

MegaPlus EP11000

11 megapixels | Interline CCD | Passively cooled



The MegaPlus EP11000 is a passively cooled, high resolution 11 megapixel digital camera. It is uniquely designed to separate and isolate the camera's primary electronics from the sensor cooling path resulting in true 12-bits per pixel at virtually any operating temperature. Using passive cooling, both dark noise and thermal drift are significantly reduced, making the camera the perfect solution for the most demanding scientific and industrial applications. The EP11000 is designed to cool the sensor without a fan - opening up new opportunities for customers who would not have previously considered a cooled camera due to fan vibration.

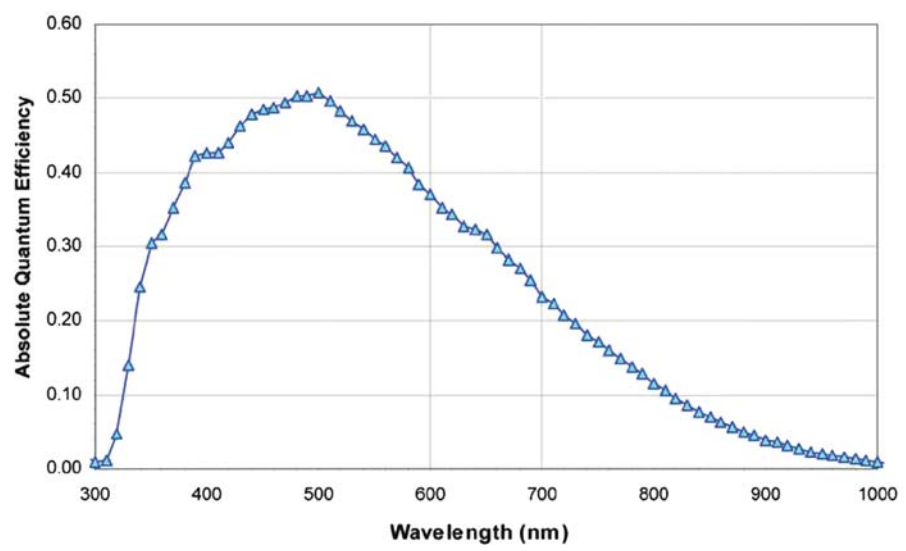
Applications: Machine Inspection & Calibration, Scientific Imaging, Document Imaging, Flat Panel Inspection

Features	Benefits
11 megapixel Resolution (4008 x 2672 pixels)	Resolves fine detail
Full 35mm Size Image sensor (36 x 24mm)	Enables large scanning areas optimized for standard optics
Passively Cooled Camera	Enables long integration times while minimizing dark noise; Consistent imaging performance over long periods
Interline Transfer Progressive Scan CCD	Eliminates camera vibration, facilitates fast triggering
Over 4.5 frames per second (fps) with CameraLink	High bandwidth continuous data interface
Firewire (IEEE-1394a) Interface	Seamless, plug-n-play connection to PC notebooks and desktops. No need to install PCI cards
Available in color or monochrome	Allows same camera architecture to be seamlessly integrated across many applications
12-bits per pixel	Quantifies full range of light levels in a single image
Compact design	Small footprint design optimized for integration into applications where space is at a premium

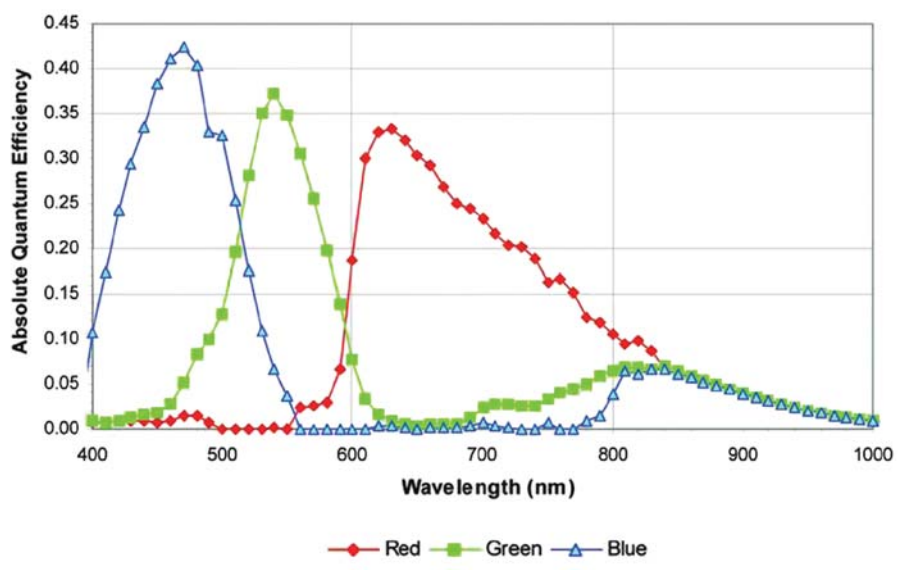
CCD Imager	
Imaging Device	KAI-11002, CCD, Color and Mono
Sensor Readout	Interline, progressive scan
Pixel Size	9 μm x 9 μm
Resolution	4008 x 2672, 11 megapixels
Imager Size (diagonal)	42.52 mm
Active Area	36 mm (h) x 24 mm (v)
Aspect Ratio	3:2
Sensor dynamic range	66 dB
Readout Noise	30 electrons rms
Shuttering	Electronic
Imaging Performance	
Output Bit Depth	8-, 10-, or 12-bits per pixel
Sensor Clock Rate	30 MHz (optional over clocked 38 MHz)
Controller Clock Rate	60 MHz (over clocked 76 MHz)
Max. Frame Rate (CameraLink)	4.63 fps @ 30 MHz
Max. Frame Rate (IEEE1394a)	3 fps (monochrome)
Max. Frame Rate w/ 2x2 Binning	8 fps @ 30 MHz, 10 fps @38 MHz
Max. Frame Rate w/ 3x3 Binning	11 fps @ 30 MHz, 14 fps@ 38 MHz
Max. Frame Rate w/ 4x4 Binning	13 fps @ 30 MHz, 17 fps@ 38 MHz
Exposure Settings	
Max. Integration Time	10 minutes
Gain Settings	0-36 dB
Binning	Yes
Anti-blooming	Yes
Trigger Modes	Edge, Level, Double exposure, Periodic interval (self), Overlap trigger modes
Cooling Performance	
Cooling Method	Passive
Standard Cooling	~12 °C above ambient (0 - 40 °C)
Dark Current Doubling Temperature	7 °C
Mechanical Description	
Lens Mount	F-mount (Other mounts available upon request)
Camera Head Cable	2m, 5m, 7m
Camera Head Dimensions (F-mount)	123.83 mm x 78.01 mm x 98.43 mm (LxDxH)
Controller Dimensions	160.7 mm x 158.3 mm x 50.8 mm (LxDxH) multi-head controller 158.8 mm x 152 mm x 38.1 mm (LxDxH) single-head controller
Camera Head Weight	650 grams
Controller Weight	1140 grams multi-head controller 992 grams single-head controller
Environmental	
Operating Temperature	0 - 40 °C, non-condensing
Vibration	3G, sinusoidal from 10 to 500 Hz
Shock	5G
Power Consumption (Single Head with Controller)	15 watts
Certification	FCC Part 15, Class A and CE
Input/Output	
CameraLink	Base, Medium, Dual Base
Firewire	1394a
Serial	RS232
Trigger In	BNC, TTL
Trigger Out	BNC, TTL
Ethernet	10/100/1000 Base-T

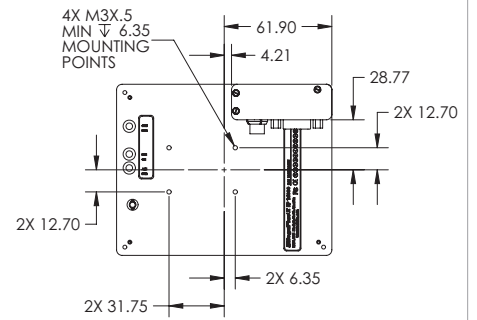
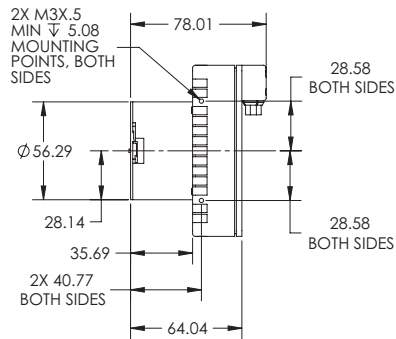
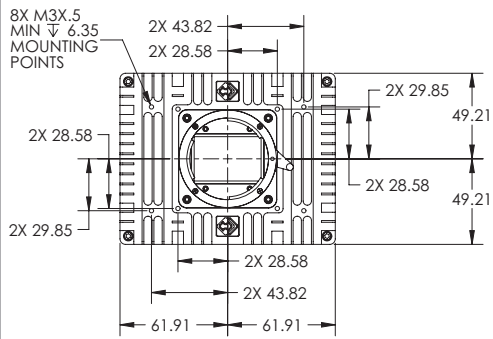
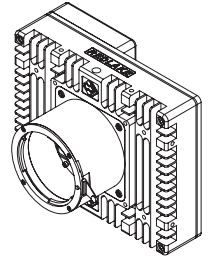
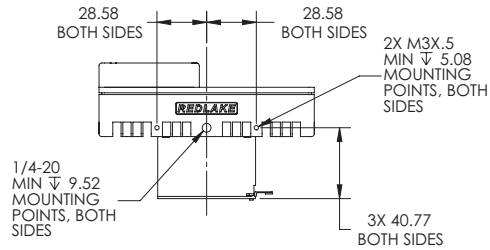
Note: Specifications are subject to change.

Monochrome with Microlens Quantum Efficiency



Color with Microlens Quantum Efficiency





[All dimensions are in mm]



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