

PhotoCam **Speeder V2**

STANDALONE HIGH-SPEED CAMERA SYSTEM
WITH LONG RECORD TIME FEATURE



Troubleshoot Your Production Line Problem

The PhotoCam Speeder V2 is a portable, standalone high-speed camera system designed to allow production line workers to quickly identify and fix problems in automated manufacturing environments. It features one or two miniature camera heads tethered to a compact control unit. Camera control, along with video display and playback, is accomplished via the integrated 7-inch LCD touch screen, making the Speeder V2 a truly portable and standalone system that can be fully utilized without a computer or network infrastructure. And because the Speeder V2 is very easy to use, you do not have to be a professional photographer to effectively run the system.

The Speeder V2 provides up to 2,000 frames per second (fps) at full resolution, and faster frame rates at reduced resolutions. Excellent light sensitivity and very short exposure times deliver superb, blur free images in either color or monochrome video formats. High-speed video can be recorded directly to internal memory at the camera's maximum frame rate and resolution, or it can be streamed to an integrated solid state drive (SSD) for very long recording times at reduced frame rates and/or resolutions.

An operator can manually choose when to start and stop a Speeder V2 video recording using the touch screen or a simple thumb switch. Alternatively, the system can be automatically triggered with a TTL pulse or switch closure emitted as the result of an equipment failure or production line disruption. Immediately after the video is recorded, it can be played back in super slow motion to allow factory personnel to understand and then correct the problem or failure.

Benefits

- Portable, standalone system (no computer required)
- Frame Rate Performance Examples*:
 - 2,000 fps at 512 x 512 pixel resolution
 - 3,000 fps at 512 x 352 pixel resolution
 - 4,000 fps at 512 x 256 pixel resolution
 - 8,000 fps at 512 x 128 pixel resolution
 - 10,000 fps at 512 x 96 pixel resolution
- Two video recording modes:
 - Speed Priority Mode for high frame rate video capture to internal memory
 - Time Priority Mode for extended duration video capture to SSD
- One or two miniature camera heads
 - 35mm (1.38") (W) × 35mm (1.38") (H) × 33.3mm (1.31") (D) excluding protrusions
 - 90g (0.2lbs.)
- Durable camera head cables in 3m (standard), 5m, 7m and 10m lengths
- System control via standard LCD Remote Touch Screen
- Sensitivity: ISO 12232 Ssat standard
 - ISO 3200 monochrome
 - ISO 1600 color
- Compatibility with C-mount lenses

Target applications include:

- Packaging
- Bottling
- Printing
- Milling/Machining
- Pick & Place
- Wire bonding

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Specifications: Partial Frame Rate / Recording Duration Table

FRAME RATE (fps)	Single Camera Head				Dual Camera Head			
	Speed Priority Mode (to internal memory)		Time Priority Mode (to SSD)		Speed Priority Mode (to internal memory)		Time Priority Mode (to SSD)	
	Resolution	Time (seconds)	Resolution	Time (minutes)*	Resolution**	Time (seconds)	Resolution**	Time (minutes)*
125	512 x 512	129	512 x 512	120	1,024 x 512	64	1,024 x 512	60
250	512 x 512	64	512 x 512	60	1,024 x 512	32	1,024 x 512	30
500	512 x 512	32	512 x 512	30	1,024 x 512	16	1,024 x 384	20
1,000	512 x 512	16	512 x 384	20	1,024 x 512	8	1,024 x 192	20
2,000	512 x 512	8	512 x 192	20	1,024 x 512	4	1,024 x 96	20
3,000	512 x 352	7.8	-	-	1,024 x 352	3.9	-	-
4,000	512 x 256	8	512 x 96	20	1,024 x 256	4	-	-
8,000	512 x 128	8	-	-	1,024 x 128	4	-	-
10,000	512 x 96	8	-	-	1,024 x 96	4	-	-

*Note: When two camera heads are implemented, the images from each camera head are combined into a single image, effectively doubling the resolution of each image.

**Note: Time (minutes) assumes standard 256GB SSD. Recording times are doubled with optional 512GB SSD.

Sensor Type 512 x 512 pixels, 10 μ m pixel size, 8-bit ADC (Bayer system color, 24-bit single sensor)

Maximum Frame Rate 2,000 fps at max resolution

Minimum Shutter Speed 1/160,000 sec (6.25 μ s)

Sensitivity ISO 3200 mono, ISO 1600 color (ISO12232 Ssat Standard)

Hardware Gain x1, x3

Video File Format Uncompressed AVI

Video Recording Modes
Speed Priority Mode: Direct to internal memory (4GB) provides fastest frame rates
Time Priority Mode: Stream to SSD (256GB standard, 512GB optional) provides longest recording times

Trigger Modes Start, End, Manual

System Control LCD Remote Touch Screen

Input/Output Signals
(requires optional I/O cable)
Input: Trigger (TTL/Switch), Sync (5Vp-p), Rec, Event
Output: Trigger (TTL), Sync (5Vp-p), Rec

Dimensions and Weight
Camera Head: 35mm (1.38") (W) \times 35mm (1.38") (H) \times 33.3mm (1.31") (D)
90g (0.2lbs) excluding protrusions
Main Unit: 186mm (7.32") (W) \times 110mm (4.33") (H) \times 160mm (6.3") (D)
2.5kg (5.5lbs) excluding protrusions
Touch Screen: 186mm (7.32") (W) \times 120mm (4.72") (H) \times 14.5mm (0.57") (D)
660g (1.5lbs) excluding protrusions

Cable Lengths
Camera Head Cable: 3m standard, 5m/7m/10m optional
Touch Screen Cable: 3m standard, 5m/7m/10m optional

No. of Camera Heads 1 or 2

Camera Head Lens Mount C

Camera Head Mount 1/4 20UNC, Shoe adapter

Storage Temperature and Humidity -20°C – 60°C, 85% relative humidity

Operating Temperature 0 – 40°C, 85% relative humidity

Power Requirements
AC: 100V~240V, 100VA, 50 - 60Hz
DC: 9V~18V, 85VA



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