

MegaPlus ES1603

1.6 megapixel CCD | Full Frame CCD | Large Dynamic Range



The MegaPlus ES1603 is a 1.6 megapixel CCD digital camera. The camera can be configured with 1603ME full frame CCD sensors for 100% fill factor and excellent sensitivity. 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. By keeping the sensor temperature low, both dark noise and thermal drift are significantly reduced, making the camera the perfect solution for the most demanding scientific and industrial applications. The ES1603 is ideal for applications where intrascenic dynamic range -ability to capture both bright and dim signals in the same image -is important. **The camera supports the latest GigE Vision interface along with Firewire and CameraLink interfaces to make it one of the most versatile imaging platforms on the market.**



Applications: Medical Imaging, Scientific Imaging, Imaging, Ophthalmology

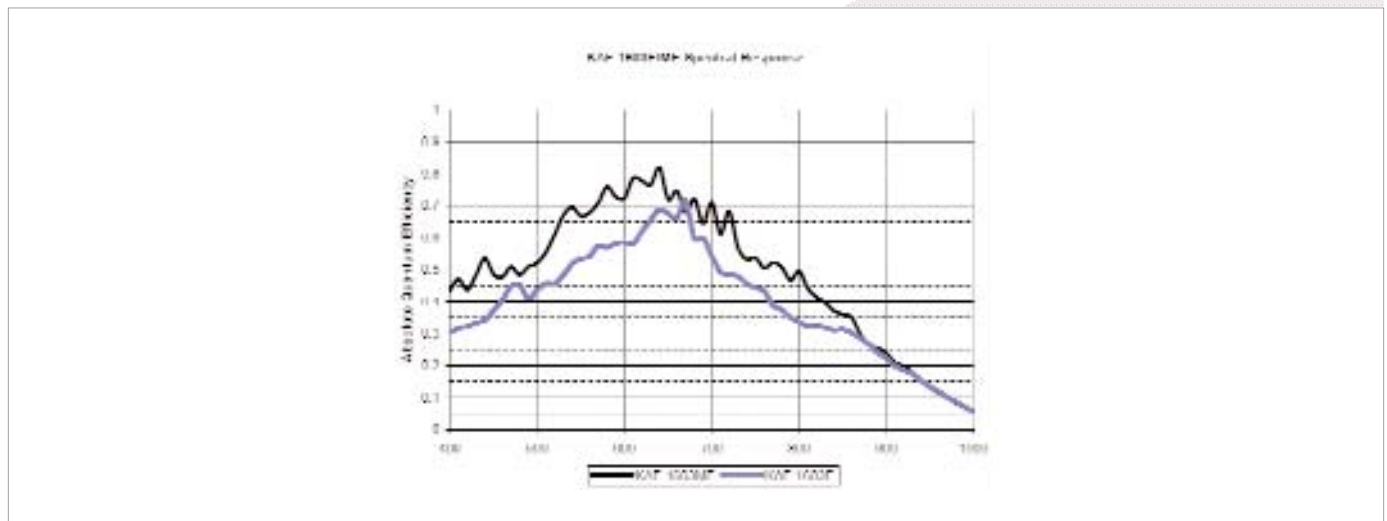
Features	Benefits
1.6 megapixel Resolution (1536 x 1024 pixels)	Resolves fine detail
Two piece camera design	Provides the best imaging performance with lower noise and larger dynamic range by lowering the sensor operating temperature
Full Frame Progressive Scan CCD	100% fill factor provides excellent sensitivity
Patented Mechanical Shutter	Reliable performance year after year, thanks to mechanical shutter rated for millions of cycles
CameraLink or Firewire (IEEE-1394a) Interface	High bandwidth CameraLink or seamless, plug-n-play Firewire connection to PC notebooks and desktops.
New GigE Vision Interface	Ideal for plug-n-play operation over extended distances. No need for expensive frame grabbers.
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

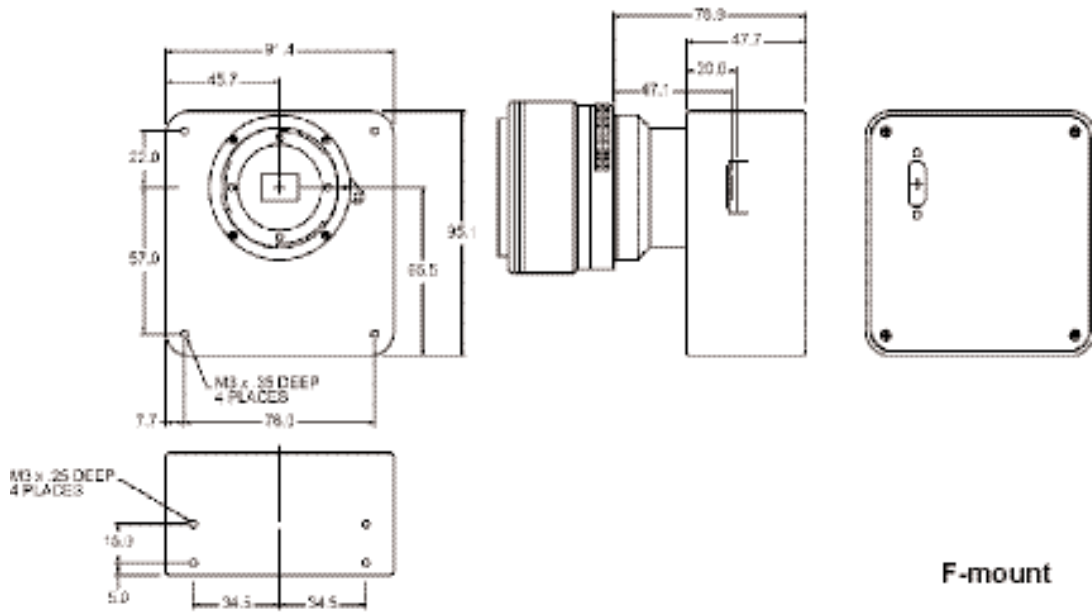
MegaPlus ES1603 Specifications

CCD Imager	
Imaging Device	KAF-1603ME, CCD, Mono
Sensor Readout	Full Frame, progressive scan
Pixel Size	9 μm x 9 μm
Resolution	1536 x 1024, 1.6 megapixels
Imager Size (diagonal)	16.6 mm
Active Area	13.8 mm (h) x 9.2 mm (v)
Aspect Ratio	3:2
Sensor dynamic range	74 dB
Shuttering	Electronic
Imaging Performance	
Output Bit Depth	8-, 10-, or 12-bits per pixel
Sensor Clock Rate	12 MHz
Minimum Shutter Speed	2 msec
Max. Frame Rate (CameraLink)	6.42 fps
Max. Frame Rate (IEEE1394a)	6.2 fps
Exposure Settings	
Gain Settings	0-36 dB
Binning	Yes
Anti-blooming	Yes
Trigger Modes	Edge, Level, Periodic interval (self)
Mechanical Description	
Lens Mount	F-mount, C-mount (other mounts available upon request)
Camera Head Cable	0.5m, 2m, 5m, 7m
Camera Head Dimensions	91.4 mm x 78.9 mm x 95.1 mm (LxDxH) F-mount 91.4 mm x 47.3 mm x 95.1 mm (LxDxH) C-mount
Controller Dimensions	160.7 mm x 158.3 mm x 50.8 mm (LxDxH) multi-head controller (CameraLink & Firewire) 158.8 mm x 152 mm x 38.1 mm (LxDxH) single-head controller (CameraLink) 158.8 mm x 152 mm x 54.4 mm (LxDxH) single-head controller (GigE Vision)
Camera Head Weight	625 grams
Controller Weight	1140 grams multi-head controller 992 grams single-head controller (CameraLink) 1124 grams single-head controller (GigE Vision)
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	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.

Quantum Efficiency Curves





[All dimensions are in mm]



www.princetoninstruments.com
 email: info@princetoninstruments.com
 USA +1.877.474.2286 | Europe +353 (0) 66.7118345
 Germany +49 (0) 89.660.779.3 | China +86 10 8252.5122
 Japan +81.3.5639.2741 | Asia/Pacific +65.6408.6240