

## DATA SHEET

For the most current version visit [www.phantomhighspeed.com](http://www.phantomhighspeed.com)  
Subject to change Rev April 2016

# Phantom® CineMag II® and CineStation®

Hot-swappable, non-volatile  
memory solutions for Phantom  
High-Speed Cameras

### Key Features:

Available in three sizes: 144GB, 256GB, 512GB

Supports direct recording up to 800 Mpx/second for applications that require long record times of up to several minutes

Quickly save high-speed recordings from RAM to the CineMag and free up the camera to capture the next event

Files are stored in CineMag in the efficient & high quality Cine raw format

Download files from CineMag using the Phantom CineStation via standard Gigabit Ethernet or optional 10-Gigabit Ethernet for the fastest file transfer

Access the data in the CineMag from Phantom PCC software, just as you were accessing recordings stored in camera RAM

*Note: Separate data sheet is available for the CineMag IV and CineStation IV*



*Phantom CineMag II installed on a Phantom CineStation-X2SR*

### Key Benefits:

#### High-Speed Imaging is Memory Hungry

Each second of HD 1,000 frame-per-second (fps) recording takes up about 4 Gigabytes of memory. A 4-second recording could then take up to 15 minutes to save using the camera's standard Gigabit Ethernet. That's a lot of downtime between shots! As technology improves, and available resolutions and frame rates increase, the fact is that more memory is needed for each second of ultra-high speed recording.

By equipping the camera with a Phantom CineMag II, that same shot can now be saved to non-volatile memory in about 15 seconds. The file is secure, and stored in Phantom's native uncompressed raw format to ensure the highest quality footage. Re-arm the camera and you're ready to move on to the next shot right away. The amount of time saved on set, or in between experiments is invaluable.

The CineMag II is small, secure and completely hot-swappable. Once full it can be removed from the camera and replaced with an empty one so the shoot remains uninterrupted. The full CineMag can now be moved to a Phantom CineStation for off-camera download and file management.

The CineStation is a simple device that connects to a PC using standard Gb Ethernet or optional fiber-based 10Gb Ethernet for the fastest file download

# DATA SHEET

## Phantom® CineMag II® and CineStation®



CineMag II installed on a Phantom v1210 camera

### CineMag II Specifications:

- Weight: <1 lb (.4 kg)
- Size: 5.5" x 4.9" x 0.5" (192 x 126 x 13 mm)
- Environmental: Operating temperature 0°C to +40°C; Humidity: 80% non-condensing at +5°C
- Power Consumption: 1.5 amp supplied by camera or CineStation
- LED display: Built-in display shows memory remaining, write activity, write protect, status and power

### CineStation Specifications:

- Weight: 5 lbs (2.3 kg)
- Size: 10.25" x 6" x 3" (26 x 15.25 x 7.7 cm)
- Inputs: CineMag, AC power, Tri-level genlock
- Outputs: Gb Ethernet, Dual-link HD-SDI (4:4:4), Component Video (YPrPb), Optional 10Gb Ethernet Standard Gb Ethernet – RJ45 Copper interface Optional 10Gb Ethernet – X2SR Fiber interface

## VISION RESEARCH

### AMETEK® MATERIALS ANALYSIS DIVISION

100 Dey Road  
Wayne, NJ 07470 USA  
+1.973.696.4500

[www.phantomhighspeed.com](http://www.phantomhighspeed.com)

possible. Mount a CineMag II to the CineStation and use the supplied software to view each file stored on the CineMag, play them over the dual HD-SDI or component video ports, set in- and out-points to trim, and save the files to a connected hard drive. The save process can also be fully automated.

Applications that require a longer duration recording than what is available in the camera's built in memory will benefit from the CineMag's Run/Stop workflow. In this mode data can be streamed at a throughput of roughly 800 Mpx/sec directly to the CineMag II, which is available in sizes up to 512 GB. Several minutes of high-speed recording are possible at limited frame rates. Maximum record speed and times can be found in the chart below.

Whether in a studio environment, in the lab or on a test range, save time and file security is critical. The Phantom CineMag and CineStation provides the ideal solution for a fast, streamlined and high quality workflow.

### Maximum Direct-to-CineMag Record Times at Select Resolutions

#### Phantom Flex, v34X, v64X models

Resolution	Frame Rate (fps)	144 GB	256 GB	512 GB
2560 x 1600	175 max	2.4 minutes	4.3 minutes	8.5 minutes
2560 x 1440	200 max	2.4 minutes	4.3 minutes	8.5 minutes
2048 x 1080	360 max	2.4 minutes	4.3 minutes	8.5 minutes
2048 x 1080	24	36 minutes	64 minutes	128 minutes
1024 x 1024	750 max	4.3 minutes	4.3 minutes	8.5 minutes
1280 x 720	850 max	2.4 minutes	4.3 minutes	8.5 minutes

#### Phantom v12.1, vX10, vX11 models

Resolution	Frame Rate (fps)	144 GB	256 GB	512 GB
1280 x 800	780 max	2.4 minutes	4.2 minutes	8.5 minutes
1280 x 720	860 max	2.4 minutes	4.2 minutes	8.5 minutes
1280 x 720	300	7 minutes	12 minutes	24.5 minutes
640 x 480	2600 max	2.4 minutes	4.2 minutes	8.5 minutes

#### Phantom UHS vXX10 & vXX11 models

Resolution	Frame Rate (fps)	144 GB	256 GB	512 GB
1280 x 800	970 max	2 minutes	3.4 minutes	6.8 minutes
1280 x 720	1050 max	2 minutes	3.4 minutes	6.8 minutes
1280 x 720	300	7 minutes	12 minutes	24.5 minutes
640 x 480	3260 max	2 minutes	3.4 minutes	6.8 minutes

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.