Vision Cam LM
Smart Line Scan Camera

SMART LINE SCAN CAMERA

Vision Cam LM

The Vision Cam LM is a versatile programmable line scan camera featuring IMAGO's unique Real-Time Communication Controller (RTCC). The RTCC provides user-programmable logic and internal units for I/Os. As it operates independently of the operating system, many time-critical applications can be realized without using a real-time operating system. Various color and monochrome line scan sensors with up to 8,192 pixels can serve many typical applications. In addition, the dual-core ARM Cortex-A15 runs under Debian based Linux providing developers with a powerful base for quick applications in C++ or other languages. Halcon Embedded as the leading library for machine vision is also supported.

sample configuration

Key Features

- Line Scan Sensors up to 8192 pixels
- Up to 80 kHz scan rate / 160 kHz line rate
- Sensor Trigger
- Digital I/Os with opto-isolators: 2 IN / 4 OUT

- Serial Interface and 1 Gigabit/s Ethernet
- Industrial Ethernet Protocols on request
- Freely programmable under Debian based Linux
- Fast developing with IMAGO's ViewIT available
- Halcon Embedded support

Sensor Options / CMOS – One Line

Resolution (pixels)	2048	4096	4096	8192
Pixelsize (µm²)	7.0	7.0	3.5	3.5
Max line Rate, full width 8bit (kHz)	80	80	80	46
10bit (kHz)	80	46	46	23
Color	mono	mono	mono	mono

Sensor Options / CMOS – Dual Line

Resolution (pixels)	2x 2048	2x 4096
Pixelsize (µm²)	7.0	7.0
Max Scan Rate, full width 8bit RAW (kHz)	80	46
10bit RAW (kHz)	46	23
24 Bit RGB (kHz)	61	30
32 Bit RGBx (kHz)	46	23
Color	mono / color	mono / color
HW-demosaicing	yes	yes

Processor / Storage

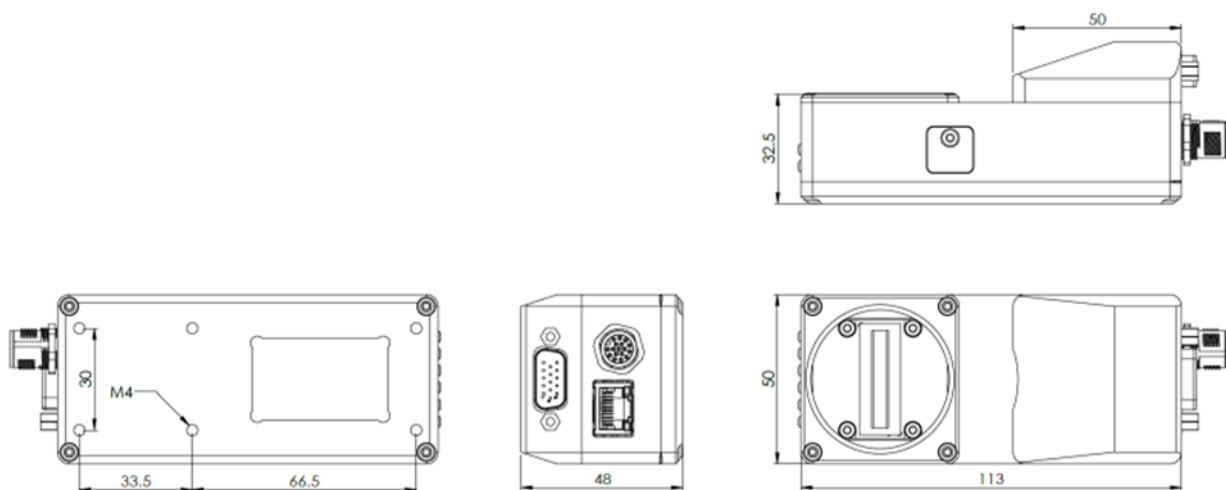|	
Manufacturer, Type	Texas Instruments AM5728 Sitara
ARM Cortex-A15 Processor Clock	2 × 1.5 GHz
Floating-Point DSP Processor Clock	2 × 750 MHz
DDR RAM	1 GB DDR3L
Mass Storage	1 × µSD Card ≥ 32 GB (accessible)

Interfaces

Ethernet	1000 MBit/s
Serial Interface	1 × RS-232
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
Dimension L × W × D	113 mm × 50 mm × 48 mm (without lens mount)
Weight (without lens)	310 g
Power Supply	11 V_{DC} – 26 V_{DC} (internal LED ring light requires ≈ 24 V)
Temperature Range	+5 °C … +50 °C
Protection Class	IP 54, only with M12 connectors and lens tube
Mounting	6 × M4

Dimensions

The smartest embedded vision components

For more than 25 years, IMAGO has been supplying machine vision technology to machine builders to improve product quality, make processes smoother, avoid production errors, reduce manufacturing costs and make systems more efficient.

What we do

With the focus on what counts for our customers, we develop hardware components for industrial image processing. Be it in factory automation, the printing industry, for the food and beverage industry, pharmaceutical or logistics industry. IMAGO supplies vision systems, smart cameras, vision sensors and the appropriate software for the optimized use of our products. We pay special attention to miniaturization, high frame rates, increasing computing power and environmentally friendly power consumption. These characteristics already distinguish our products today.
And we are proud of them.