PHANTOM®
Miro C

DATASHEET

PHANTOM Miro® C110

COMPACT
HIGH-SPEED CAMERAS

Miro C110

900 fps at 1280 x 1024 resolution
1,280 fps at 1280 x 720
High image quality, with low noise

FEATURES & BENEFITS

ECONOMICAL AND EASY TO USE

- The Miro C110 is just right for many common applications from motion analysis to industrial troubleshooting - small economical, and easy to use.
- Standard Ethernet and BNC cables for convenient connections. Plus, it's small and sturdy enough for tough environments.
- 8GB or 16GB of RAM, with up to 63 partitions for multiple shots.

PACKED WITH PHANTOM QUALITY

- 5.6 µm pixel and a C-mount is perfect for Microscopy.
- 1.3Mpx resolution with very low noise and high dynamic range, for clear images.
- Many Phantom Features, such as Image Based Auto Trigger, FSync, and Image Processing tools, are included.

FRAME RATES & EXPOSURE	
Top FPS at Max Resolution	900
1 Megapixel FPS	1.160
Maximum FPS	52,200
Minimum FPS	50
CAR Increments	64 x 8
Minimum Exposure	5 µs
Electronic Shutter	Global Shutter
Exposure Features	Auto-Exposure

IMAGING	
Sensor Type	CMOS
Maximum Resolution	1280 x 1024
Bit Depth	12-bit
Pixel Size	5.6 µm
Sensor Size	5.73 x 7.16 mm; 9.18 mm Diagonal
ISO Daylight (12232 STD)	Mono 2,500; Color 640
ISO Tungsten (12232 STD)	Mono 5,000; Color 640
Exposure Index	Mono 2,500-12,500; Color 640-3,200
Dynamic Range	58 dB
Readout Noise	10 e-

FRAME RATE CHART

Table provides examples of common resolutions and frame rates. The record times shown are for 8GB RAM at the frame rate shown. Duration will be double for 16GB.

Maximum Frame Rate - FPS; (8GB Record time - Sec)	
Resolution (H x V)	**Miro C110**
1280 x 1024	900 (4.5)
1280 x 920	1,010 (4.4)
1280 x 800	1,160 (4.4)
1280 x 720	1,280 (4.5)
768 x 768	1,200 (7.5)
768 x 576	1,600 (7.2)
640 x 480	1,910 (8.5)
512 x 512	1,800 (10.6)
256 x 256	3,530 (19.4)
128 x 128	6,810 (33.1)
128 x 64	12,700 (26.2)
64 x 32	22,300 (39.3)
64 x 8	52,200 (21.9)

Miro C110

Miro C110 mounted to microscope

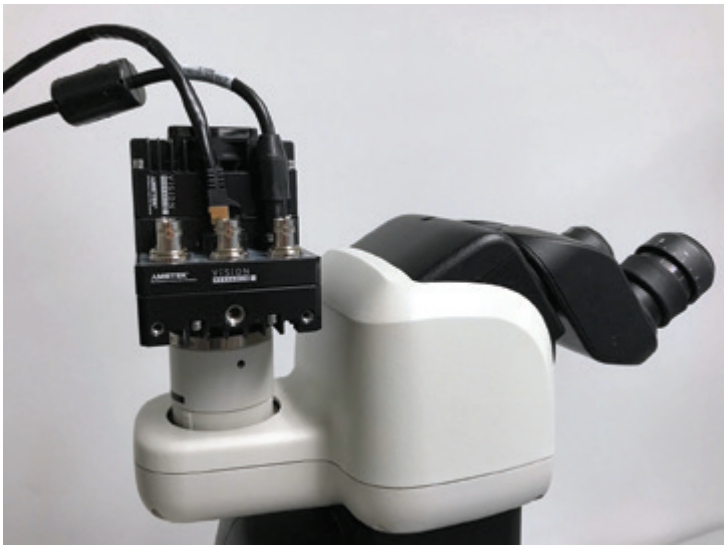
CONNECTIVITY & SIGNALS

Ethernet	Gb Ethernet accessed through RJ45 connector
Timecode	IRIG in - Modulated, Un-modulated; Out - Un-modulated
Port Descriptions	Dedicated BNC's: Trigger, SDI Aux 1 BNC: FSync, Strobe, Event, Memgate Aux 2 BNC: Strobe, Ready Mini-XLR: Power
Hardware Trigger	Trigger BNC
Software Trigger	via PCC over Ethernet; via Image Based Auto Trigger (IBAT)
Synchronization	External Sync via FSync or IRIG Timecode
Recording Features	Multi-Cine
Video Output	HD-SDI, through BNC connector

Miro C110 Connectors

CONTROL

Software & OS	Phantom PCC (Windows); SDK also available for C++ and with MatLab and LabView drivers
Primary File Format	Phantom Cine RAW (.cine)
Alternative File Formats	Easily convert to formats including .mp4, Apple ProRes .mov, .avi, Tiff, JPG, DNG and many more using PCC. Cine files are directly compatible with many major video editing and motion analysis programs
Highlighted Software Features	Multi-Cine recording, Continuous recording, Shutter off mode for PIV, Advanced Image Tools and Processing



Miro C110 (connector view) mounted on a microscope

MEMORY & STORAGE

RAM Buffer	8GB, 16GB RAM
Multi-Cine	Up to 63 Partitions

POWER

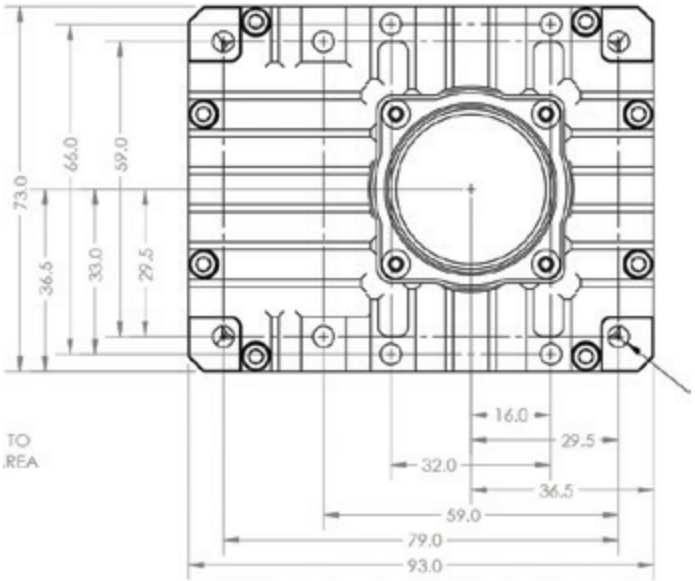
AC Power	100-250 VAC, 40W power supply included
Voltage Range	16-28VDC
Power Consumption	13W typical

MECHANICAL

Size	2.9 x 3.65 x 3.25" (73 x 93 x 82.5 cm)
Weight	1.2 lbs (0.54 kg)
Lens Mounts	1" C-Mount
Mounting Points	4 x 1/4-20, 10 x M4 mounting points
Cooling	Active cooling. Quiet mode disables fans during capture.

ENVIRONMENTAL

Operating Temperature	0 to +50°C
Storage Temperature	-20 to +70°C
Regulatory	Made in the USA CE Emissions - CE Compliant EN 61326-1 CE Immunity - CE Compliant EN 61326-1 FCC - CFR 47, Part 15, Subpart B & ICES-0003, Class A Safety - IEC 60950-1



GLOBAL SUPPORT NETWORK

The Phantom Miro C Cameras are supported by Vision Research's Global Service and Support network, offering PhantomCare Performance Services from multiple sites around the globe. Maximize the value of your Phantom camera with a selection of professional services from which to choose.

Learn more about our service offering at
www.phantomhighspeed.com/Service-Support

ABOUT VISION RESEARCH

Focused. Since 1950, Vision Research has been designing, and manufacturing high-speed cameras. Our single focus is to invent, build, and support the most advanced cameras possible.

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