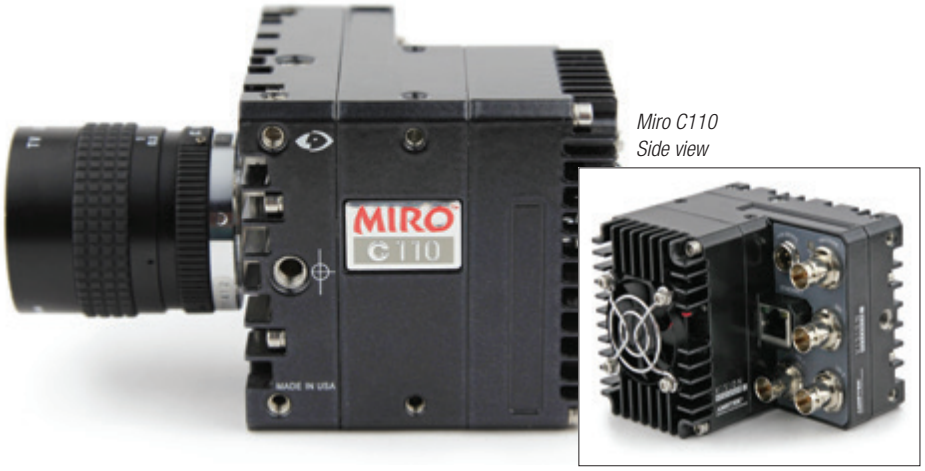
VISION RESEARCH

PHANTOM

when it's too fast to see, and too important not to.®

DATA SHEET

For the most current version visit www.phantomhighspeed.com
Subject to change Rev April 2016



Miro C110
Side view

Miro C110 Rear view of connectors

Phantom® Miro® C110

The Cost Effective and Easy to Use camera, perfect for many applications

Key Benefits:

When it's too fast to see, and too important not to®

The **Phantom Miro C110** is the **perfect go-to camera** for many applications and situations benefiting from high quality, high speed analysis. Its ideal mix of **speed, image quality and ease of use** makes it one of the most flexible analytical tools in the lab.

- 800 frames per second (fps) at full 1.3 Mpx resolution, and up to over 29,800 fps at smaller resolutions
- Sturdy and small, easy to connect and use, with common BNC and Ethernet connectors
- Phantom quality image and features, in a cost effective camera

The smart companion for a **wide range of applications** such as industrial trouble-shooting, mechanical analysis and motion analysis, the Miro C110 is **easy to work with**. Its sturdy, small body connects to signaling with common BNC cables, and uses a standard Ethernet cable for camera control and data downloading. Its accessible Trigger BNC and two programmable I/O BNC's make it easily controlled in any situation.

Specifications

The Miro C110 is based on a 1.3 Mpx sensor with 1.0 Gpx throughput. This provides 800 fps at 1280 x 1024, and up to 29,840 fps at lower resolutions, with very low noise to capture critical details. Also, the Miro C110's exposure times can be set as low as 5 microsceconds, to further help **eliminate motion blur** and freeze objects in motion. The minimum frame rate at all resolutions is 100 fps.

The camera uses a 12-bit pixel depth, CMOS sensor, with 5.6 µm pixel size. It has a 1/2" image sensor format, and can take advantage of a large selection of C and CS lenses. It is available in either Color or Monochrome. It **makes the most out of available light**, with light sensitivity ISO ratings measured according to ISO 12232:2006 method:

	D (Daylight)	T (Tungsten)
Monochrome	2500	5000
Color	640	640

Key Features:

12-bit 1.3 Megapixel CMOS sensor

800 fps @ 1280 x 1024

Available in Monochrome or Color

ISO Mono 5,000 (T), 2,500 (D)*
Color 640 (T)*, 640 (D)*, adjustable

Compact and sturdy

Standard BNC and Ethernet connections

Reversible mount for C & CS lenses

8GB of RAM included

Easy-to-use signals:
- Trigger
- IRIG In
- IRIG out
- FSYNC
- Strobe

** Measured according to ISO 122326:2006 method*

AMETEK®
MATERIALS ANALYSIS DIVISION

DATA SHEET

Phantom® Miro® C110

Complete with Easy-to-Use Phantom Features

Phantom Miro C110

The Miro C110 comes equipped with 8GB of memory, providing 5.0 seconds of record time at maximum frame rate and resolution, and longer at reduced rates and resolutions. It uses powerful Phantom Camera Control (PCC) software. PCC makes an easy job out of capturing the event and then adjusting image characteristics like color and brightness. Flexible triggering options **easily capture the images of a specific event**. Images are automatically recorded into a circular buffer, and the trigger option determines which of those images are saved to RAM – images before, after, or on either side of the trigger, depending on the actual experiment set-up. There is also a suite of advanced features to support your analysis, including:

- **Image-Based Auto-Trigger:** Trigger the camera (or even a number of connected cameras) from motion detected within the live image. This makes it easier to catch events that are not predictable and may occur infrequently.
- **Multi-Cine:** Partition internal memory into up to 63 segments and make shorter recordings back-to-back without missing any action.
- **Continuous Recording:** Perfect to record many occurrences of an event, especially an event that happens rarely or is unpredictable. Continuous recording mode automatically saves a cine to a connected PC immediately after it is recorded then re-arms the camera, waiting for the next cine. A recording can be triggered manually, from an event detection system, or even by our Image-Based Auto-Trigger. The number of recordings is limited only by the amount of available disk storage.

Trim Save the Cine in either its raw format, or convert it **popular formats such as Quicktime or AVI** or save frames in JPEG or TIFF, to easily email the analysis to colleagues.

AMETEK Vision Research's digital high-speed cameras are subject to the export licensing jurisdiction of the Export Administration Regulations. As a result, the export, transfer, or re-export of these cameras to a country embargoed by the United States is strictly prohibited. Likewise, it is prohibited under the Export Administration Regulations to export, transfer, or re-export AMETEK Vision Research's digital high-speed cameras to certain buyers and/or end users.

Customers are also advised that some models of AMETEK Vision Research's digital high-speed cameras may require a license from the U.S. Department of Commerce to be: (1) exported from the United States; (2) transferred to a foreign person in the United States; or (3) re-exported to a third country. Interested parties should contact the U.S. Department of Commerce to determine if an export or a re-export license is required for their specific transaction.

Additional Features:

Image-Based Auto-Trigger (IBAT)
Continuous Recording
Auto-Exposure
Multi-cine Acquisition
Gb Ethernet
Motion Analysis software included
Size and Weight:
1.2 lb, 0.54 kg; 2.9 x 3.65 x 3.25 inches
73 x 93 x 82.5 mm (H x W x D)
Operating Temperature: 0º C to 50º C
Tiered Service Contracts to protect your investment

Maximum Frame Rates		
Horizontal	**Vertical**	**FPS**
1280	1024	800
1280	720	1128
768	768	1060
640	480	1670
512	512	1570
384	288	2710
256	256	3025
128	128	5645
128	8	29,840

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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