

CMOS Digital Camera

Data Sheet Flat Body Camera



UK1255 - M monochrome

The UK1255-M Flat Body Camera is a compact CMOS monochrome camera designed for industrial and scientific image processing tasks. The camera is part of the EHD CMOS camera family with different features for various applications. Typical fields of application for the 1,3 megapixel cameras are high resolution measurement, microscopy, documentation and surveillance.

The flat body allows assembly flexibility in cases with sparse room in machines or facilities. For taking and saving picture of fast moving objects using a flashlight is recommended (rolling shutter).

The fast USB2.0 interface allows the transmission of a maximum of 20 noncompressed live images per second at full sensor resolution. Thus the user has the possibility to implement image processing applications without using an additional frame grabber. The sensor provides frame rates up to 30 frames per second depending on the resolution. With the integrated high performance DSP developers may realize image processing or image pre-processing tasks directly in the camera. Thus the camera can be used as a stand-alone intelligent optical sensor.

The built-in memory is able to save up to 16 images and provides the possibility to decouple image capturing and transmission.

Pixel resolution	1280 × 1024 pixel
CMOS sensor	1/2"
Frame rate (sensor)	30 fps [bei 1280 × 1024]
Shutter	rolling shutter
Exposure time	60 µs to 0,5 s
Pixel size	5,2 µm × 5,2 µm
A/D resolution	10 bit
Data interface	USB 2.0
Processor	built-in DSP
Image memory	32 Mbyte
Power supply	USB bus powered
Dimensions	47 mm × 72 mm × 22 mm
Lens mounting	C-mount (adjustable)



Sensor Frame Rate

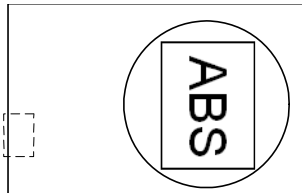
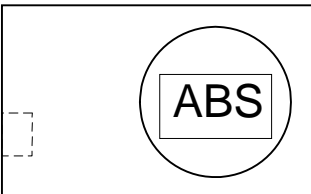
Resolution	1280×1024	1024×768	800×600	640×480
Frame rate	30 fps	45 fps	70 fps	100 fps

Technical Specifications

Sensor	1/2" CMOS progressive scan, monochrome
Resolution	1280 × 1024 (SXGA)
Pixel size	5,2 µm × 5,2 µm
Lens mounting	C-mount (flange focal distance adjustable)
Sensor orientation	→ see table below
Frame rate	<ul style="list-style-type: none"> - 30 fps at 1280 × 1024 pixel (within camera) - typically 20 fps in video mode at 1280 × 1024 over USB2.0 (PC dependent) - higher frame rates at lower resolutions
Electronic shutter	rolling shutter
Exposure time	60 µs to 0,5 s
Gain factors	1 - 15 ×
Dynamic range	68 dB
Built-in memory	32 MByte
DSP power	1200 MMAC
HOST interface	USB2.0 (mini-USB plug)
Power supply (camera)	USB bus powered
Power loss	typically 1,6 W
Temperature range (operational)	0°C to 55°C
Temperature range (store)	-20°C to +70°C
Dimensions	47 mm × 72 mm × 22 mm
Weight	110 g (without lens)

Table: Sensor Orientation

(Note: There are two camera modifications with 0° and 90° sensor orientation.)

Sensor Orientation	View	Remarks
0°		Standard
90°		Sensor mounted with 90° orientation

Dimensions

