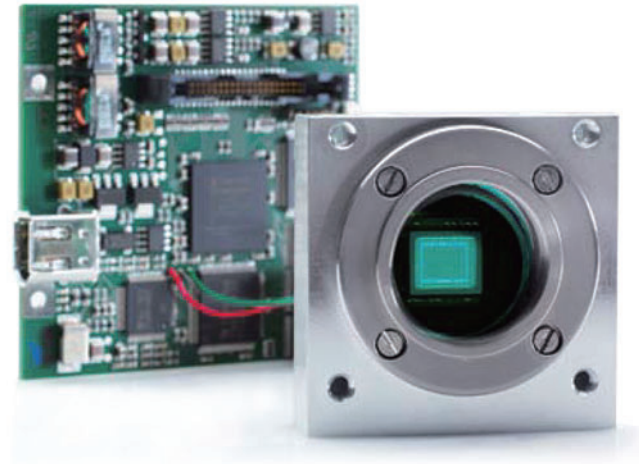




Imaging Modules



CMOS Imaging Modules

The best imaging solution for system integrators in industry, medicine and security.

Benefits

- Very high frame rates
- ROI
- High resolution
- Low noise electronics
- Binning

CCD Color Imaging Modules

The highest image quality for system integrators requiring outstanding performance for applications in industry, life science and security

Benefits

- Perfect color reproduction
- ROI
- High frame rates
- Binning
- Low-level noise electronics

Sensitive CCD Imaging Modules

The optimal solution for system integrators requiring highest performance in systems for digital imaging applications, even in Electron Microscopy.

Benefits

- Large pixels for high sensitivity
- High quantum efficiency
- IR imaging capability
- Binning
- Advanced cooling
- Overlapping read out

Easy to integrate

Software development kit (SDK), LabView driver, ActiveX Control

MS Win 2000 / XP / Vista | Mac OS X 10.4 or higher | Linux

Hardware requirements : 3GHz CPU, 1GB RAM, 64MB graphics, USB2.0 or Firewire

Specifications

	CMOS Imaging Modules		CCD Color Imaging Modules			Sensitive CCD Imaging Modules		
Imaging module type	IM 3.15 USB/ 3.15	IM 5.0 USB	IM 3.3	IM 5.0	IM 7.1	IM 1.4C/ 1.4M	IM 1.4C ^{cool} / 1.4M ^{cool}	IM 11C/ 11M ※
Sensor size [H x V]	6.55 mm x 4.92 mm	5.70 mm x 4.28 mm	8.10 mm x 6.64 mm	9.74 mm x 7.96 mm	5.71 mm x 4.29 mm	8.8 mm x 6.6 mm	8.8 mm x 6.6 mm	36.07 mm x 24.05 mm "35mm format"
Digitization	10 Bit	12 Bit	12 Bit	12 Bit	12 Bit	12 Bit	14 Bit	14 Bit
Color/ Monochrome	Color	Color/ Monochrome	Color	Color	Color	Color/ Monochrome	Color/ Monochrome	Color/ Monochrome
Sensor resolution [max]	2048 x 1536 pixel [3.15 Mpix]	2592 x 1944 pixel [5.0 Mpix]	2080 x 1542 pixel [3.3 Mpix]	2580 x 1944 pixel [5.0 Mpix]	3072 x 2304 pixel [7.1 Mpix]	1360 x 1024 pixel [1.4 Mpix]	1360 x 1024 pixel [1.4 Mpix]	4008 x 3672 pixel [10 Mpix]
Pixel size	3.2 μm ²	2.2 μm ²	3.45 μm ²	3.4 μm ²	1.86 μm ²	6.45 μm ²	6.45 μm ²	9.0 μm ²
Dynamic range	58 dB	68 dB	61 dB	61 dB 60 dB	60 dB	65 ... 67 dB	67 ... 69 dB	64 dB
Exposure times	50 μs ... 3 s	75 μs ... 3 s	500 μs ... 180 s	400 μs ... 180 s	200 μs ... 5 s	200 μs ... 180 s	200 μs ... 300 s	0.120 ms ... 50 min
Analog gain	1x ... 8x	1x ... 8x	1x ... 8x	1x ... 8x	1x ... 16x	1x ... 8x	1x ... 8x	1x ... 8x
Max. frame rate [image size]	12 fps [2048 x 1536 pixel]	6 fps [2592 x 1944 pixel]	18 fps [1024 x 770 pixel]	9 fps [1290 x 972 pixel]	11 fps [1228 x 920 pixel]	13 fps [1360 x 1024 pixel]	13 fps [1360 x 1024 pixel]	4 fps [4008 x 2672 pixel]
typical via USB 2.0	8.9 fps [2048 x 1536 pixel]	5.7 fps [2048 x 1536 pixel]						
Image resolution Binning	2x, 3x	2x, 3x	1x1 ... 5x5	1x1 ... 5x5	2x, 4x	2x ... 5x	2x ... 5x	2x ... 8x
Digital interface ¹⁾	USB 2.0 IEEE1394a FireWire	USB 2.0	IEEE1394a FireWire	IEEE1394a FireWire	IEEE1394a FireWire	USB 2.0/ FireWire a	FireWire a	FireWire a/ b
Power consumption	approx. 1.9 W 4 W	approx. 1.8 W	approx. 4 W	approx. 6 W	approx. 6 W	≤ 2.5 W 6 W	approx. 6 W	approx. 8 W
Dimensions sensor board	51 mm x 51 mm [with C-Mount]		51 mm x 51 mm [with C-Mount]			51 x 51 mm [USB] 72 x 62.3 mm [FireWire] [with C-Mount]	78 x 72 mm [with C-Mount]	60 x 44 x 30 mm
Dimensions interface board	55 x 46 mm [USB] 70 x 75 mm [FireWire]	55 mm x 46 mm	70 mm x 75 mm			55 x 46 mm [USB] 85 x 70 mm [FireWire]	85 x 70 mm	108 x 60 x 50 mm
Weight	approx. 220 g [with C-Mount]		approx. 270 g [with C-Mount]			220 g [USB] 300 g [FireWire] [with C-Mount]	approx. 450 g [with C-Mount]	approx. 400 g

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.

※ Optical connection: F-mount