



# Phantom CineMag

Hot-swappable, non-volatile memory for  
Phantom Digital Cinema Cameras

## HIGH-SPEED IMAGING IS MEMORY HUNGRY

Shoot 1000 frames-per-second with the Phantom HD at 1920x1080 and 14 bits-per-pixel and you will need 3.6GB of memory for each **second** of recording!

Maybe you are using the Phantom 65 to shoot for digital cinema at 60 frames-per-second. At 4096x2440, you will consume 1GB per second.

Just getting that much data out of the camera can take minutes. Those are minutes you'd rather be shooting, maintaining the momentum and pace on set. The last thing you want to do is shoot for 4 seconds, then download for 8 minutes.

Introducing the Phantom® CineMag™. Hot-swappable, non-volatile memory for the Phantom Digital Cinema cameras.

The CineMag comes in two sizes—256GB and 512GB. Record directly into a CineMag on the Phantom HD at speeds up to 450 fps at 2048x1080. At higher speeds, record into camera RAM and “upload” to the CineMag in seconds. With the Phantom 65, record directly into a CineMag at up to 90 fps. On both cameras, higher direct recording speeds are available at lower resolutions.

When a CineMag gets full, or when you are done with a series of shots, pop the CineMag off the camera and snap another one on. You can later use the camera as a “docking station” to view and download your high-speed movies, or use the Phantom CineStation™ (available in late 2007) connected to a PC and keep your camera free for



doing its job – shooting high-speed scenes. The CineStation supports both raw digital file and video workflows by providing a fast file download capability as well as the ability to play the cine files stored on the CineMag over dual HD-SDI video outputs.

Our efficient *cine* raw format packs a lot of information into the available memory. With a 512GB CineMag on a Phantom 65 you can shoot 4K footage at 60 fps for over 12 minutes continuously, for example.

Access the data in the CineMag from the Phantom Software, just as if you were accessing recordings stored in a camera. All the familiar tools are available. You can view stored scenes, trim them, and save them onto a hard disk for later processing and conversion. Or, trim them, make image enhancements and “play” them out over HD-SDI.

Phantom CineMags--your workflow solution for high-speed imaging.

Phantom HD at 1920x1080, 14-bit depth, 16GB memory, into 256GB CineMag (double these times for a 512GB CineMag):

FRAME RATE (FPS)	MAXIMUM RECORDING TIME	CINEMAG UPLOAD TIME
24	66 minutes	N/A
100	15 minutes 30 seconds	N/A
250	6 minutes	N/A
450	3 minutes 32 seconds	N/A
700	16 shots of 6.2 seconds each	9.6 seconds per shot
1000	16 shots of 4.3 seconds each	9.6 seconds per shot

Phantom 65 at 4096x2440, 14-bit depth, 16GB memory, into 256GB CineMag (double these times for a 512GB CineMag, preliminary and subject to change):

FRAME RATE (FPS)	MAXIMUM RECORDING TIME	CINEMAG UPLOAD TIME
24	15 minutes 15 seconds	N/A
60	6 minutes 6 seconds	N/A
90	4 minutes	N/A
120	16 shots of 11.4 seconds each	15.2 seconds per shot
140	16 shots of 9.8 seconds each	15.2 seconds per shot

