

CMOS Digital Camera

Data Sheet Flat Body Camera



UK1275 - C QXGA color

The UK1275 Flat Body Camera is a compact CMOS color 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 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 10 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 90 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 10 images and provides the possibility to decouple image capturing and transmission.

Pixel resolution	2048 × 1536 (QXGA)
CMOS-Sensor	1/2 "
Frame rate (sensor)	12 fps [at 2048 × 1536]
Shutter	rolling shutter
Exposure time	50 µs to 50 s
Pixel size	3,2 µm × 3,2 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 Rates:

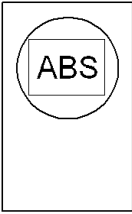
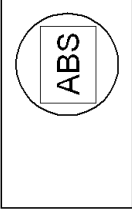
Resolution	2048×1536	1600×1200	1280×1024	1024×768	800×600	640×480
Frame Rate	12 fps	20 fps	27 fps	43 fps	65 fps	90 fps

Technical Specifications

Sensor	1/2" CMOS progressive scan, color, BAYER pattern
Resolution	2048 × 1536 (QXGA)
Pixel Size	3,2 µm × 3,2 µm
Lens Mounting	C-mount (flange focal distance adjustable)
Sensor Orientation	→ see table below
Frame Rate	<ul style="list-style-type: none"> - 12 fps at 2048 × 1536 (within camera) - typically 10 fps in "Continuous" mode at 2048 × 1536 over USB2.0 (dependent on PC) - higher frame rates at lower resolutions - 25 fps at SXGA or 90 fps at VGA-resolution for instance
Electronic Shutter	rolling shutter
Exposure Time	50 µs to 50 s
Gain	0 – 42 dB
Dynamic Range	60 dB
Built-in Memory	10 frames at full resolution
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 to 55 °C
Temperature Range (storage)	-20 to +70 °C
Dimensions	47 mm × 72 mm × 22 mm
Weight	approx. 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

