

MegaPlus EP16000

16 megapixels | Interline CCD | Passively cooled



The MegaPlus EP16000 is a passively cooled, high resolution 16 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 EP16000 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. For applications requiring even greater cooling, an optional fan is available. **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.**



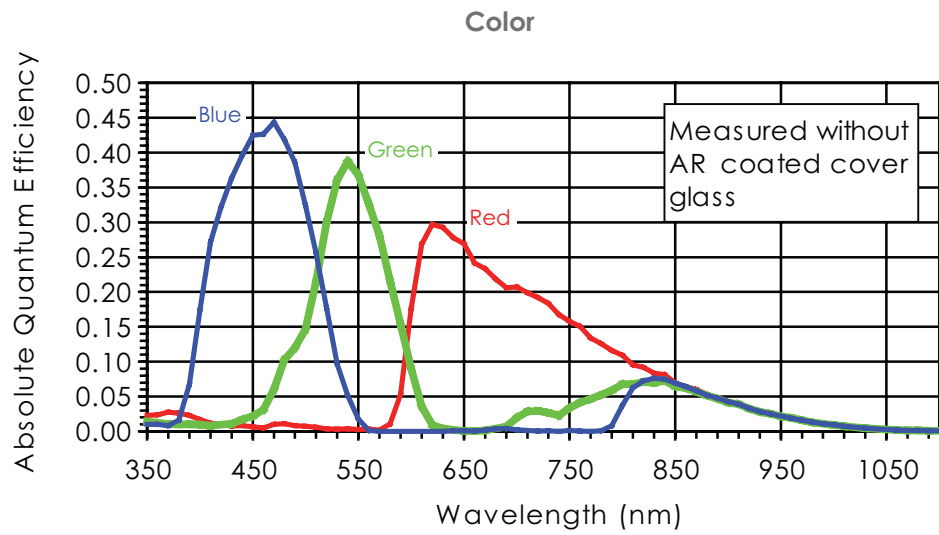
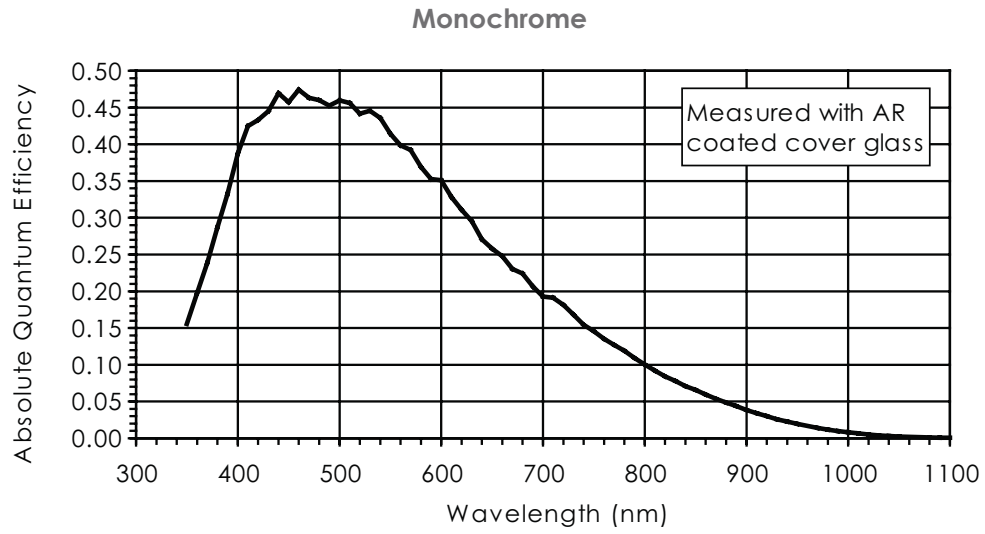
Applications: Machine Inspection & Calibration, Scientific Imaging, Document Imaging, Flat Panel Inspection

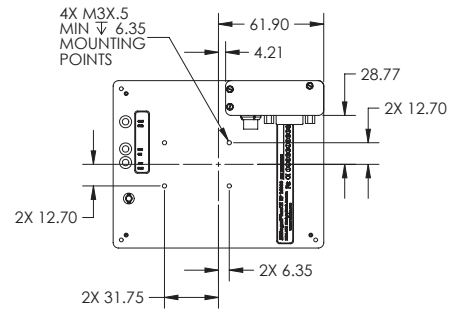
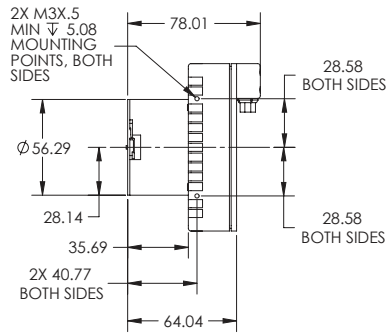
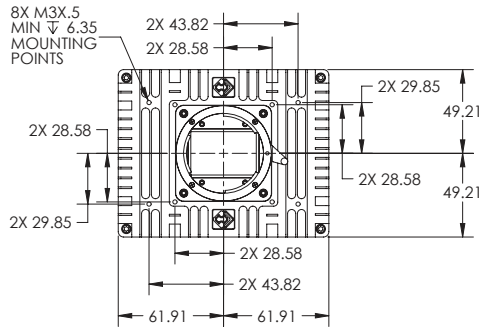
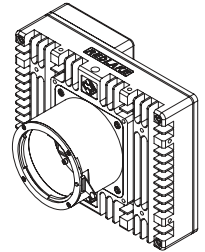
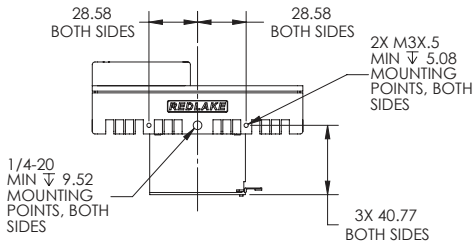
| Features | Benefits |
|---|--|
| 16megapixel Resolution (4872 x 3248 pixels) | Resolves fine detail |
| Full 35mm Size Image sensor (36 x 24mm) | Enables large scanning areas optimized for standard optics |
| Passively Cooled Camera | Enables long integration times while minimizing dark noise; Consistent imaging performance over long periods |
| Interline Transfer Progressive Scan CCD | Eliminates camera vibration, facilitates fast triggering |
| CameraLink Interface | High bandwidth continuous data interface |
| New GigE Vision Interface | Ideal for plug-n-play operation over extended distances. No need for expensive frame grabbers. |
| 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 |

MegaPlus EP1 6000 Specifications

| | |
|---|--|
| CCD Imager | |
| Imaging Device | KAI-16000, CCD, Color and Mono |
| Sensor Readout | Interline, progressive scan |
| Pixel Size | 7.4 μm x 7.4 μm |
| Resolution | 4872 x 3248, 16 megapixels |
| Imager Size (diagonal) | 43.3 mm |
| Active Area | 36 mm (h) x 24 mm (v) |
| Aspect Ratio | 3:2 |
| Sensor dynamic range | 65 dB |
| Readout Noise | 16 electrons rms |
| Shuttering | Electronic |
| Imaging Performance | |
| Output Bit Depth | 8-, 10-, or 12-bits per pixel |
| Sensor Clock Rate | 30 MHz (optional - over clocked to 38 MHz) |
| Controller Clock Rate | 60 MHz (over clocked 76 MHz) |
| Max. Frame Rate (CameraLink) | 3.2 fps @ 30 MHz |
| Max. Frame Rate (IEEE1394a) | 1.6 fps (monochrome) |
| Max. Frame Rate w/ 2x2 Binning | 5.4 fps @ 30 MHz, 6.8 fps @38 MHz |
| Max. Frame Rate w/ 3x3 Binning | 7.5 fps @ 30 MHz, 9.6 fps@ 38 MHz |
| Max. Frame Rate w/ 4x4 Binning | 9 fps @ 30 MHz, 11.7 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) |
| Cooling With Fan Option | ~5 °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 | 0.5m, 2m, 5m, 7m |
| Camera Head Dimensions (F-mount) | 123.83 mm x 81.73 mm x 98.43 mm (LxDxH) |
| 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 | 650 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 | FCC Part 15, Class A and CE |
| Input/Output | |
| GigE Vision | RJ-45 (for use with Cat 5e/6 cables) |
| CameraLink | Base, Medium, Dual Base |
| Firewire | 1394a |
| Serial | RS232 |
| Trigger In | BNC, TTL |
| Trigger Out | BNC, TTL |
| Diagnostics | 10/100/1000 Base-T (for diagnostics and firmware updates only) |

Note: Specifications are subject to change.





[All dimensions are in mm]



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