

## The Highest-Resolution Compact High-Speed Cameras on the Market



### When Portability and Rapid Deployment Matter

The i-SPEED 220 and i-SPEED 221 represent the first cameras in a class of small footprint, easy-to-use, low-cost and very high-resolution cameras. A high-resolution 1600x1600 CMOS fast-transfer sensor allows the imagery of minute details even when zoomed in. The maximum full frame rate of 600 fps with both a global exposure shutter and optional G-shock housing makes this a true professional high-speed camera ideal for microscopy, robotics, auto-crash testing, graphics inspection, 3-D biomechanics, sports, web inspection, and more.

The i-SPEED 220/221 cameras fit in a briefcase, consume little power and create extremely nice images that can be zoomed and analyzed. Image transfer is simple via Ethernet.

The 1-hour battery that comes standard on the model 221 coupled with a standard laptop make this camera ideal for untethered portable field work. Add a layer of rugged durability with the optional Hi-G shock package.

### FEATURES

- High resolution 1600 x 1600 CMOS sensor
- Full resolution to 600 frames per second
- Maximum frame rate 204,100 frames per second
- Certified to 100 G shock, 10 G vibration
- Long recording times with up to 16 GB memory (Model 221 only)
- Small package fits on microscopes and in tight spaces
- Global exposure shutter
- Interchangeable C-mount lenses

# SPECIFICATIONS

i-SPEED® 220/221

## IMAGER

Frame rate at full resolution	600 fps
Shutter	Global Electronic Shutter: 2 µs to 1 s
Spectral bandwidth	400 - 900 nm
Amplification	Digital Gain 1 - 2 in 3 steps
Maximum resolution	1600 x 1600
Maximum frame rate	204,100 fps
Sensor diagonal	size 18.1mm
Pixel size	8 µm square
Bit depth	8 bit
Light sensitivity	1,200 mono / 1,000 color

## SYNCHRONIZATION and CAPTURE

220 Memory	2 GB / 4 GB
221 Memory	4 GB / 8 GB / 16 GB
Memory segments	16
Video	AVI (JPG, BMP)
Image sequence	TIFF, BMP, JPG, DNG, PNG

## PHYSICAL and ENVIRONMENTAL

220 Dimensions inches	2.5 (W) x 2.5 (H) x 2.6 (L)
Dimensions mm	64 (W) x 64 (H) x 66 (L)
Weight	0.66 lbs (300 g) without lens
221 Dimensions inches	3.7 (W) x 2.7 (H) x 3.6 (L)
Dimensions mm	94 (W) x 69 (H) x 92 (L)
Weight	2.00 lbs (900 g) without lens
Input voltage	10 - 30 VDC
Power consumption	210 = 7.5 w max 211 = 15 w max
Mounting	¼-20
Battery charge	Recording: 1 hr, standby: 1.5 hr (model 221 only)
Lens options	C mount / F mount / FG mount
G shock	Hi-G 100 G shock, 10 G vibration
Temperature °F	41 to 113 operation
Temperature °C	5 to 45 operation
Ethernet	1 Gb
Remote control	via supplied software

## CONNECTIVITY

IRIG input	IRIG-B via BNC*
Network	1 Gb RJ45
Power input	6 pin female connector
Trigger	External signal/switch triggering
Input/output	8 pin female I/O module (model 221 only)
Trigger modes	Video trigger, burst trigger mode

## PURCHASING OPTIONS

Sensor	Color / mono
220 Memory	2 GB / 4 GB
221 Memory	4 GB / 8 GB / 16 GB
Package	Standard / Hi-G rated
Warranty	1 yr (std) / 2 yr

\*Model 221 only

## FRAME RATES, RESOLUTION and DURATION

FPS	Resolution	Record Time(s)			
		2 GB	4 GB	8 GB	16GB
600	1600x1600	1.4 s	2.8 s	5.6 s	11.2 s
1,000	1600x900	1.5 s	3.0 s	6.0 s	11.9 s
1,150	1280x1024	1.4 s	2.8 s	5.7 s	11.4 s
1,400	1024x1024	1.5 s	2.9 s	5.8 s	11.7 s
1,640	1280x720	1.4 s	2.8 s	5.7 s	11.4 s
2,850	800x600	1.6 s	3.1 s	6.3 s	12.6 s
4,450	640x480	1.6 s	3.1 s	6.3 s	12.6 s
5,000	512x512	1.6 s	3.3 s	6.5 s	13.1 s
14,750	320x240	1.9 s	3.8 s	7.6 s	15.2 s
43,500	128x128	3.0 s	6.0 s	12.0 s	24.1 s
204,100	128x10	8.2 s	16.4 s	32.9 s	66.0 s

Note: Other resolutions and speeds are available.

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