

VisionCam XM – Your Personal Vision Sensor.

The VisionCam XM offers a versatile, programmable camera at an attractive price-performance ratio. The main processor is a single- or dual-core ARM Cortex-A15 processor which can be supported by a single- or dual-core accelerator. Linux is the operating system – however, we can provide the hard real-time OS SYS/BIOS, too.

Different color and monochrome sensors of up to 12 megapixels enable the best choice between resolution and speed. For communication with the machine/process, there are 2 / 4 digital I/Os, a serial interface and a 1.000 Mbit/s Ethernet interface. As a USP, IMAGO offers Ethernet-based real-time fieldbus support like Profinet, EtherCAT or SERCOS. The programmable camera is delivered, as usual, with a rounded-off software. The camera is freely programmable and runs under Debian based Linux, therefore programming in C++ or other languages quickly results in an application-specific intelligent camera. Halcon Embedded as the leading library for machine vision is supported, too.

Sensor Options / CMOS – Global Shutter

Optical Size	1/3"	1/1.8"	1/1.8"	1.1"	1"
Resolution	752 × 480 pixels	1280 × 1024 pixels	1600 × 1200 pixels	2592 × 2048 pixels	4096 × 3072 pixels
Pixelsize	(6.0 μm) ²	(5.3 μm) ²	(4.5 μm) ²	(4.8 μm) ²	(2.8 μm) ²
Framerate (full res.)	63 fps	65 fps	55 fps	40 fps	31 fps
Framerate (VGA res.)	74 fps	136 fps	134 fps	460 fps	
Partial Scan	yes	yes	yes	yes	yes
Color	Monochrome or bayer pattern	Monochrome or bayer pattern	Monochrome or bayer pattern	Monochrome or bayer pattern	Monochrome or bayer pattern

Processor

Manufacturer, Type	Texas Instruments AM5728 Sitara
ARM Cortex-A15 Processor Clock	2 × 1.5 GHz
Floating-Point DSP Processor Clock	2 × 750 MHz
DDR RAM	1 GB DDR3L
Mass Storage	1 × μSD Card ≥ 32 GB (accessible)



Interfaces

Ethernet TCP/IP, FTP	1000 MBit/s
Serial Interface	1 × RS-232 (also used for Linux console)
Digital In/Out	2 × Input / 4 × Output, opto-isolated, 24V
Fieldbus	[Optional: PROFINET, EtherCAT, SERCOS, ...]

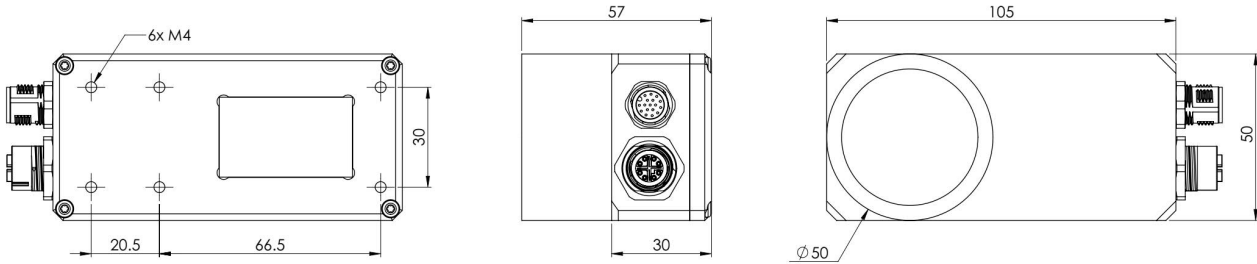
Mechanical / Electrical

Lens Mount	S-Mount or C-Mount (S-Mount not recommended for > 5 MP; CS-Mount option for WVGA)
I/O Connector	M12 - 17 Pin
Ethernet Connector	M12 - 8 Pin [Option: RJ 45]
Dimension L × W × D	105 mm × 50 mm × (30 mm + lens tube 27 – 80 mm)
Weight (without lens)	180 g
Power Supply	11 V _{DC} – 26 V _{DC} (internal LED ring light requires ≈ 24 V)
Temperature Range	+5 °C ... +50 °C (optimum: +20 °C ... +30 °C)
Protection Class	IP 54, only with M12 connectors and lens tube
Mounting	6 × M4

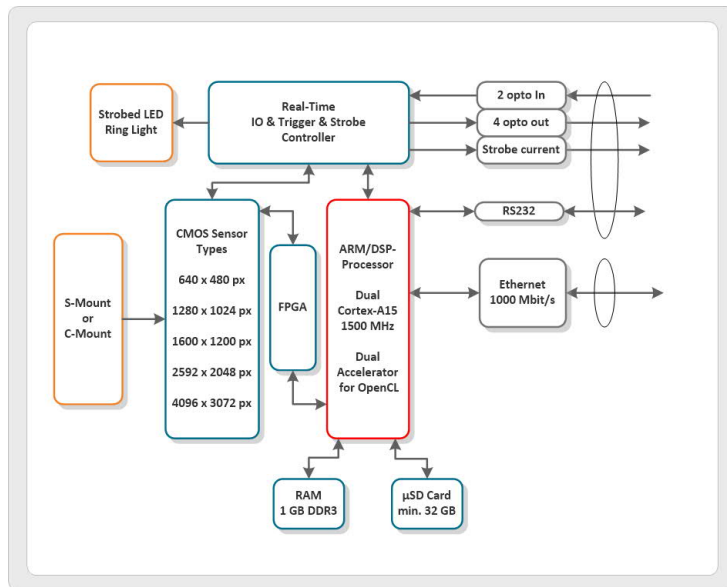
LED Strobe

Location	Internal ring light	External supply
Maximum Strobe Current	2 A @ 24 V	2 A @ 24 V
Strobe Current Step Size	10 mA	10 mA
Minimum Flash Duration @ 2A	10 μ s	10 μ s
Flash Duration Step Size	1 μ s	1 μ s

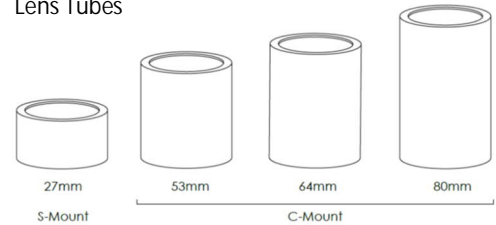
Dimensions



Block Diagram



Lens Tubes



Other products with ARM processor: VisionSensor PV, VisionCam XM with area sensor & VisionBox LE MANS

