

Technical Data - CMOS Camera Line

Product Overview

The iCube series consist of 2 monochrome and 5 color models in an industrial and OEM board version. The Micron CMOS image sensors with resolutions from WVGA up to 5 mega pixel will provide for all types an efficient plug and play solution and an available high speed frame rate at full resolution of up to 87 fps. Higher frame rates are easily possible when using free scalable ROI, Binning or Sub-sampling mode. Needless to say iCube supports the Trigger and Strobe functionality.

CMOS sensors provide an excellent image quality combined with the full range of color indication. The benefits of a USB interface combined with CMOS technology and all of its advantages, like low power consumption, anti blooming technology and an economic price level, make the iCube family to a precise camera alternative for many image capturing and processing applications.

INDUSTRIAL	NS1044BU	NS1044CU	NS1130BU	NS1130CU	NS1201CU	NS1300CU	NS1500CU
OEM	KS1044BU	KS1044CU	KS1130BU	KS1130CU	KS1201CU	KS1300CU	KS1500CU
Image Sensor	1/3" CMOS MT9V032	1/3" CMOS MT9V032	1/2" CMOS MT9M001	1/3" CMOS MT9M131	1/3" CMOS MT9D131	1/2" CMOS MT9T001	1/2.5" CMOS MT9P001
Effective pixel	0.36MP, WVGA 752(H) x 480(V)	0.36MP, WVGA 752(H) x 480(V)	1.3 MP, SXGA 1280(H) x 1024(V)	1.3 MP, SXGA 1280(H) x 1024(V)	2 MP, UXGA 1600(H) x 1200(V)	3.2 MP, QXGA 2048(H) x 1536(V)	5.0 MP, QSXGA 2592(H) x 1944(V)
Pixel Size	6.00 x 6.00 μm	6.00 x 6.00 μm	5.2 x 5.2 μm	3.6 x 3.6 μm	2.8 x 2.8 μm	3.2 x 3.2 μm	2.2 x 2.2 μm
Image Area	4.51 x 2.88 mm	4.51 x 2.88 mm	6.66 x 5.32 mm	4.6 x 3.7 mm	4.73 x 3.52 mm	6.55 x 4.92 mm	5.70 x 4.28 mm
Frame Rate	87fps	87fps	25 fps	25 fps	15 fps	12 fps	6 fps
Exposure Time (Freerun & Trigger) Shutter	0.03 - 66 ms	0.03 - 66 ms	0.05 - 110 ms	0.05 - 110 ms	0.07 - 133 ms	0.06 - 175 ms	0.07 - 207 ms
Dynamic Range	>80dB	>80dB	68.2dB	71dB	61 dB	61 dB	67.4 dB
Binning	ROI & Binning Mode	ROI & Binning Mode	ROI & Binning Mode		Binning Mode	ROI & Binning Mode	ROI & Binning Mode
Sub-Sampling Modes (Binning or Skipping)	376 x 270	376 x 270	640 x 512 / 320 x 512		1024 x 768 / 800 x 600 / 640 x 480	1024 x 768 / 640 x 480 / 512 x 384	1280 x 960 / 1024 x 768 / 640 x 480
Shutter	Global Shutter	Global Shutter	Rolling Shutter		Rolling Shutter with Global Reset	Rolling Shutter	Rolling Shutter with Global Reset
Aspect Ratio	14 : 9	14 : 9	5 : 4		4 : 3	4 : 3	4 : 3
Exact Real Diagonal	5,4 mm	5,4 mm	8,5 mm	5,9 mm	5,6 mm	8,2 mm	-
Power Consumption	<1.0W	<1.0W	<1.0W		<1.5W	<1.5W	<1.5W
Lens Mount	C- / CS- mount, optional S-mount						
Scanning System	Progressive Scan						
Trigger	External Trigger / Software Trigger						
Strobe	Yes						
GPIO	1x						
Gain	1-128 (Hardware Gain)						
Interface/Transfer Rate	USB2.0 Interface / 480 Mbits/sec						
Operating Temperature	- 5°C to + 45°C						
Regulations	FCC, CE, RoHS						
Dimension	Cased: 30 (W) x 30.5 (H) x 32 (D) m, 50g Board: 28 x 28 x 22 mm, 12g						
USB Connection	Mini - B USB Connector						
Digital I/O Connection	8 pin lockable						