

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



**3,985fps @ 1920x1080 | 8GPx/s throughput | 10,000fps @ 1064x768**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor (2.1MPx), more pixels = greater accuracy
- 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
- Global electronic shutter to 289 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 1,000,000 fps
- 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

**The i-SPEED 5 Series is controlled both by PC and the touchscreen CDUe.**



## 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>Light sensitivity Mono (Gain off/on)</b>	16,000 / 125,000
<b>Light sensitivity Color (Gain off/on)</b>	4,000 / 32,000
<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>	289 ns min (export restricted)

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROc
<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) / 289 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 [in seconds]

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	20.23	40.47	80.93	107.91	161.86
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	3.05	6.09	12.18	16.24	24.36
3,000	1920x1080	2.03	4.05	8.10	10.80	16.20
3,985	1920x1080	1.53	3.05	6.10	8.13	12.20
4,980	1512x1080	1.58	3.17	6.33	8.45	12.67
5,000	1512x1080	1.58	3.16	6.31	8.41	12.62
6,382	1344x966	1.55	3.11	6.22	8.29	12.44
7,500	1232x888	1.57	3.14	6.28	8.37	12.56
10,000	1064x768	1.58	3.15	6.30	8.41	12.61
15,000	840x630	1.62	3.25	6.49	8.65	12.98
20,000	728x540	1.64	3.28	6.55	8.74	13.10
50,000	448x324	1.77	3.55	7.10	9.46	14.20
100,000	336x198	1.94	3.87	7.74	10.33	15.49
200,000	336x84	2.28	4.56	9.13	12.17	18.26
300,000	336x48	2.66	5.32	10.65	14.20	21.30
500,000	392x18	3.65	7.30	14.60	19.47	29.21
750,000	112x42	7.30	14.60	29.20	38.93	58.40
1,000,000	112x30	7.67	15.34	30.68	40.91	61.36

Note: Other resolutions and speeds are available.



Specifications subject to change  
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