Extreme Performance for Research, Ballistics and Testing

6,642fps @ 2048x1536 | 20GPx/s throughput | ISO 16,000 / 125,000

i-SPEED 720R 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 720 camera is controlled both by PC and the new 7 Series touchscreen CDUe

FEATURES

- High resolution 2048x1536 pixel sensor (3.1MPx)
- 1080p resolution at 9,942 frames/second
- Up to 288 GB of on-board memory for long recordings
- Internal or external SSD drive for fast data transfer
- Microlens sensor for exceptional light sensitivity
- Wide Dynamic Range recording
- Global electronic shutter to 293 ns*
- 1 hour battery life
- Compatible with all Nikon F and Canon 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
- Upgrade path between models

* Subject to export regulations, shorter shutter speeds are available by request. Contact iX Cameras for more information.

ix-cameras.com

SPECIFICATIONS

IMAGER

Sensor type	Custom CMOS
Sensor resolution	2048 x 1536 pixel
Sensor size	27.972 mm x 20.736 mm
Sensor diagonal	34.82 mm
Pixel size	13.5 µm
Bit depth	12 bit (36 bit color)
Light sensitivity Mono (Gain off/on)	16,000 / 125,000
Light sensitivity Color (Gain off/on)	4,000 / 32,000
Maximum frame rate	1,000,000 fps
Shutter type	Global exposure
Shutter time, standard	1 µs minimum
Shutter time, fast mode	293 ns
WDR	Wide Dynamic Range

SYNCHRONIZATION and CAPTURE

Trigger	TTL T0 to 0-100%
Trigger modes	Circular, ROC, BROC
Sync	10 Hz – 200 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 sub 1 µs
IRIG sync	Camera sync to IRIG
Internal memory	72 GB standard, upgrade to 288 GB

PHYSICAL and ENVIRONMENTAL

Dimensions	
Instrumentation package	
inches	14.3 (W) x 6.2 (H) x 6.2 (L)
mm	363 (W) x 157 (H) x 154 (L)
Rugged package	
inches	14.75 (W) x 6.0 (H) x 5.75 (L)
mm	374 (W) x 150 (H) x 143.5 (L)
Weight	18.7 lb (8.5 kg) with battery
Input voltage	12-36 V
Power consumption	150 W nominal, 200 W max
Mounting	¼x20 and 3/8x16 tripod plate
Battery	2x 14.4 V 90 Wh
Battery life	1 hour
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
IP rating	IP 20
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
G-shock, Instrumentation package	10 G
G-shock, Rugged package	30 G @ 11 ms IEC 68-2-27 Ea, 30 G @ 2 ms IEC 68-2-29 Eb
Power input connector	6 pin Lemo
Trigger input	BNC 75 Ω
Feature connector	18 pin Lemo, trigger in / sync / sync out / exposure out / remote power

CONNECTIVITY

Video outputs	2x HD-SDI, HDMI
USB	USB 3
Network	1 Gb RJ45
Video	IXV, AVI (compressed or uncompressed)
Image sequence	TIFF, JPG, RAW
Ethernet control	1 Gb
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	72 GB / 96 GB / 144 GB / 288 GB
Shutter time	1 µs (std) / 293 ns (subject to export restrictions)
Internal SSD	500GB / 1TB / 2TB
External SSD	250GB / 500GB / 1TB / 2TB
Lens mounts	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
Package type	Instrumentation / Rugged
Warranty	1 yr (std) / 2 yr / 3 yr
Internal Batteries	Set of 2 batteries

FRAME RATES, RESOLUTION, and DURATION (in seconds)

Frame Speed	Resolution	72GB	96GB	144GB	288GB
1,000	2048x1536	16.2	21.6	32.4	64.8
2,000	2048x1536	8.1	10.8	16.2	32.4
5,000	2048x1536	3.2	4.3	6.5	12.9
6,642	2048x1536	2.4	3.2	4.9	9.7
7,500	1960x1428	2.5	3.3	4.9	9.8
9,942	1920x1080	2.4	3.3	4.9	9.8
10,000	1680x1242	2.5	3.3	4.9	9.9
15,000	1344x1008	2.5	3.4	5.1	10.1
20,000	1176x864	2.5	3.4	5.1	10.1
30,000	952x696	2.6	3.5	5.2	10.4
50,000	840x462	2.7	3.5	5.3	10.6
100,000	840x216	2.8	3.8	5.7	11.4
200,000	840x96	3.2	4.3	6.4	12.8
500,000	896x24	4.8	6.4	9.6	19.2
750,000	448x36	4.3	5.7	8.5	17.0
1,000,000	448x24	4.8	6.4	9.6	19.2

Note: Other resolutions and speeds are available.

iX Cameras