

## MegaPlus Controller (Multi-head)

Performance | Flexibility | FireWire & CameraLink



The MegaPlus controller (Multi-head) houses the camera calibration and image processing electronics, and provides data interface to the host PC. The controller can control up to four camera heads simultaneously while connecting to the host PC via CameraLink or Firewire. By housing the heat generating image processing and control electronics separate and away from the sensor, the controller helps maintain lower sensor temperature. Consequently, the MegaPlus cameras achieve lower noise and higher dynamic range than comparable cameras using similar sensors. The controller also provides real time intelligence for each camera head such as: pixel defect mapping, flat field correction, gamma control, color space conversion and bit windowing. For real-time viewing a DVI video is provided.

Note: For applications not requiring multiple-head operation, users can also consider single-head controllers with GigE Vision or CameraLink.

### About MegaPlus cameras:

MegaPlus cameras are the reference standard for high performance scientific and industrial imaging applications. The cameras use interline and full frame CCD sensors with resolutions up to 16 megapixels.

### Features

### Benefits

Separate housing for image processing electronics	Heat generating electronics are kept away from the sensor leading to lower sensor operating temperature. As a result, every camera delivers lower noise and larger dynamic range.
Multi-head operation	Operate up to four cameras while maintaining a single data interface to the host PC
On-board Image Processing	Flat field normalization, defect correction, color space conversion, gamma control for real time high quality imaging
High bandwidth connection to the camera head	Cameras are operated at the highest possible frame rates
Field upgradeable firmware	Easily expand controller capabilities with new/updated features. Easy customization for OEM requirements.
User programmable	User can easily apply custom optical corrections such as flat field normalization in real time
8-, 10-, or 12-bit output	Programmable bit windowing to maximize bit depth or to minimize file size
CameraLink or Firewire interface	Choice of interface for highest data throughput and/or for plug-n-play operation

## Comparison between Multi-head and Single-head MegaPlus controllers

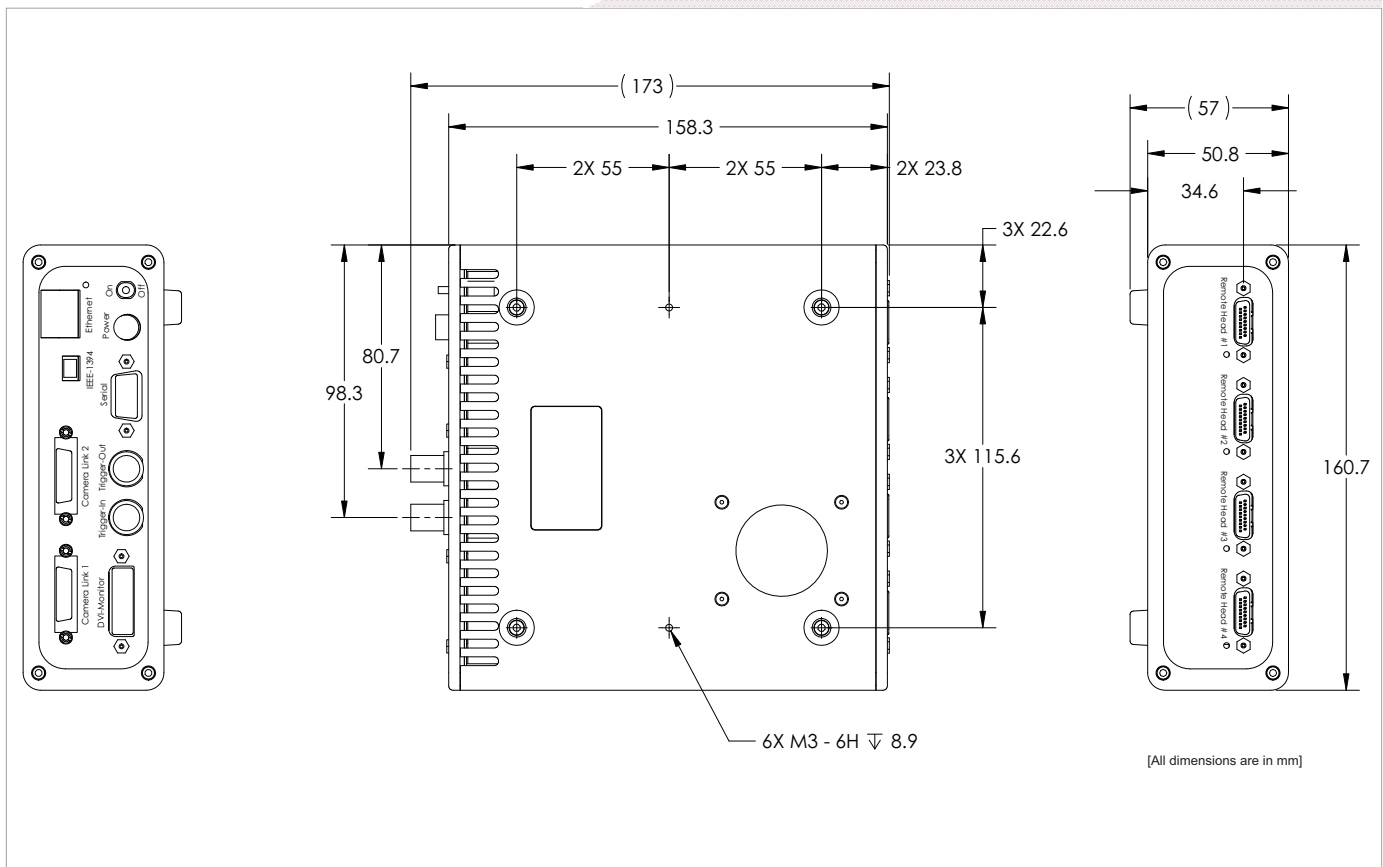
	Multi-Head Controller (Firewire and CameraLink)	Single-Head Controller (CameraLink)	Single-Head Controller (GigE Vision)
GigE Vision	No	No	Yes
CameraLink	Yes (Base, Medium, Dual Base)	Yes (Base, Dual Base)	No
Firewire	Yes	No	No
DVI Video Output	Yes	No	No
Trigger In/Out	Yes	Yes	Yes
RS 232 Port	Yes	Yes	Yes
Control One Head	Yes	Yes	Yes
Control Multiple Heads	Yes	No	No
Size	160.7 mm x 158.3 mm x 50.8 mm	158.8 mm x 152 mm x 38.1 mm	158.8 mm x 152 mm x 54.44 mm
Weight	1140 grams	992 grams	1124 grams

## MegaPlus Controller (Multi-head) Specifications

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
Imaging	
Camera compatibility	MegaPlus cameras up to 16 megapixel resolution, monochrome or color, interline or full frame
Multi-camera head operation	Up to 4 camera heads
Real time Image Processing	Flat field normalization, Color space conversion, gamma control, defect correction
Clock rate	Up to 76MHz
Mechanical Description	
Camera Head Cable	0.5m, 2m, 5m, 7m
Dimensions	160.7 mm x 158.3 mm x 50.8 mm (LxDxH)
Weight	1140 grams
Environmental	
Operating Temperature	0 - 40 °C, non-condensing
Vibration	3G, sinusoidal from 10 to 500 Hz
Shock	5G
Power input	12V, 3A (max.)
Power Consumption (Single Head with Controller)	15 watts
Certification	FCC Part 15, Class A and CE

Note: Specifications are subject to change.

## MegaPlus Controller (Multi-head) Drawing



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