iX Cameras—a legacy built on innovation

iX Cameras is a world-leading technology and product company specializing in the field of high-speed (slow motion) imaging. Based on proprietary innovative technologies, we design, build, and sell cutting-edge, ultra-fast cameras and software for a wide range of advanced scientific research applications.

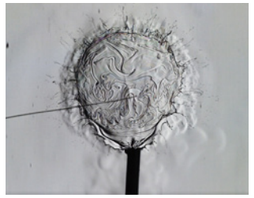
Advanced Sensor Technology

iX Cameras' Advanced Sensor Technology (AST) is the result of a collaboration between our engineering team and key strategic partners to create a unique process for high performance sensor development. AST applies proprietary sensor technology to produce the best light sensitivity, speed, and resolution in each sensor class developed for our cameras.

Advanced high-speed cameras for any application

i-SPEED cameras record without compromising high resolution at high recording speeds—capturing the fastest events while reducing motion blur. Our cameras are easy to operate in the lab, field, or test range to suit the requirements of every application.

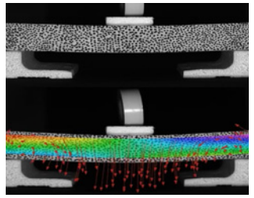
Fluid Dynamics
The combination of high resolution and integrated lighting control allows for perfect capture of fluids with zero motion blur.



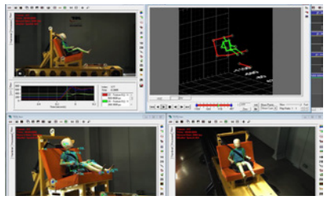
Courtesy: Linden Gledhill

Ballistics
With the highest pixel throughput available (27.1Gp/s), the 7 Series provides industry leading resolution values at high frame rates.

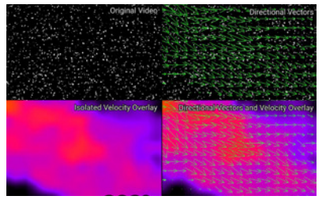
Digital Image Correlation (DIC)
The 7 Series cameras use the new AST high-resolution sensor, enabling small particle correlation with zero interpolation.



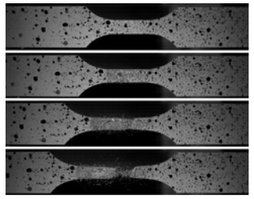
Motion Analysis
When accuracy of motion analysis is paramount, the high resolution, high dynamic range allows for perfect 2-D and 3-D analysis.



PIV
Large area medium pixel sensors are ideal for PIV applications, giving high resolutions as well as high sensitivity.

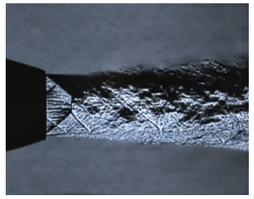


Scientific Research
The wealth of functions and features that the 7 Series offers enables the most extreme tests to be completed with ease.



Fragmentation
When the environment is tough the camera also needs to be tough. The new 7 Series provides a tough 30G case made from a solid billet of aluminum.

Schlieren
Traditional mirror and modern digital techniques both excel with the AST Sensor due to its high sensitivity and resolution.



Courtesy: Dr. Charles Tinney, Applied Research Laboratories, University of Texas at Austin and Dr. Nathan Murray, University of Mississippi

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United States | United Kingdom | China | India

 DS 07-2022

i-SPEED CAMERAS

World-class high-speed cameras for science and industry.

iX Cameras

A complete line of high-speed cameras

	i-SPEED 7 SERIES			i-SPEED 5 SERIES			i-SPEED 2 SERIES		
									
	i-SPEED 727	**i-SPEED 721**	**i-SPEED 717**	**i-SPEED 513**	**i-SPEED 510**	**i-SPEED 508**	**i-SPEED 203**	**i-SPEED 220**	**i-SPEED 210/211**
Throughput (GPx/Second)	**27.1**	**21**	**17**	**13**	**10**	**8**	**2.7**	**1.5**	**0.65**
Native image Resolution	**2072 x 1536 (3.2MPx)**	**2072 x 1536 (3.2MPx)**	**2072 x 1536 (3.2MPx)**	**1920 x 1080 (2.1MPx)**	**1920 x 1080 (2.1MPx)**	**1920 x 1080 (2.1MPx)**	**1280 x 864 (1.1MPx)**	**1600 x 1600 (2.6MPx)**	**1280 x 1024 (1.3MPx)**
Speed									
Maximum speed at full resolution	8,512 fps	6,642 fps	5,315 fps	6,382 fps	4,980 fps	3,980 fps	2,500 fps	600 fps	500 fps
Maximum speed	2.45 Million fps	2.45 Million fps	2.45 Million fps	1,000,000 fps	1,000,000 fps	1,000,000 fps	225,000 fps	204,100 fps	79,500 fps
Resolution at 5,000fps	2072 x 1536	2072 x 1536	2072 x 1536	1920 x 1080	1904x1080	1512x1080	1280x432	512x512	400x242
Resolution at 10,000fps	1920 x 1374	1680 x 1242	1512 x 1098	1344 x 984	1176 x 870	1064 x 768	1280 x 216	512 x 252	256 x 150
Resolution at 25,000fps	1176 x 882	1064 x 756	952 x 672	952 x 534	840 x 468	728 x 408	1280 x 84	256 x 158	128 x 68
Resolution at 100,000fps	840 x 294	840 x 216	672 x 216	504 x 216	392 x 204	336 x 198	1280 x 20	96 x 42	128 x 4
Resolution at 250,000fps	1064 x 78	840 x 72	672 x 72	504 x 78	392 x 72	336 x 66			
Record memory, maximum	288GB	288GB	288GB	144GB	144GB	144GB	16GB	4GB	4GB (210), 8GB (211)
Image characteristics									
Light sensitivity Mono (Gain off/on)	16,000 / 125,000	16,000 / 125,000	16,000 / 125,000	16,000/125,000	16,000/125,000	16,000/125,000	6,400	1,200	2,500
Light sensitivity Color (Gain off/on)	4,000 / 32,000	4,000 / 32,000	4,000 / 32,000	4,000/32,000	4,000/32,000	4,000/32,000	5,000	1,000	2,000
Minimum shutter speed (export controlled)	168ns	168ns	168ns	277ns	293ns	289ns			
Shutter speed standard	1 µs minimum	1 µs minimum	1 µs minimum	1µs	1µs	1µs	1µs	2µs	2µs
Bit depth	12 bit (36 bit color)	12 bit (36 bit color)	12 bit (36 bit color)	12bits	12bits	12bits	10bits	8bits	8bits
Pixel size	13.5 µm	13.5 µm	13.5 µm	13.5µm	13.5µm	13.5µm	13.7µm	8.0µm	14.0µm
Camera control and image management									
Non-volatile on-board SSD storage	2TB (optional)	2TB (optional)	2TB (optional)	8TB (optional)	8TB (optional)	8TB (optional)			
External removable xSSD for fast data transfer	2TB (optional)	2TB (optional)	2TB (optional)	2TB (optional)	2TB (optional)	2TB (optional)			
CDUe handheld display control	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)			
PC computer camera control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Saved formats	AVI, IXV, TIFF, JPG, RAW	AVI, IXV, TIFF, JPG, RAW	AVI, IXV, TIFF, JPG, RAW	AVI, IXV, TIFF, JPG, RAW	AVI, IXV, TIFF, JPG, RAW	AVI, IXV, TIFF, JPG, RAW	AVI, JPG, BMP, PNG, TIFF	AVI, JPG, BMP, DNG, PNG, TIFF	AVI, JPG, BMP, DNG, PNG, TIFF
Ethernet connection	1Gb	1Gb	1Gb	1 Gb	1 Gb	1 Gb	1 Gb	1 Gb	1 Gb
Live image via HDMI and HD-SDI	Yes	Yes	Yes	Yes	Yes	Yes			
Physical attributes									
Dimension inches (L x W x H)	14.75 x 5.75 x 6.0	14.75 x 5.75 x 6.0	14.75 x 5.75 x 6.0	12.0 x 5.0 x 5.1	12.0 x 5.0 x 5.1	12.0 x 5.0 x 5.1	4.7 x 2.6 x 2.6	2.6 x 2.5 x 2.5	210: 2.6 x 2.5 x 2.5 • 211: 3.6 x 3.7 x 2.7
Dimension mm (L x W x H)	374 x 143.5 x 150	374 x 143.5 x 150	374 x 143.5 x 150	305 x 127 x 129	305 x 127 x 129	305 x 127 x 129	120 x 65 x 65	66 x 64 x 64	210: 66 x 64 x 64 • 211: 92 x 94 x 69
Electromechanical shutter	F(D), F(G)	F(D), F(G)	F(D), F(G)						
Lens plates	F(D), F(G), C, EF	F(D), F(G), C, EF	F(D), F(G), C, EF	F(D), F(G), C, EF	F(D), F(G), C, EF	F(D), F(G), C, EF	F, F(G), C	F, F(G), C	F, F(G), C
G-shock rating	30G	30G	30G					100G (optional)	100G (optional)
Battery equipped	Yes (optional)	Yes (optional)	Yes (optional)						Yes (211)

Portable handheld touch screen camera control

The industry unique Control Display Unit (CDUe) high-resolution touchscreen tablet allows you to set up easily, change resolution, frame rate, and shutter speed, record, play back, and much more with the touch of a finger.

Swappable SSD storage

The i-SPEED 7 and i-SPEED 5 Series feature a swappable external Solid State Drive (xSSD). The xSSD has up to 2TB of space and is a secure way of saving data.

PC control software sets new standard

All the i-SPEED Series cameras are delivered with PC Control Software to allow the user complete control of the camera and motion analysis. A Premium software option is available for more advanced use such as synchronizing additional cameras or DAQ systems.

Electromechanical Shutter

This new feature of the i-SPEED 7 Series enables remote session referencing, automated calibration and provides sensor protection during lens changes. The electromechanical shutter makes the i-SPEED 7 Series ideal for situations where the camera must not be moved after calibration or is at a distance from the user.

Synchronized Integrated Lighting Control (SILC)*

SILC is a new feature in the i-SPEED Software Suite for i-SPEED 7 Series cameras—it ensures that the intensity of strobed illumination is maximized for power, and aligned in time (relative position and duration), for each frame of video. This means that the full power of a synchronized lighting system is unleashed, and illumination is not wasted when the camera sensor is dormant and not absorbing photons.

*Patent pending