

## The Ultimate High-Resolution, High-Speed Camera



There's only one way to capture the fastest events in the world. That's with the highest resolution, fastest camera ever built.

Experience the i-SPEED 726, the pinnacle of the powerful, high-end i-SPEED 7 Series line of high-speed cameras. Packed with value and suited for a wide range of applications, driven by a whopping 3.1 megapixel image sensor. It's a level of performance that captures more than movement. It captures the imagination.



### **i-SPEED 726R shown in heavy duty, rugged environmental package**

Choose from the sleek new instrumentation package or elect to upgrade your camera to the high-G rated rugged package with its environment resistant aluminum casing. When the fastest camera is required to capture the fastest events, the i-SPEED 7 is up to the task.



### **The i-SPEED 726 camera is controlled both by PC and the new 7 Series touchscreen CDUs**

## FEATURES

- High-resolution 2048x1536 pixel sensor
- Full resolution to 8,512 frames/second
- 1080p resolution at 12,742 frames/second
- Up to 288 GB of on-board memory for long recordings
- Internal or external SSD drive for fast data transfer
- Class leading 26 GP/sec throughput
- Microlens sensor for exceptional light sensitivity
- Wide Dynamic Range recording
- Global electronic shutter to 1  $\mu$ s
- 1 hour battery life
- Compatible with all F and EF mount lenses
- Maximum frame rate – 1,000,000 fps
- Flexible frame synchronization from 10 Hz to 200 kHz
- Environmentally rugged package available
- 32 point integrated real-time health monitoring system

## IMAGER

<b>Sensor type</b>	Custom CMOS
<b>Sensor resolution</b>	2048 x 1536 pixel
<b>Sensor size</b>	27.972 mm x 20.736 mm
<b>Sensor diagonal</b>	34.82 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 5,000 / 40,000 (max) Color 1,800 / 14,400 (max)
<b>Maximum frame rate</b>	1,000,000 fps
<b>Shutter type</b>	Global exposure
<b>Shutter time, standard</b>	1 µs minimum
<b>Shutter time, fast mode</b>	277 ns
<b>WDR</b>	Wide Dynamic Range

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROCC
<b>Sync</b>	10 Hz – 200 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 sub 1 µs
<b>IRIG sync</b>	Camera sync to IRIG
<b>Internal memory</b>	96 GB standard, upgrade to 288 GB

## PHYSICAL and ENVIRONMENTAL

<b>Dimensions</b>	
<b>Instrumentation package</b>	
inches	14.3 (W) x 6.2 (H) x 6.2 (L)
mm	363 (W) x 157 (H) x 154 (L)
<b>Rugged package</b>	
inches	14.75 (W) x 6.0 (H) x 5.75 (L)
mm	374 (W) x 150 (H) x 143.5 (L)
<b>Weight</b>	18.7 lb (8.5 kg) with battery
<b>Input voltage</b>	12-36 V
<b>Power consumption</b>	150 W nominal, 200 W max
<b>Mounting</b>	¼x20 and 3/8x16 tripod plate
<b>Battery</b>	2x 14.4 V 90 Wh
<b>Battery life</b>	1 hour
<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) RoHS directive
<b>Lead free</b>	
<b>WEEE</b>	Compliant
<b>IP rating</b>	IP 20
<b>Temperature °F</b>	32 to 104 operation, -4 to 140 storage
<b>Temperature °C</b>	0 to 40 operation, -20 to 60 storage
<b>Pressure</b>	71 kpa to 106 kpa
<b>Relative humidity</b>	95% at 104°F non-condensing
<b>G-shock, Instrumentation package</b>	10 G
<b>G-shock, Rugged package</b>	30 G @ 11 ms IEC 68-2-27 Ea, 30 G @ 2 ms IEC 68-2-29 Eb
<b>Power input connector</b>	6 pin Lemo
<b>Trigger input</b>	BNC 75 Ω
<b>Feature connector</b>	18 pin Lemo, trigger in / sync / sync out / exposure out / remote power

## CONNECTIVITY

<b>Video outputs</b>	2x HD-SDI, HDMI
<b>USB</b>	USB 3
<b>Network</b>	1 Gb RJ45
<b>Video</b>	AVI (compressed or uncompressed)
<b>Image sequence</b>	TIFF, JPG, RAW
<b>Ethernet control</b>	1 Gb
<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 Xcitem
<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>	Portable Control Unit
<b>Sensor</b>	Color / Mono
<b>Memory</b>	96 GB / 144 GB / 288 GB
<b>Shutter time</b>	1 µs (std) / 277 ns (subject to export restrictions)
<b>Internal SSD</b>	500 GB / 1 TB
<b>External SSD</b>	250 GB / 500 GB / 1 TB
<b>Lens mounts</b>	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
<b>Package type</b>	Instrumentation / Rugged
<b>Warranty</b>	1 yr (std) / 2 yr / 3 yr
<b>Internal Batteries</b>	Set of 2 batteries

## FRAME RATES, RESOLUTION and DURATION

FPS	Resolution	36GB	72GB	96GB	144GB	288GB
1,000	2048x1536	–	–	21.6 sec	32.4 sec	64.8 sec
2,000	2048x1536	–	–	10.8 sec	16.2 sec	32.4 sec
5,000	2048x1536	–	–	4.3 sec	6.5 sec	12.9 sec
7,500	2048x1536	–	–	2.9 sec	4.3 sec	8.6 sec
8,512	2048x1536	–	–	2.5 sec	3.8 sec	7.6 sec
9,942	1904x1422	–	–	2.6 sec	3.8 sec	7.7 sec
10,000	1904x1410	–	–	2.6 sec	3.8 sec	7.7 sec
12,742	1920x1080	–	–	2.5 sec	3.8 sec	7.6 sec
20,000	1344x978	–	–	2.6 sec	3.9 sec	7.8 sec
30,000	1064x798	–	–	2.7 sec	4.0 sec	8.1 sec
50,000	1064x474	–	–	2.7 sec	4.1 sec	8.2 sec
100,000	1064x228	–	–	2.8 sec	4.2 sec	8.5 sec
200,000	1064x102	–	–	3.2 sec	4.8 sec	9.5 sec
500,000	1232x24	–	–	4.6 sec	7.0 sec	13.9 sec
750,000	1120x12	–	–	6.8 sec	10.2 sec	20.4 sec
1,000,000	560x24	–	–	5.1 sec	7.7 sec	15.3 sec

*Note: Other resolutions and speeds are available.*



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