

# Fastec HiSpec 2-HR

## 3 Megapixel High Resolution High-Speed Camera

### Fast Facts

- Outstanding Image Quality: Up to 523 frames per second at 1696 x 1710 resolution.
- Extremely Fast: 1150 frames per second at 1280 x 1024 resolution.
- Well Connected: GiGE compatible for easy remote camera control.
- Fits Anywhere: Only 69mm H x 93mm W x 92mm D, C-Mount and .9 kg.
- GiGE Vision: Industry control interface protocol standard. 



### High Resolution and High Speed

The HiSpec 2-HR provides superb quality images with its 1696 x 1710 resolution. And it is a perfect fit for a wide variety of high-speed motion applications with the capability to capture up to megapixel images at more than 1400 fps.

### Optional ImageBLITZ® Auto Trigger & Multi-Sequence Mode

Now it's easy to capture those elusive random events. Simply define a "region of interest" in the field of view and let the ImageBLITZ® trigger take over. Any change in the pre-set image area will stop the recording and save the event sequence. No special hardware or intrusive wiring is required. And the optional Multi-Sequence Mode allows the recording of multiple events by partitioning the memory into 2, 4, 8 or 16 individual recordings.

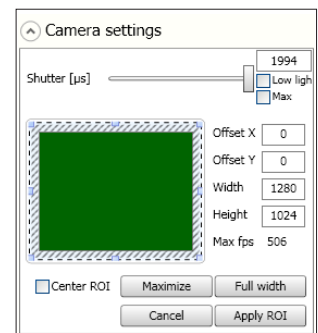
### Optional Hi-G Configuration

The HiSpec 2-HR has been certified to 100 "G" accelerations making it the ideal combination of ruggedness with small size. Fits into tight spaces for on-board automotive impact testing, military ordinance testing and other harsh environments. The built-in battery operates in three modes:

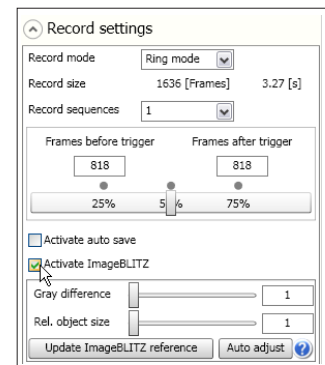
- Ensures fail-safe operation in the event of a power loss
- Allows "untethered" operation for up to 1 hour
- Has image retention mode of up to 24 hours

### Use It Everywhere

The HiSpec 2-HR's Gigabit Ethernet interface allows the user to operate multiple cameras from any standard Notebook / PC up to a distance of 100 meters. The HiSpec 2-HR is designed for easy operation in virtually any industrial or laboratory environment.



Easy to use  
Camera Control Software



ImageBLITZ® Auto Trigger  
feature based on selectable  
region of interest

*See what you've been missing*




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## 3 Megapixel High Resolution High-Speed Camera

### CAMERA SPECIFICATIONS

|                       |  |
|-----------------------|--|
| SYSTEM DESIGN         | Scaleable and network-compatible with standard and/or notebook PCs. Synchronous processing of multiple cameras       |
| SENSOR                | CMOS sensor, 1696 x 1710 pixels, 8-bit monochrome or RGB color with BAYER filter. Active pixel area 19.27mm diagonal |
| PIXEL SIZE            | 8 x 8 $\mu$ m  |
| LIGHT SENSITIVITY     | 1200 ISO monochrome, 400 ISO color   |
| SPECTRAL BANDWIDTH    | 400 - 900 nm   |
| RECORDING RATE        | Up to 523 fps at full resolution. Up to 285,000 fps at reduced resolution  |
| MEMORY                | 4GB. Optional upgrade to 8GB   |
| RECORDING TIME        | 3.2 seconds at full resolution. Longer record times with variable resolution and frame rates                         |
| SHUTTER               | Global electronic shutter from 2 $\mu$ sec to 1 second in 2 $\mu$ sec steps  |
| LENS MOUNT            | C-Mount or F-Mount   |
| FRAME FORMAT          | BMP, TIF, DNG, JPG or AVI file format  |
| CAMERA/PC INTERFACE   | 1000/100 Ethernet interface (Gigabit Ethernet)   |
| PHASE LOCK            | Multiple cameras can be synchronized to a master camera or to an external source such as optional IRIG-B             |
| TRIGGER               | Contact closure, external TTL signal or optional ImageBLITZ® Auto Trigger software                                   |
| CAMERA SIZE           | 69mm H x 93mm W x 92mm D with C-Mount. 69mm H x 93mm W x 128mm D with F-Mount  |
| CAMERA WEIGHT         | .9 kg. without lens  |
| OPERATING ENVIRONMENT | + 5° to + 45°C   |
| POWER SUPPLY          | 10 - 30V DC external power supply  |
| POWER CONSUMPTION     | 15W maximum  |

### SOFTWARE SPECIFICATIONS

|                         |  |
|-------------------------|--|
| CAMERA CONTROL SOFTWARE | HiSpec 2 Director software for Windows 2000/XP/Vista   |
| IMAGE AMPLIFICATION     | Digital gain from 1 – 4 in 8 steps   |
| OPTIONAL SDK            | GiGE Vision compatible  |
| CONNECTOR POSITION      | Select from rear or side connector positions   |

### OPTIONS AVAILABLE

|                     |   |
|---------------------|---|
| MEMORY              | 8GB   |
| AUTO TRIGGER        | ImageBLITZ® Software – Auto Trigger                       |
| MULTI-SEQUENCE MODE | 2, 4, 8 or 16 individual recording partitionsRange timing |
| IRIG-B              | standard  |
| HI-G CERTIFIED      | Certified for shock to 100g for 20ms, vibration to 10g    |
| F-MOUNT ADAPTER     | Convert from C-Mount lenses to F-Mount lenses             |
| CONNECTOR POSITION  | Select from rear or side connector positions              |

### TYPICAL RESOLUTIONS & FRAME RATES

| Maximum Frame Rate | Resolution  | 4GB STANDARD                    |              | 8GB OPTION                      |              |
|--------------------|-------------|---------------------------------|--------------|---------------------------------|--------------|
|                    |             | Recording Time @ Max Frame Rate | Total Frames | Recording Time @ Max Frame Rate | Total Frames |
| 523 fps            | 1696 x 1710 | 2.8 sec.                        | 1,480        | 5.7 sec.                        | 2,960        |
| 1,150 fps          | 1280 x 1024 | 2.8 sec.                        | 3,277        | 5.7 sec.                        | 6,555        |
| 1,633 fps          | 1280 x 720  | 2.8 sec.                        | 4,654        | 5.7 sec.                        | 9,324        |
| 1,405 fps          | 1024 x 1024 | 2.9 sec.                        | 4,075        | 5.8 sec.                        | 8,191        |
| 4,453 fps          | 640 x 480   | 3.1 sec.                        | 13,982       | 6.3 sec.                        | 27,965       |
| 5,001 fps          | 512 x 512   | 3.3 sec.                        | 16,403       | 6.6 sec.                        | 33,007       |
| 14,781 fps         | 320 x 240   | 3.8 sec.                        | 55,872       | 7.6 sec.                        | 111,892      |
| 298,851 fps        | 128 x 2     | 56.1 sec.                       | 16,777,495   | 114.0 sec.                      | 34,069,014   |

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