

## The Perfect Balance of Speed, Size, and Memory



**4,980fps @ 1920x1080 | 10GPx/s throughput | 10,000fps @ 1176x870**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor, more pixels = greater accuracy
- Full resolution to 4,980 frames/second, maintaining higher res at higher speeds
- 8 TB internal SSD capacity
- Up to 144 GB of on-board memory for long recordings or multiple buffers
- Internal or external SSD drive for fast data transfer
- Impressive 10 GP/sec throughput
- Global electronic shutter to 250 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 500,000 fps
- App-based tablet control via Controller Display Unit (CDU) for simple operation
- Fully compatible with the i-SPEED Software Suite 2.0 for more advanced functions
- Upgrade path between models

\* subject to export regulations

**High performance high-speed camera in a compact and durable form-factor.**



The sealed electronics design of the i-SPEED 5 utilizes an innovative internal cooling system—drawing heat from the inside of the camera and venting it to the atmosphere

**Sublime ease-of-use coupled with full feature functionality**



## IMAGER

<b>Sensor type</b>	Custom CMOS
<b>Sensor resolution</b>	1920 x 1080 pixel
<b>Sensor size</b>	25.920 mm x 14.580 mm
<b>Sensor diagonal</b>	29.74 mm
<b>Pixel size</b>	13.5 µm
<b>Bit depth</b>	12 bit (36 bit color)
<b>ISO (12232-2:2006, D, sat)</b>	Mono ISO 8,500D (sat) / 68,000D (sat) Color ISO 3,060D (sat) / 24,480D (sat)
<b>Maximum frame rate</b>	500,000 fps
<b>Shutter type</b>	Global exposure
<b>Shutter time, standard</b>	1 µs min (standard)
<b>Shutter time, fast mode</b>	250 ns min (export restricted)

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROCC
<b>Sync</b>	10 Hz – 350 kHz
<b>Luminance histogram</b>	Iris setting aid tool
<b>i-CHEQ 360</b>	Camera status LEDs
<b>i-FOCUS</b>	Focusing aid tool
<b>i-EXPOSE</b>	High/low exposure highlight
<b>Control</b>	PC or CDUe
<b>IRIG input</b>	IRIG – B to 1 µs
<b>Internal memory</b>	18 GB standard, upgrade to 144 GB

## PHYSICAL and ENVIRONMENTAL

<b>Dimensions inches</b>	5.0 (W) x 5.1 (H) x 12.0 (L)
<b>Dimensions mm</b>	127 (W) x 129 (H) x 305 (L)
<b>Weight</b>	9.9 lb (4.5 kg)
<b>Input voltage</b>	14-36 V
<b>Power consumption</b>	110 W nominal, 150 W max
<b>Mounting</b>	1/4 x 20 and 3/8 x 16 tripod plate
<b>Lens mount</b>	Custom, swappable lens plate
<b>EMC</b>	EN55032-A, EN55024
<b>Safety</b>	BS EN61010-1 (camera), IEC60950 (PSU)
<b>CE marking</b>	EMC directive (camera), EMC directive, LV directive (PSU)
<b>Lead free</b>	RoHS directive
<b>WEEE</b>	Compliant
<b>Temperature °F</b>	14° to 122° operation, -4° to 140° storage
<b>Temperature °C</b>	-10° to +50° operation, -20° to 60° storage
<b>Pressure</b>	71 kpa to 106 kpa
<b>Relative humidity</b>	95% at 104°F non-condensing
<b>Power input connector</b>	4 pin Lemo
<b>Trigger input</b>	BNC 75 Ω
<b>I/O connector</b>	10 pin Lemo, trigger in / sync / exposure out / remote power

## CONNECTIVITY

<b>Video outputs</b>	HD-SDI, HDMI
<b>USB</b>	USB 3
<b>Network</b>	1Gb/s RJ45 / 10 pin Lemo
<b>Video</b>	IXV, AVI (compressed or uncompressed)
<b>Image sequence</b>	TIFF, JPG, RAW
<b>Ethernet control</b>	1 Gb/s
<b>Remote control</b>	Via supplied software

## PC SOFTWARE

<b>Standard control</b>	Control ONE
<b>Premium control</b>	Control MULTI-DAQ
<b>Editing</b>	i-SPEED Movie Maker
<b>Analysis</b>	ProAnalyst® Lite by Xcitex
<b>Viewer</b>	i-SPEED Viewer
<b>Utilities</b>	i-SPEED Lens Calculator, i-SPEED Viewer
<b>Software Developers Kit</b>	C++, LabView
<b>Synchronized data acquisition</b>	USB DAQ, 8 options

## PURCHASING OPTIONS

<b>CDUe</b>	Controller Display Unit
<b>Sensor</b>	Color / Mono
<b>Memory</b>	18 GB (std) / 36 GB / 72 GB / 96 GB / 144GB
<b>Shutter time</b>	1 µs (std) / 250 ns (subject to export restrictions)
<b>Internal SSD</b>	500 GB / 1 TB / 2 TB / 4 TB / 8 TB
<b>External SSD</b>	500 GB / 1 TB / 2 TB
<b>Lens mounts</b>	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
<b>Warranty</b>	1 yr (std) / 2 yr / 3 yr
<b>IRIG</b>	IRIG-B

## FRAME RATES, RESOLUTION, and DURATION

FPS	Resolution	18GB	36GB	72GB	96GB	144GB
100	1920x1080	30.4 sec	60.9 sec	122 sec	162 sec	243 sec
200	1920x1080	15.2 sec	30.4 sec	61 sec	81 sec	122 sec
300	1920x1080	10.1 sec	20.3 sec	41 sec	54.1 sec	81.1 sec
500	1920x1080	6.1 sec	12.2 sec	24 sec	32.5 sec	49 sec
1,000	1920x1080	3 sec	6.1 sec	12 sec	16.2 sec	24.3 sec
2,000	1920x1080	1.5 sec	3 sec	6.1 sec	8.1 sec	12.2 sec
3,000	1920x1080	1 sec	2 sec	4.1 sec	5.4 sec	8.1 sec
3,985	1920x1080	0.8 sec	1.5 sec	3.1 sec	4.1 sec	6.1 sec
4,980	1920x1080	0.6 sec	1.2 sec	2.4 sec	3.3 sec	4.9 sec
5,000	1904x1080	0.6 sec	1.3 sec	2.5 sec	3.3 sec	5 sec
6,382	1512x1080	0.6 sec	1.2 sec	2.5 sec	3.3 sec	5 sec
7,500	1344x1008	0.6 sec	1.3 sec	2.5 sec	3.4 sec	5.1 sec
10,000	1176x870	0.6 sec	1.3 sec	2.5 sec	3.4 sec	5 sec
15,000	952x708	0.6 sec	1.3 sec	2.5 sec	3.4 sec	5.1 sec
20,000	840x594	0.7 sec	1.3 sec	2.6 sec	3.4 sec	5.2 sec
50,000	504x366	0.7 sec	1.4 sec	2.8 sec	3.7 sec	5.6 sec
100,000	392x204	0.8 sec	1.6 sec	3.2 sec	4.3 sec	6.4 sec
200,000	392x90	0.9 sec	1.8 sec	3.7 sec	4.9 sec	7.3 sec
300,000	392x54	1 sec	2 sec	4.1 sec	5.4 sec	8.1 sec
500,000	392x24	1.4 sec	2.7 sec	5.5 sec	7.3 sec	10.9 sec

Note: Other resolutions and speeds are available.



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Specifications subject to change  
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