

VisionCam LM – Your Personal Line Scan Vision Sensor.

Why VisionCam LM? Now it's time to rethink your line scan application to integrate everything into an embedded vision system. Latest line scan sensors and a powerful dual-core ARM processor together with viable interfaces allow merging a complete PC-based line scan system into one device. Put your knowledge in just one state-of-the-art device to reduce costs, risks and the number of components.

The VisionCam LM offers a versatile, programmable ARM processor-based line scan 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 line scan sensors of up to 8.192 pixels are able to serve many typical applications. For communication with the machine/process, there are 2 / 4 digital I/Os, a serial interface and a 1.000 Mbit/s Ethernet interface. 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

Resolution	2048 pixels	2 × 2048 pixels	4096 pixels	2 × 4096 pixels	8192 pixels
Pixelsize	(7.0 μm) ²	(7.0 μm) ²	(7.0 μm) ²	(7.0 μm) ²	(3.5 μm) ²
Size	14.3 mm	14.3 mm	28.6mm	28.6mm	28.6mm
Scan Rate (Mono: 8 bit / Color: 24 bit)	80 kHz	61 kHz	80 kHz	30 kHz	46 kHz
Scan Rate (Mono: 10 bit / Color: 32 bit)	80 kHz	46 kHz	46 kHz	23 kHz	23 kHz
Color	Mono	Bayer	Mono	Bayer	Mono

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)



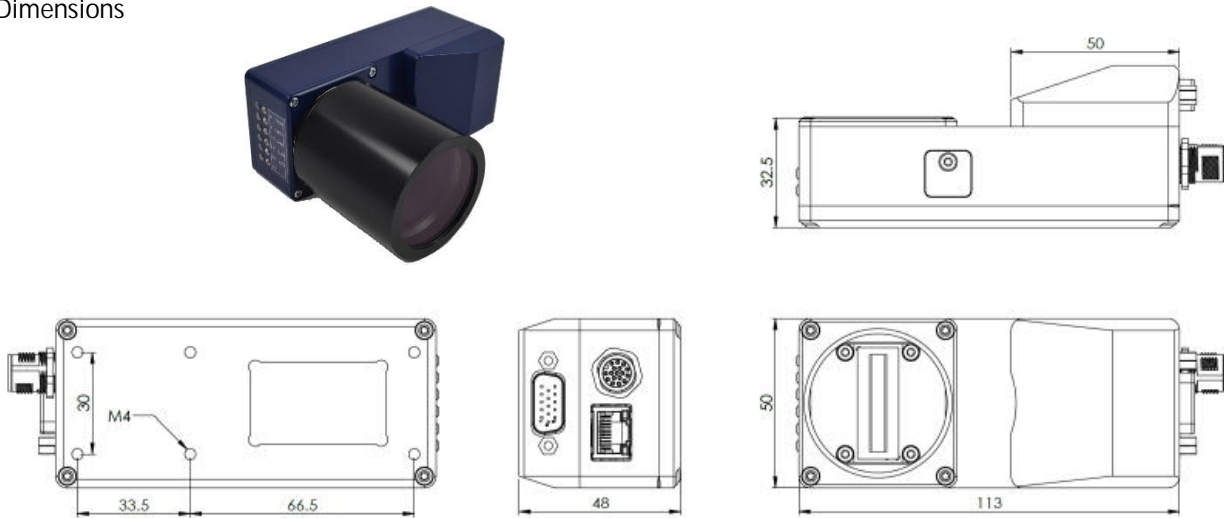
Interfaces

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
Encoder Interface RS-422	3 × Input / 3 × Output (for daisy chain)

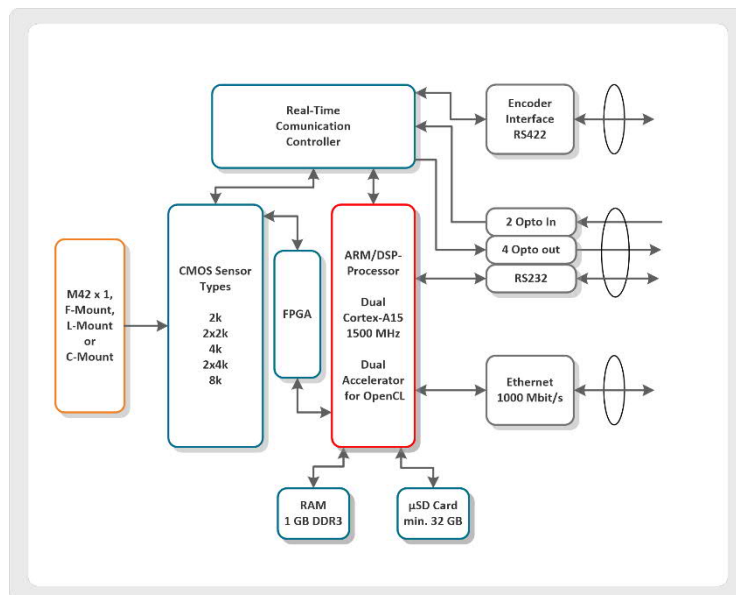
Mechanical / Electrical

Lens Mount	M42 × 1, L-mount (M39 x 1/26"), F-mount or C-mount (2k-version only)
I/O Connector	M12 - 17 Pin
Ethernet Connector	1 × RJ 45
Encoder Connector	1 × D-Sub 15
Dimension L × W × D	113 mm × 50 mm × 48 mm (without lens mount)
Weight	310 g (without lens & lens mount)
Power Supply	11 V _{DC} – 26 V _{DC}
Temperature Range	+5 °C ... +50 °C (optimum: +20 °C ... +30 °C)
Mounting	6 × M4

Dimensions



Block Diagram



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

