

TEC cooled PCIe CCD CAMERA



Product family PCI Express Camera

PK52165-C 4 Megapixel / color
 PK52165-M 4 Megapixel / monochrome

Description

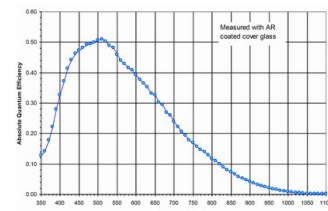
The PK52165 device is a compact CCD camera designed for industrial and scientific image processing tasks. The camera is a part of the ABS CCD camera family with different features for various applications. Typical fields of application for the 4 Megapixel camera are high resolution measurement technique, microscopy, documentation and surveillance. The TEC cooling of the image sensor provides high and constant signal-to-noise ratio even at poor lighting conditions. The global shutter allows to capture images of fast moving objects. The short-circuit-proof opto-decoupled digital outputs and opto-decoupled digital inputs are advantageous in order to use the camera under rough environmental conditions. The fast PCIe interface allows the transmission of a maximum of 32 noncompressed live images per second at full sensor resolution. With the integrated high performance DSP developers may realize image processing or image pre-processing tasks directly in the camera.

Application

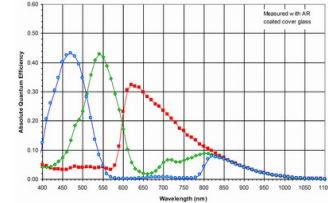
- fluorescence
- for application with poor light conditions
- light-sensitive measurement and microscope camera
- stand-alone intelligent optical sensor

Spectral response of the sensor

PK52165-M



PK52165-C



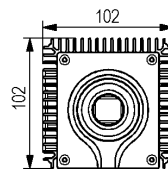
Technical specifications

Sensor	1", CCD, progressive scan, monochrome or color (BAYER pattern)
Sensor resolution	2336 × 1752 pixel
Pixel size	5,5 µm × 5,5 µm
Frame rate camera	32 fps at 2336 × 1752 pixel
Shutter type	Global shutter
Exposure time	38 µs to 1,7 s, long-time exposure until 5 min
ADC resolution	8 bit / 10 bit / 12 bit / 14 bit
Gain	1 - 32x
Data interface	PCIe (PCI express x4)
Power supply	12 V
Power consumption	typ. 8 W without cooling; max. 23 W TEC cooled
Sensor cooling single-stage	<ul style="list-style-type: none"> ▪ 15±1 °C (ambient temperatures < 27 °C) ▪ cooling capacity -12K (at ambient temp. from +27 °C to +55 °C)
two-stage	<ul style="list-style-type: none"> ▪ 10±1 °C (ambient temperatures < 30 °C) ▪ cooling capacity -20K (at ambient temp. from +27 °C to +55 °C)
Operating temp.	+ 0 °C to + 55 °C
Storage temp.	-20 °C to + 70 °C
Dimensions	102 mm × 102 mm × 124 mm
Weight	appr. 1100 g
Lens mounting	C-mount, optional M42×1 thread
Control interface	<ul style="list-style-type: none"> ▪ Digital inputs: 2× opto-decoupled (freely programmable) 1× TTL trigger input (fast) ▪ Digital outputs 2× opto-decoupled (programmable as strobe) ▪ RS232 interface
Accessories	<ul style="list-style-type: none"> ▪ PCIe expansion card for PC ▪ PCIe connection cable with power supply

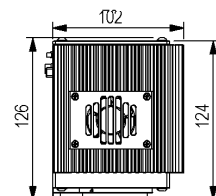
Assembly dimensions



Front view



Side view



Top view

