

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



**6,382fps @ 1920x1080 | 13GPx/s throughput | 10,000fps @ 1344x984**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor, more pixels = greater accuracy
- Full resolution to 6,382 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 13 GP/sec throughput
- Global electronic shutter to 250 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 1,000,000 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>	1,000,000 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	60.85	121.70	243.40	324.53	486.80
200	1920x1080	30.43	60.85	121.70	162.27	243.40
300	1920x1080	20.28	40.57	81.13	108.18	162.26
500	1920x1080	12.17	24.34	48.68	64.91	97.36
1,000	1920x1080	6.09	12.17	24.34	32.45	48.68
2,000	1920x1080	3.04	6.09	12.17	16.23	24.34
3,000	1920x1080	2.03	4.06	8.11	10.82	16.22
3,985	1920x1080	1.53	3.05	6.11	8.14	12.21
4,980	1920x1080	1.22	2.44	4.89	6.51	9.77
5,000	1920x1080	1.22	2.43	4.87	6.49	9.74
6,382	1920x1080	0.95	1.91	3.81	5.08	7.62
7,500	1624x1080	0.98	1.96	3.92	5.22	7.83
10,000	1344x984	0.97	1.95	3.90	5.19	7.79
15,000	1064x798	1.01	2.02	4.04	5.39	8.08
20,000	952x678	1.00	1.99	3.98	5.31	7.96
50,000	560x420	1.10	2.19	4.38	5.84	8.76
100,000	504x216	1.18	2.36	4.72	6.29	9.44
200,000	504x96	1.33	2.66	5.32	7.09	10.64
300,000	560x54	1.42	2.84	5.68	7.57	11.36
500,000	560x24	1.92	3.83	7.66	10.21	15.32
750,000	112x78	3.93	7.86	15.72	20.96	31.44
1,000,000	112x48	4.79	9.58	19.16	25.55	38.32

Note: Other resolutions and speeds are available.



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Specifications subject to change  
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