

# FASTEC IMAGING™

HIGH-SPEED IMAGING IN THE PALM OF YOUR HAND



## FASTEC TS5

### TS5 At A Glance

- Handheld, battery-powered, with built-in touchscreen LCD
- TS5-Q models record Quad HD (2560 x 1440) @ 359fps
- TS5-H models record full 1080p @ 634fps
- Advanced 5-Megapixel CMOS sensor
- Multiple recording modes to suit any situation
- Control via powerful FasMotion Software on PC or Mac or via built-in web interface
- Long Record Option: Stream video directly to an SSD

## Key Features

- **Performance to fit** – With four models from SVGA (800x600) to QSXGA (2560x2048), there is a *TS5* that is right for your needs. All models use an advanced 5-Megapixel sensor that produces remarkably clean images at all resolutions. Binning and sub-sampling features of the sensor give it great flexibility and sensitivity.
- **FasFire Mode** – Ultra-fast save times to the onboard media *while simultaneously recording* high-speed bursts of hundreds or even thousands of images at a time, the *TS5* 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 *TS5* puts the power of both a traditional high-speed camera *and* long-record system into the palm of your hand. The *TS5* is truly a point-and-shoot high-speed camera solution.
- **Flexible Control** – The *TS5* 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 *TS5* 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 up to 1 terabyte (TB) of lightning-fast non-volatile internal storage.
- **Long Record Option** – Stream video to a built-in SSD at over 200 frames per second at HD 1080p resolution and 520 fps at HD 720p resolution. Unlike traditional high-speed camera systems that record for a only few seconds and require careful triggering, the Fastec *TS5* with LR option can record at high speed for many minutes, or hours at reduced resolutions.
- **FasCorder Mode** – The *TS5* allows you to acquire multiple high-speed “takes” of varied lengths, from a few seconds to many minutes, without having to fuss with any settings. Just click to record, click again to pause...as often and as quickly as the situation demands.



# Fastec TS5 Specifications

## Standard Features

<b>System Design</b>	Handheld, battery-powered, portable with touchscreen LCD
<b>Sensor</b>	12-bit CMOS sensor with 5µm square pixels, color or monochrome
<b>Sensor Modes</b>	Standard, binning 2x2, 4x4; sub-sampling 2x2, 4x4; 2x bin + 2x sub
<b>Resolution by Model</b>	TS5-Q: QSXGA 2560 x 2048; TS5-H: HD 1920x1080; -S: SXGA 1280x1024; -L SVGA 800x600
<b>Light Sensitivity</b>	1600 to 12,800* ISO monochrome, 800 to 6400* ISO color (depending on mode)
<b>Shutter</b>	Global electronic shutter from 3µsec to 41.654ms
<b>Image Memory</b>	4GB (std.) or 8GB (optional)
<b>Removable Storage</b>	SD card (SDHC: 32GB maximum); USB flash drive
<b>File Formats</b>	Stacks – BMP, DNG, JPEG, TIFF, TIFF(raw); Video – AVI, CAP(raw); Still – JPEG
<b>Lens Mounts</b>	C-mount (std.), F-mount or PL-mount (optional)
<b>Built-in Monitor</b>	High resolution, 178mm (7”) diagonal LCD
<b>Communication Ports</b>	USB 2.0 device (micro-B), Ethernet (10/100/1000Base-T)
<b>Control Software</b>	FasMotion (PC/Mac application), web interface (browser on all platforms)
<b>Six External I/O Ports</b>	Markers, Trigger In/Out, Sync In/Out, Arm In/Out (LVTTTL (3.3V) or switch closure)
<b>Marker Data Views</b>	Camera display info line, playback timeline, FasMotion o-scope mode, XML file
<b>Video Out</b>	HDMI (1080p30, 1080p60, 720p, 480p)
<b>Construction</b>	Anodized machined aluminum housing
<b>Power</b>	Rechargeable Internal Li-ion battery or 10-26 VDC external
<b>Power Consumption</b>	42W maximum
<b>Operating Environment</b>	+5°C to +40°C
<b>Size and Weight</b>	228mm (9.0”) W x 114mm (4.5”) H x 89mm (3.5”) D. 1.8 Kg (3.9 lbs.)

## Optional Features

<b>WiFi</b>	802.11 b/g/n, Security: open, WEP, WPA(2) - PSK
<b>Built-In Storage</b>	Solid State Drive (SSD): 256GB, 512GB, 1TB
<b>Long Record</b>	Streams uncompressed video to SSD at 480MB/sec; 8GB mem. + SSD required; ships with an external battery pack

\*Higher ISO settings available via bit-shifting and analog gains result in lower SNR. Binning modes reduce noise.

## Sample Record Rates and Times

	Resolution	Normal Mode*		Long Record Mode**		
		Max Frame Rate	Recording Time	Max Frame Rate	Recording Time	
TS5-Q: QSXGA	2560 x 2048 (QSXGA)	253 fps	6.3 sec	91	34.9 min	
	2560 x 1440 (QHD)	359 fps	6.3 sec	130	34.7 min	
	TS5-H: HD 1080p	1920 x 1080 (HD: 1080p)	634 fps	6.5 sec	231	34.7 min
		1440 x 1080	634 fps	8.5 sec	308	34.7 min
TS5-S: SXGA	1280 x 1024 (SXGA)	668 fps	9.7 sec	366	34.7 min	
	1280 x 960	712 fps	9.6 sec	390	34.7 min	
	1280 x 720 (HD: 720p)	943 fps	9.7 sec	520	34.7 min	
TS5-L: SVGA	1024 x 1024	668 fps	12.0 sec	457	34.7 min	
	1024 x 768 (XGA)	886 fps	12.0 sec	610	34.7 min	
	800 x 600 (SVGA)	1126 fps	15.5 sec	942	36.5 min	
	800 x 450	1488 fps	15.7 sec	1246	36.8 min	
	640 x 576 (PAL)	1172 fps	19.4 sec	980	46.0 min	
	640x480 (VGA)	1398 fps	19.5 sec	1170	46.3 min	
	512 x 384	1732 fps	24.7 sec	1451	58.6 min	
	320 x 240	2697 fps	40.6 sec	2268	34.3 min	

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

\*Record times assume 8GB of memory. Divide Record times by 2 for approximate 4GB record times.

\*\*LR Record times assume Long Record option and 1TB SSD. Divide by 2 if using a 512GB SSD.

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