

Compact Ultra-High-Speed Capture

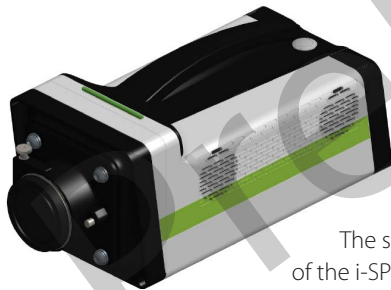


The i-SPEED 5 Series draws on the industry leading features of the i-SPEED 7 Series cameras in a more compact and versatile package - carrying all of the features of a high-end ultra-high-speed camera while maximizing the advantages of smaller systems. Lighter, Tighter and Clipped - the i-SPEED 5 has all of the necessary power to be at the heart of your applications, with the flexibility and adaptability synonymous with the i-SPEED line of products.

As always, the i-SPEED 5 Series can be controlled via a unique touch-screen app-based solution, or via the powerful i-SPEED Software Suite 2.0. Suddenly High-Speed control, capture and analysis are within your grasp.

Portable - Rugged - Exceptional Image Quality

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



The sealed electronics design of the i-SPEED 5 utilizes innovative heat-pipe technology - drawing heat from the inside of the camera and venting to the atmosphere. Thus dust and corrosive particles are prevented from being ingested internally to the camera where they could damage sensitive electronics. The fans may be disabled during recording for any vibration sensitive measurements.



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

FEATURES + OPTIONS

- HD resolution 1920x1080 pixel sensor, more pixels = greater accuracy
- Full resolution to 6,371 frames/second, maintaining higher res at higher speeds
- Up to 144 GB of on-board memory for long recordings or multiple buffers
- Internal or external SSD drive for fast data transfer
- Impressive 13.2 GP/sec throughput
- Wide Dynamic Range recording
- 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

IMAGER

Sensor type	Custom CMOS
Sensor resolution	1920 x 1080 pixel
Sensor size	25.920 mm x 14.580 mm
Sensor diagonal	29.74 mm
Pixel size	13.5 µm
Bit depth	12 bit (36 bit color)
ISO (12232-2:2006, D, sat)	Mono 5,000 / 40,000 (max) Color 1,800 / 14,400 (max)
Maximum frame rate	500,000 fps
Shutter type	Global exposure
Shutter time, standard	1 µs min (standard)
Shutter time, fast mode	250 ns min (export restricted)
WDR	Wide Dynamic Range

SYNCHRONIZATION and CAPTURE

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

PHYSICAL and ENVIRONMENTAL

Dimensions inches	12.0 (W) x 5.1 (H) x 5.0 (L)
Dimensions mm	305 (W) x 129 (H) x 127 (L)
Input voltage	12-36V
Power consumption	110 W nominal, 150 W max
Mounting	¼x20 and 3/8x16 tripod plate
Lens mount	Custom, swappable lens plate
EMC	EN55032-A, EN55024
Safety	BS EN61010-1 (camera), IEC60950 (PSU)
CE marking	EMC directive (camera), EMC directive, LV directive (PSU)
Lead free	RoHS directive
WEEE	Compliant
Temperature °F	32° to 104° operation, -4° to 140° storage
Temperature °C	0° to 40° operation, -20° to 60° storage
Pressure	71 kpa to 106 kpa
Relative humidity	95% at 104°F non-condensing
Power input connector	6 pin Lemo
Trigger input	BNC 75 Ω
Feature connector	11 pin Lemo, trigger in / sync / exposure out / remote power

CONNECTIVITY

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

PC SOFTWARE

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

PURCHASING OPTIONS

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

FRAME RATES, RESOLUTION and DURATION

FPS	Resolution	18GB	36GB	72GB	96GB	144GB
100	1920x1080	61 sec	122 sec	243 sec	324 sec	487 sec
200	1920x1080	30 sec	61 sec	122 sec	162 sec	243 sec
300	1920x1080	20 sec	41 sec	81 sec	108 sec	162 sec
500	1920x1080	12 sec	24 sec	49 sec	65 sec	97 sec
1,000	1920x1080	6.1 sec	12 sec	24 sec	32 sec	49 sec
2,000	1920x1080	3.0 sec	6.1 sec	12 sec	16 sec	24 sec
3,000	1920x1080	2.0 sec	4.1 sec	8.1 sec	11 sec	16 sec
5,000	1920x1080	1.2 sec	2.4 sec	4.9 sec	6.5 sec	9.7 sec
6,371	1920x1080	1.0 sec	1.9 sec	3.8 sec	5.1 sec	7.6 sec
7,500	1512x1134	1.0 sec	1.9 sec	3.8 sec	5.1 sec	7.7 sec
10,000	1344x978	1.0 sec	1.9 sec	3.9 sec	5.2 sec	7.8 sec
15,000	1064x798	1.0 sec	2.0 sec	3.9 sec	5.2 sec	7.9 sec
25,000	1064x474	1.0 sec	2.0 sec	4.0 sec	5.3 sec	8.0 sec
50,000	1064x228	1.0 sec	2.1 sec	4.1 sec	5.5 sec	8.3 sec
100,000	1064x102	1.1 sec	2.2 sec	4.4 sec	5.9 sec	8.8 sec
200,000	532x102	1.2 sec	2.5 sec	4.9 sec	6.5 sec	9.8 sec
300,000	336x90	1.4 sec	2.8 sec	5.6 sec	7.5 sec	11 sec
500,000	336x42	1.8 sec	3.5 sec	7.0 sec	9.3 sec	14 sec

Note: Other resolutions and speeds are available.

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