FASTEC IMAGING™

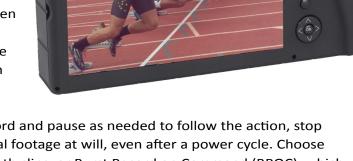## HIGH-SPEED IMAGING IN THE PALM OF YOUR HAND

FASTEC TS4

TS4 At A Glance

- Long Record and Standard Modes in one camera!
- 1280 x 1024 CMOS 510 fps sensor
- Hand-held, battery-powered, with built-in LCD
- Full resolution: Stream at 366 fps to on-board SSD
- Camera control via touch screen, built-in web interface or FasMotion application

Key Features

- **Standard Record Mode – Classic High-Speed Imaging** – The TS4 records ultra-sharp 1280 x 1024 mono or vivid color images at over 500 frames per second to 8GB of image memory.

- **Long Record (LR) Mode** – with streaming speeds of up to 366 frames per second at full resolution and 1541 fps at VGA resolution to the built-in SSD, the Fastec TS4 lets you see what you have been missing with normal-speed video. Unlike traditional high-speed camera systems, which only record for a few seconds and require careful triggering, the Fastec TS4 can record continuously at high speed for many minutes, or hours at reduced resolutions.

- **FasCorder Mode** – Operate the camera as you would a common camcorder! This intuitive Long Record feature allows you to record and pause as needed to follow the action, stop recording and review what you have, and then append additional footage at will, even after a power cycle. Choose between Record on Command (ROC), which records varying length clips, or Burst Record on Command (BROC), which records fixed-length clips. In Playback, all of the recordings are browsable on the timeline. You may play or scrub through them continuously or jump to the beginning of each, making it easy to find the footage you wish to view

- **FasFire** – Ultra-fast save times to the SSD or SD card *while recording* high-speed bursts of hundreds or even thousands of images at a time, the TS4 is always ready for the next high-speed snapshot!

- **Portability** – With its small form factor, battery operation, large built-in LCD touch screen and intuitive on-screen menu system, the TS4 puts the power of both a traditional high-speed camera *and* long-record system into the palm of your hand. The TS4 is truly a point-and-shoot high-speed camera solution.

- **Flexible Control** – The TS4 can be operated as a self-contained, handheld camera, or controlled over Gigabit Ethernet via Fastec FasMotion software on your PC or Mac or via the built-in web interface with your favorite web browser on your PC, Mac, tablet, or even your smartphone.

- **High-Performance Image Transfer** – The FasMotion application makes workflow a breeze with transfers of uncompressed images via Gigabit Ethernet at rates of 50–80MB/sec to moderately equipped PCs.

- **Multiple Storage Options** – The TS4 features both a USB port and an SD port for quick and easy image downloads to USB flash drives, SD cards, or portable hard drives. The built-in SSD provides 512GB or 1TB of lightning-fast non-volatile internal storage.

Fastec TS4 Specifications

Standard Features

System Design	Handheld, battery-powered, portable with multiple I/O ports and media options
Operating Modes	Standard mode (record to high-speed memory), Long Record mode (record to SSD)
Sensor	10-bit CMOS sensor with 14 μm square pixels, color or monochrome
Resolution	1280 x 1024 pixels maximum
Light Sensitivity	3,200 ISO monochrome, 1,600 ISO color
Record Rate	24 to 510 fps at 1280 x 1024, over 60,000 fps at reduced resolutions
Shutter	Global electronic shutter from 2μsec to 41.667ms
Image Memory	8GB
Built-In Storage	Solid State Drive (SSD): 512GB
Removable Storage	SD card (SDHC: 32GB maximum), USB Flash drive
Session Length	256MB to 8GB in Normal Mode, or up to full SSD size in Long Record Mode
File Formats	Stacks — BMP, DNG, JPEG, TIFF (processed or raw); Video — AVI, CAP (raw)
Still Image Format	JPEG
Lens Mount	C-Mount (standard), F-Mount or PL-Mount (optional)
Built-in Monitor	High resolution, 178mm (7") diagonal LCD
Communication Ports	USB 2.0 device (micro-B), Ethernet (10/100/1000Base-T)
Control Software	FasMotion (PC/Mac application), web interface (browser on all platforms)
Six External I/O Ports	Markers, Trigger In/Out, Sync In/Out, Arm In/Out (LVTTL (3.3V) or switch closure)
Marker Data Views	Camera display info line, playback timeline, FasMotion o-scope mode, XML file
Video Out	HDMI (1080p/60, 1080p/30, 720p/60)
Construction	Anodized machined aluminum housing
Power	Rechargeable Li-ion battery (4+ hours non-LR), or 10-26 VDC external power
Power Consumption	40W maximum
Operating Environment	+5°C to +40°C
Size and Weight	228mm (9.0") W x 114mm (4.5") H x 89mm (3.5") D. 1.8 Kg (3.9 lbs.)

Optional Features

WiFi	802.11 b/g/n, Security: open, WEP, WPA(2) - PSK
Lens Mounts	F-Mount, PL-Mount
TimeStamps and Sync	IRIG-B (modulated and unmodulated)
Built-In Storage	Solid State Drive: 1TB

Sample Record Rates and Times

	Standard Mode		Long Record Mode*	
Resolution	Frame Rate	Recording Time	Frame Rate	Recording Time
1280 x 1024	510fps (Max)	12.9sec	366fps (Max)	17min 50sec
1280 x 1024	250fps	26.1sec	125fps	52min 3sec
1280 x 720	725fps (Max)	12.8sec	518fps (Max)	17min 52sec
1280 x 720	250fps	37.1sec	250fps	37min
800 x 600	1299fps (Max)	13.7sec	993fps (Max)	17min 47sec
800 x 600	250fps	71.2sec	250fps	1hr 10min 36sec
640 x 480	1959fps (Max)	14.2sec	1541fps (Max)	18min 4sec
640 x 480	250fps	1min 50.5sec	250fps	1hr 51min 5sec
320 x 240	6259fps (Max)	17.8sec	6167fps (Max)	17min 47sec
320 x 240	250fps	7min 24.7sec	250fps	7hr 18min 31sec

All Specifications subject to change. All record times and rates assume 8-bit data.

*LR Record times assume 512GB SSD. Multiply by 2 for approximate times using a 1TB SSD.

Fastec Imaging
17150 Via Del Campo, Ste. 301
San Diego, CA 92127 USA
1.858.592.2342