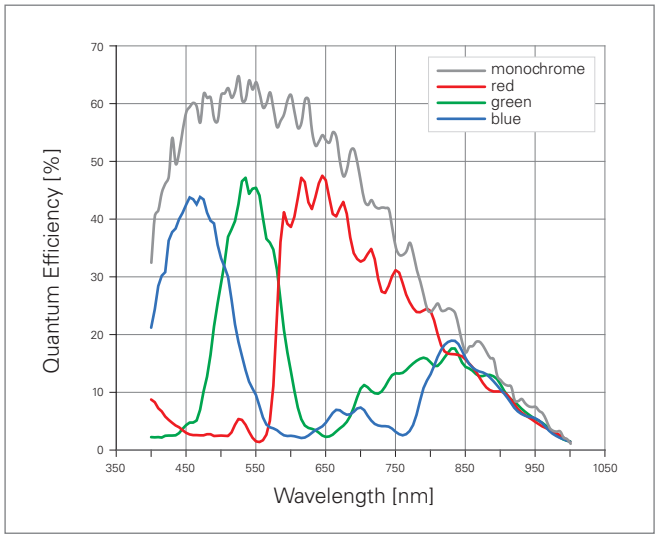
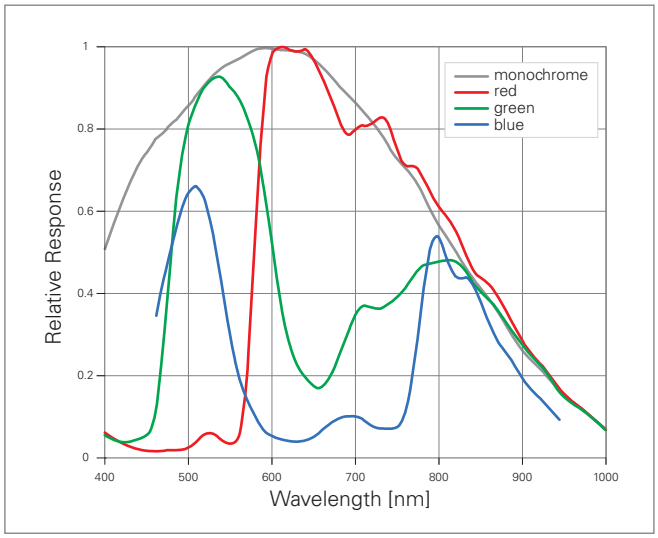
Characteristics of CMOSIS Sensors		
Sensor type	CMV2000	CMV4000
Product name	VRmRIC10-24	VRmRIC10-44
Technology	CMOS, global shutter	CMOS, global shutter
Chromaticity	mono / color	mono / color
Sensor Size	2/3"	1"
Resolution	2048 x 1088 px	2048 x 2048 px
Optical area	11.264 mm x 5.984 mm	11.264 mm x 11.264 mm
Pipelined trigger	yes	yes
Trigger modes	internal, external	internal, external
Pixel Size	5.5 x 5.5 µm	5.5 x 5.5 µm
Max. Frame Rate*	338 Hz	180 Hz



CMV2000, CMV4000



IMX250, IMX253, IMX255

Characteristics of Sony Sensors			
Sensor type	IMX250	IMX255	IMX253
Product name	VRmRIC10-54	VRmRIC10-56	VRmRIC10-58
Technology	CMOS, global shutter	CMOS, global shutter	CMOS, global shutter
Chromaticity	mono / color	mono / color	mono / color
Sensor Size	2/3"	1"	1.1"
Resolution	2448 x 2048 px	4096 x 2160 px	4096 x 3000 px
Optical area	8.446 mm x 7.066 mm	14.131 mm x 7.452 mm	14.131 mm x 10.35 mm
Pipelined trigger	no	no	no
Trigger modes	internal, external	internal, external	internal, external
Pixel Size	3.45 x 3.45 µm	3.45 x 3.45 µm	3.45 x 3.45 µm
Max. Frame Rate*	144 Hz	88 Hz	64 Hz

* Maximum value at full ROI

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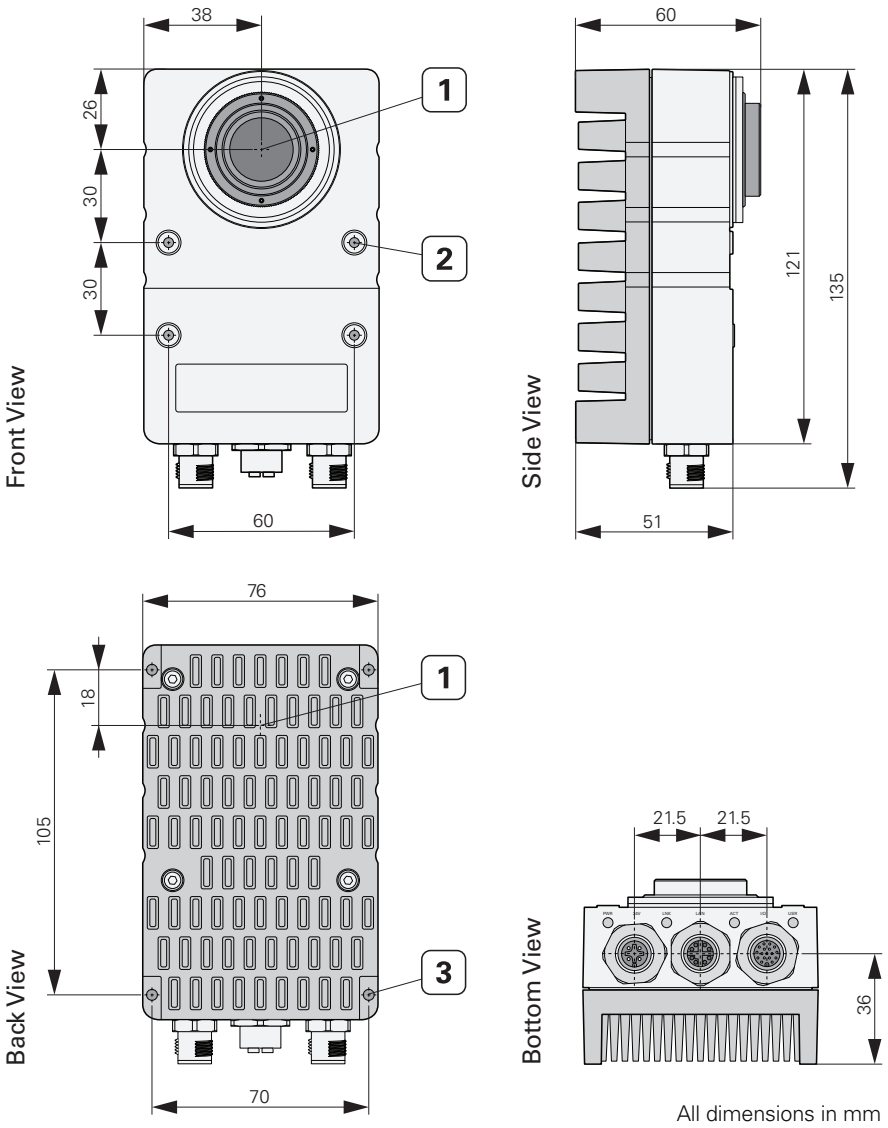
VRmRIC10 Camera C-Mount



1 Optical center of image sensor

2 4 mounting holes on front side (M4 threads)

3 4 mounting holes on back side (M4 threads)

Interfaces	
Ethernet	2.5/5/10 Gigabit Ethernet
I/O	4 digital inputs, TTL (24 V tolerant), opto-isolated 3 digital outputs, 24 V push-pull, opto-isolated
Power	24 V DC +/- 10% Typical power consumption 12 W

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Industrial Cameras

Product Code	Product Name	Sensor	Filter Glass
VRM-RIC#PN-RX-24M#PWN	VRmRIC10-24M	CMOSIS CMV2000 v3	Window (protective)
VRM-RIC#PN-RX-24C#PCN	VRmRIC10-24C	CMOSIS CMV2000 v3	IR-Cut
VRM-RIC#PN-RX-44M#PWN	VRmRIC10-44M	CMOSIS CMV4000 v3	Window (protective)
VRM-RIC#PN-RX-44C#PCN	VRmRIC10-44C	CMOSIS CMV4000 v3	IR-Cut
VRM-RIC#PN-RX-54M#PWN	VRmRIC10-54M	SONY IMX250LLR	Window (protective)
VRM-RIC#PN-RX-54C#PCN	VRmRIC10-54C	SONY IMX250LQR	IR-Cut
VRM-RIC#PN-RX-56M#PWN	VRmRIC10-56M	SONY IMX255LLR	Window (protective)
VRM-RIC#PN-RX-56C#PCN	VRmRIC10-56C	SONY IMX255LQR	IR-Cut
VRM-RIC#PN-RX-58M#PWN	VRmRIC10-58M	SONY IMX253LLR	Window (protective)
VRM-RIC#PN-RX-58C#PCN	VRmRIC10-58C	SONY IMX253LQR	IR-Cut

VRmagic GevSuite

The VRmagic GevSuite contains everything you need for an easy camera setup. It comes with a GigE Vision driver and a camera API as well as a firmware updater and a GenTL producer. The also supplied VRmagic GevCamlab allows an easy beginning when setting up a VRmagic GigE Vision camera for the first time. It helps you to configure the camera's network settings and, furthermore, it enables you to test and to demonstrate the capabilities of the camera API.

Accessories	**VRmagic Part Numbers**
DIN rail power supply 40.8 W, 24 V DC, 1.7 A	VRM_DINSUP_24V_1.7A
AC power lead (EU plug <> open ends)	VRM_PWR_OE_EU
Camera power cable, 5 m M12 4-pin plug female <> open ends, Phoenix 1407785	VRM_CAB_PWR_0001
Gigabit Ethernet cable, 5 m M12 8-pin plug male <> RJ45, Phoenix 1407473	VRM_CAB_ETH_0001
I/O cable, 5 m M12 12-pin plug female <> open ends, Phoenix 1430145	VRM_CAB_IO_0007
IP67 tube	VRM_IP_TUBE_0001
IP67 tube extension	VRM_IP_TUBE_EXT_0001
90 degree mount (including screws)	VRM_MOUNT_90_0001
Flat mounting plate (including screws)	VRM_MOUNT_FLAT_0001
Sealing Cap Power/IO-Connector	VRM_M12_CAP_M
Sealing Cap Ethernet-Connector	VRM_M12_CAP_F

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