



Inputs & Outputs

	L-models VEO 410L, 710L, 340L & 640L	S-models VEO 410S, 710S, 340S & 640S
		
Front/Side	SDI: Din port for 3G HD-SDI HDMI: Standard HDMI output VFPWR: 4-pin Hirose for 12V power output, rated for 6W	SDI: Din port for 3G HD-SDI HDMI: Standard HDMI output VFPWR: 4-pin Hirose for 12V power output, rated for 6W
Ethernet	RJ45 (Gb Ethernet standard, 10Gb optional)	8-pin Fischer (Gb Ethernet standard, 10Gb optional)
Power Input	6-pin Fischer: 16-32 VDC	6-pin Fischer: 16-32 VDC 12-pin Capture port: Secondary 12V input for battery mount
Capture Port	None	Yes, 12-pin Fischer
Signals	Timecode-in, 2 Programmable I/O	Timecode-in, F-Sync/P, Strobe/P, Ready/P, Timecode-out/P, Range Data
Trigger BNC	Yes	Yes
Rear SDI BNC	None	Yes (3G HD-SDI)
Programmable I/O	2 BNC ports Available signals: Strobe, Event, Pre-trigger, Memgate, Timecode-out, Ready, F-Sync, Aux Trigger, Auto-Trigger	4 BNC ports Available signals: Strobe, Event, Pre-trigger, Memgate, Timecode-out, Ready, F-Sync, Aux Trigger, Auto-Trigger
Serial RS232	Via 6-pin Power	Via 6-pin Power
Range Data	None	Dedicated 6-pin Fischer
On-camera Controls	None	Yes, Encoder knob and buttons for access to menu and control
USB	None	Yes not active at launch
Removable Media	None	CFast 2.0 cards, NTFS format

Phantom VEO

Example Frame Rates & Record Times

Phantom VEO 710		
Resolution	Maximum Frame Rate	Rec time @ max fps (72GB RAM)
1280 x 800	7400	6.5 seconds
1280 x 720	8200	6.5 seconds
640 x 480	21,000	7.5 seconds
256 x 256	75,000	9 seconds
64 x 8	680,000 (standard)	28 seconds
	1,000,000 (optional*)	15 seconds (optional)

Phantom VEO 410		
Resolution	Maximum Frame Rate	Rec time @ max fps (72GB RAM)
1280 x 800	5200	9.6 seconds
1280 x 720	5800	10 seconds
640 x 480	15,900	11 seconds
256 x 256	57,500	13 seconds
64 x 8	600,000	30 seconds

*Note: FAST option for VEO 710 models is export controlled

Phantom VEO 640		
Resolution	Maximum Frame Rate	Rec time @ max fps (72GB RAM)
2560 x 1600	1400	8.5 seconds
2560 x 1440	1600	8.6 seconds
1920 x 1080	2800	8.8 seconds
1280 x 720	5700	9.7 seconds
128 x 4	360,000	62 seconds

Phantom VEO 340		
Resolution	Maximum Frame Rate	Rec time @ max fps (72GB RAM)
2560 x 1600	800	15 seconds
2560 x 1440	890	15 seconds
1920 x 1080	1500	15 seconds
1280 x 720	3300	16 seconds
128 x 4	350,000	63 seconds

Record durations shown are for cameras with 72GB of RAM at the maximum frame rate. Cameras with 36GB RAM will record for ½ the duration shown and 18GB RAM provides ¼ the duration. Lower frame rates provide longer record times.

Visit phantomhighspeed.com/calc to use our recording time calculator for more available resolutions and frame rates.

Vision Research Global Support - for wherever you are

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 about our service and support options at www.phantomhighspeed.com/Service-Support.

With up to 72GB of RAM, the Phantom VEO can capture more frames than most. Use multi-cine to segment the memory up to 63 times for fast, uninterrupted capture of shorter events.

Download entire 72GB of data in as little as 2 minutes, with the 10Gb Ethernet option and an optimized system.



DATA SHEET

Phantom® VEO Additional Specifications

Power Requirements:

Primary power: 16-32 VDC via 6-pin Fischer
 Secondary power*: down to 12 VDC, via 12-pin capture port (S-models only)

Power draw at max load: 70 Watts (approx.)

* When both are connected, the power input with highest voltage gets used first.

Environmental Specs:

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
 (60 total)

Vibration Rating: MIL-STD-202G Method 214-A.
 Rated 12Grms; Figure 2A-1, Test Condition D,
 15 min per axis

Regulatory: EMC/ESD

Emissions: EN61326-1, FCC part 15

Immunity: EN 61326-1

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.



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.

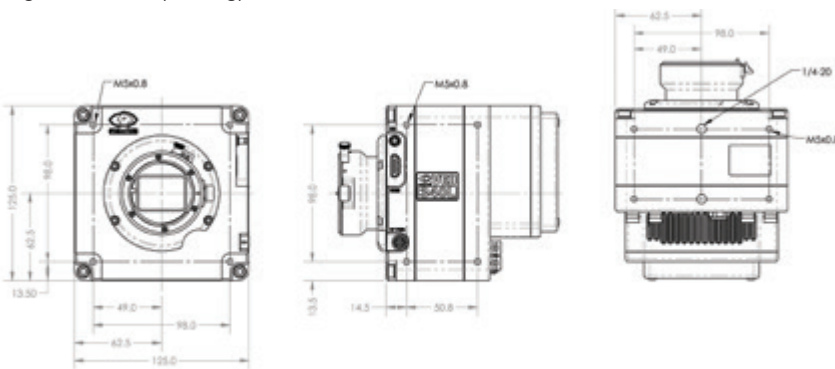
Mechanical Design

The VEO housing is precision-milled out of solid aluminum, making the camera rugged and stable in tough environments. The camera's cooling system is designed to keep the electrical components completely isolated from the airflow and protected from the outside elements.

Mechanical Specifications:

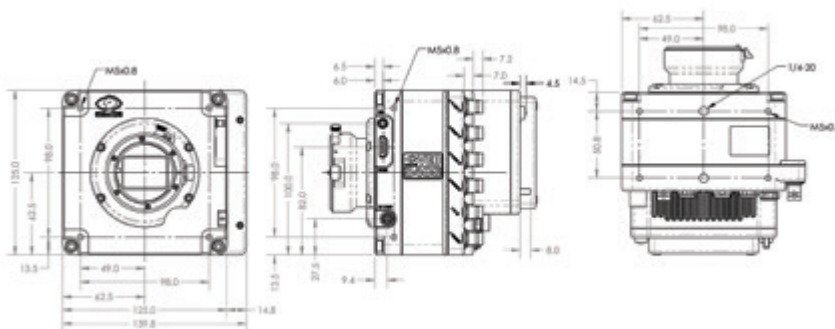
VEO L-models

Size: 5 x 5 x 5 in. (12.7 x 12.7 x 12.7 cm) L x W x H
 Weight: 5.0 lbs (2.3 kg)



VEO S-models

Size: 5 x 5.5 x 5 in. (12.7 x 14 x 12.7 cm) L x W x H
 Weight: 5.6 lbs (2.5 kg)



*size does not include lens mount

MILANO SYSTEMS

ADVANCED TECHNOLOGICAL SYSTEMS

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