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
**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 18.1 mm
- Pixel size: 8 μm square
- Bit depth: 8 bit
- Light sensitivity: 1,200 mono / 1,000 color

**SYNCHRONIZATION and CAPTURE**

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**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, standy: 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

Note: Other resolutions and speeds are available.

**FRAME RATES, RESOLUTION and DURATION**

<table>
<thead>
<tr>
<th>FPS</th>
<th>Resolution</th>
<th>Record Time(s)</th>
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<tbody>
<tr>
<td></td>
<td>2 GB</td>
<td>4 GB</td>
</tr>
<tr>
<td>600</td>
<td>1600x1600</td>
<td>1.4 s</td>
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<tr>
<td>1,000</td>
<td>1600x900</td>
<td>1.5 s</td>
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<tr>
<td>1,150</td>
<td>1280x1024</td>
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<td>1024x1024</td>
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<td>4,450</td>
<td>640x480</td>
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<td>5,000</td>
<td>512x512</td>
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<tr>
<td>14,750</td>
<td>320x240</td>
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</tr>
<tr>
<td>43,500</td>
<td>128x128</td>
<td>1.9 s</td>
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<tr>
<td>204,100</td>
<td>128x108</td>
<td>8.2 s</td>
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