

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

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	220 = 7.5 W max 221 = 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	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 [in seconds]

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

Note: Other resolutions and speeds are available.



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Specifications subject to change
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