# Fastec HiSpec 2

## *Innovative Low-Light High-Speed Camera*

## Fast Facts

- Excellent Light Sensitivity:  3,200 ISO monochrome, 1,600 ISO color.
- Outstanding Image Quality:  Up to 506 frames per second at 1280 x 1024 resolution.
- Extremely Fast:  Adjustable frame rate up to 112,000 frames per second.
- 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.  **GiGE** VISION

### Forget About Bright Lights

Until now, lighting has sometimes been a challenge with high-speed imaging.  No more! The photo-sensitivity of the HiSpec 2 enables high-speed recordings at 1.3 megapixels under normal lighting conditions.

### Optional ImageBLITZ® Auto Trigger

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.
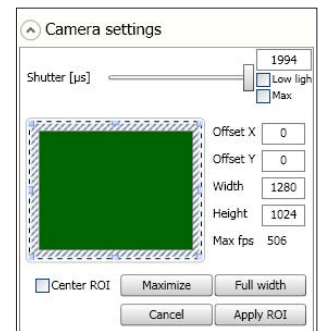
### Optional Hi-G Configuration

The HiSpec 2 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:
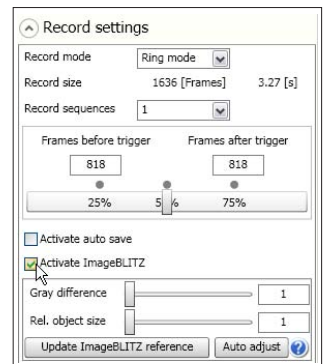
- Ensures fail-safe operation in the event of a power loss
- Allows "untethered" operation for up to 1 hour
- Has image retention mode of up to 24 hours

### Use it Everywhere

The HiSpec 2'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 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*

**FASTEC IMAGING™**

# Fastec HiSpec 2
## Innovative Low-Light 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, 1280 x 1024 pixels, 10-bit monochrome or RGB color with BAYER filter.  Active pixel area 22.9mm diagonal |
| PIXEL SIZE | 14 x 14 μm |
| LIGHT SENSITIVITY | 3,200 ISO monochrome, 1,600 ISO color |
| SPECTRAL BANDWIDTH | 400 - 900 nm |
| RECORDING RATE | Up to 506 fps at full resolution, up to 112,183 fps at reduced resolution |
| MEMORY | 4GB standard.  Optional upgrade to 8GB |
| RECORDING TIME | 6.4 seconds at full resolution.  Longer record times with variable resolution and frame rates |
| SHUTTER | Global electronic shutter from 2μsec to 1 second in 2μsec 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 93mm D with C-Mount.  63mm 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 Director 2 software for Windows 7/Vista/XP |
| IMAGE AMPLIFICATION | Digital gain from 1 – 4 in 8 steps |
| OPTIONAL SDK | GiGE Vision compatible  *GiGE VISION* |

## OPTIONS AVAILABLE

| | |
|---|---|
| MEMORY | 8GB |
| AUTO TRIGGER | ImageBLITZ® Software – Auto Trigger |
| MULTI-SEQUENCE MODE | 2, 4, 8 or 16 individual recording partitions |
| IRIG-B | Range timing 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 |

## 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 |
| 506 fps | 1280 x 1024 | 6.5 sec. | 3,274 | 12.9 sec. | 6,550 |
| 718 fps | 1280 x 720 | 6.5 sec. | 4,656 | 13.0 sec. | 9,317 |
| 1,008 fps | 1280 x 512 | 6.5 sec. | 6,548 | 13.0 sec. | 13,103 |
| 1,319 fps | 768 x 600 | 7.1 sec. | 9,313 | 14.1 sec. | 18,635 |
| 2,312 fps | 480 x 480 | 8.1 sec. | 18,627 | 16.1 sec. | 37,271 |
| 5,672 fps | 320 x 240 | 9.9 sec. | 55,879 | 19.7 sec. | 111,813 |
| 13,540 fps | 144 x 144 | 15.3 sec. | 206,967 | 30.6 sec. | 414,125 |
| 112,183 fps | 128 x 2 | 149.4 sec. | 16,760,140 | 300 sec. | 33,654,900 |

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