

MCLS-1

Multi-Channel Camera Head LVDS/CMOS

- LVDS-based digital video transmission
- Wide VGA CMOS sensor, full-frame shutter

→ preliminary

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III Features

- Multi-Channel Camera-compatible, LVDS-based
- CMOS sensor
- Resolution Wide VGA
- Freeze-Frame Shutter
- Flash-compatible

The camera head MCLS-1 features the 1/3" CMOS-Sensor MT9V032 (Micron) with a resolution of 752 x 480 pixels. This sensor has a frame rate of 60 frames per second. Additionally, it has a global shutter functionality, where all pixels are exposed to light simultaneously. This makes it possible to make images of fast-moving objects, without the distortions known from "rolling shutter" sensors. The sensor is light-sensitive for infrared, this is why no infrared filter is built into the camera. Pixel size on the sensor is 6 um * 6 um with a dynamic range of more than 55 dB.

Mechanically, the camera consists of machined front and back panels and a sheet-material center. Overall size without lens is 40 x 40 x 40 mm. Care has to be taken in the selection of the lens (C mount); it should have enough focal extension to compensate for lens flange differences of up to 1 mm.

The interfaces for video data use Ethernet patch cables with RJ-45 connectors, cables can be from 0.2 to 10 m long; with lowered transmission clocks, longer cabling is possible on request. Power supply (+12 V, 0.5 A max.) and command transmission for the camera use MMC connectors, similar to RJ-45 (no possibility to use the wrong one).

III Compatibility

The camera head MCLS-1 is compatible to ELTEC's Multi-Channel interface. ELTEC offers a frame grabber board, the PCI Express-based PC_EYE/MCG with a four-lane (x4) bus interface, capable to interface to four modules MCLS 1.

