

DATA SHEET

Preliminary information. Subject to change.
Rev October 2018

Phantom® VEO E-310L VEO E-340L

Reliable and efficient high-speed imaging for motion analysis

Key Specifications

3 Gpx/sec throughput at 1 or 4 Megapixel resolution

RAM: 18GB, 36GB options

Multi-Cine up to 63 partitions

Exposure: Minimum is 1 μ s. EDR, Auto-Exposure and Shutter-Off mode for PIV are included

Video monitoring: HDMI and HDSDI included on all models

2X Programmable I/O BNC ports for synchronization and data acquisition

Sturdy, metal body construction

Made in USA



AMETEK®
MATERIALS ANALYSIS DIVISION



VEO E-310L and E-340L

Phantom VEO cameras are utilized every day in demanding test and measurement applications around the world. Users appreciate the image quality, versatility and overall system dependability.

The new VEO-E models leverage this platform, offer many of the same features, and are:

- 20% smaller and lighter than the original VEO
- Designed for an efficient and easy set-up with industry-standard connections
- Cost-effective for laboratories and academic institutions

Imaging Specifications

VEO-E cameras incorporate custom CMOS sensors providing 12-bit pixel depth, a global shutter and super-35mm format at full resolution for use with a wide variety of high-quality optics.

	VEO E-310L	VEO E-340L
Pixel Resolution	1280 x 800	2560 x 1600
Pixel size	20 μ m	10 μ m
Sensor Size	25.6 x 16mm	25.6 x 16mm
ISO (12232 STD)	Mono: 16,000T, 6400D Color: 2000T, 2000D	Mono: 16,000T, 6400D Color: 1250T, 1250D
Exposure Index	Adjustable E.I. * Mono E.I. 6400 – 32,000 Color E.I. 2000 – 10,000	Adjustable E.I. * Mono E.I. 6400 – 32,000 Color E.I. 1250 – 6400

* Recommended Exposure Index (E.I.) range is specified.

DATA SHEET

Example Frame Rates & Record Times*

VEO E-310L		
Resolution	Maximum Frame Rate (FPS)	Record duration to 36GB RAM (sec)
1280 x 800	3,200	7.8
640 x 480	10,100	8.3
512 x 512	11,500	8.5
512 x 256	23,000	8.5
256 x 256	39,800	9.8
64 x 8	650,000	77

VEO E-340L		
Resolution	Maximum Frame Rate (FPS)	Record duration to 36GB RAM (sec)
2560 x 1600	800	7.8
1600 x 1600	1,190	8.1
2048 x 1080	1,460	8
1280 x 720	3,310	8.4
640 x 480	8,570	9.8
128 x 4	287,000	175

* Many other resolutions and speeds are available. Visit phantomhighspeed.com/calc to use our recording time calculator for additional configurations

Connectivity

Gb Ethernet for control and download using a standard Cat5e network cable
I/O: 4 BNC ports. Fixed Trigger and Timecode-in; 2X Programmable I/O provides the ability to assign and define the parameters of various signals including: F-Sync, Strobe, Event, Pre-trigger, Timecode-out, and more.



Primary Power:
 16-32 VDC via 6-pin Fischer. Power draw at max load: 40W

Camera Control & File Formats

Phantom PCC software for setup, control, download, image manipulation and basic motion analysis
Native file format: Phantom Cine Raw (.cine). Cines can be easily converted to other formats including h.264 mp4, Apple ProRes .mov, AVI, Tiff, JPEG, DNG and more using PCC. Cine Raw files are compatible with many major video editing and motion analysis programs
SDK with both Labview and Matlab support is available

Select Features Include

Video monitoring: Standard HDMI and 3G HD-SDI provides 720 and 1080 video standards up to 60Hz for live and playback. Includes uninterrupted live video during high-speed capture.
Internal Mechanical Shutter: Shutter closes quickly to perform a black reference with no physical access to the camera necessary.
Image-Based Auto Trigger (IBAT): Trigger the camera (or even multiple connected cameras) from motion detected within the live image, per the parameters set up in PCC software.

Mechanical & Environmental

Dimensions: 5 x 5 x 4.2" (127 x 127 x 108 mm)
Weight: 4 lbs. (1.8 Kg)
Lens Mount: Choices include Nikon F with G-style lens support, C-mount, and Canon EF with electronic lens control
Mounting Points: 2X standard 1/4x20 on 3 sides, with additional points for custom mounting plates.
Cooling: Actively cooled. Sealed system keeps electronics isolated from the airflow. Quiet mode temporarily disables the fan.
Operational Temperature: -10°C - +50°C
Operational Shock: MIL-STD-202G Method 213-B. Rated 30G with shutter; 100G without shutter; sawtooth wave, 11ms, +/- 10 pulses all axes
Vibration Rating: MIL-STD-202G Method 214-A. Rated 12Grms; Figure 2A-1, Test Condition D, 15 min per axis
Regulatory: CE & KC (2018); EC Declaration details available online.

Vision Research Global Support Network

The Phantom VEO camera line is supported by Vision Research's Global Service and Support network offering AMECare Performance Services from multiple sites around the globe. Maximize the value of your Phantom camera with a full menu of professional support services. Learn more at www.phantomhighspeed.com/Service-Support



Vision Research, Inc. | 100 Dey Rd. Wayne, NJ 07470, USA
Tel: +1 973.696.4500 | phantomhighspeed.com

Certain Phantom cameras are held to export licensing standards. Please visit www.phantomhighspeed.com/export for more information.