

FASTEC IMAGING™

HIGH-SPEED IMAGING IN THE PALM OF YOUR HAND

Fastec TS3



TS3 At A Glance

- Handheld, battery-powered, built-in LCD
- 1280 x 1024 at 510 fps CMOS sensor
- Up to 512GB of onboard image storage
- Multiple removable image storage options
- Camera control via touch screen, built-in web interface or PC application

Key Features

- **Portability** – With its small form factor, battery operation, large built-in LCD touch screen and intuitive on-screen menu system, the TS3 puts the power of a traditional high-speed camera in the palm of your hand. The TS3 is truly a point-and-shoot high-speed camera.
- **High-Resolution, High-Speed Images** – The TS3-S records ultra-sharp 1280 x 1024 mono or vivid color images at over 500 frames per second. With recording rates in excess of 60,000 frames per second at reduced resolutions, almost no event is too fast for the TS3-S. The economical TS3-L records at a maximum resolution of 800 x 600 and frame rates up to 1250 fps.
- **Flexible Control** – The TS3 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.
- **FasFire Mode** – Ultra-fast save times to an SSD or SD card **while recording** high-speed bursts of hundreds or even thousands of images at a time, the TS3 is always ready for the next high-speed snapshot!
- **Multiple Storage Options** – The TS3 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. An optional built-in SSD (solid state drive) provides for up to 512GB of lightning-fast non-volatile internal storage. Shoot all day long without having to download to a computer.
- **High-Performance Image Transfer** – With download rates exceeding 10GB per minute to the optional internal SSD, or just seconds for short clips, you will always be ready to take the next shot with the TS3! The FasMotion application makes workflow a breeze with transfers of uncompressed images via Gigabit Ethernet at rates of 50–80MB/s to moderately equipped PCs.

TS3 Specifications

Standard Features

System Design	Handheld, battery-powered, portable with multiple PC I/O ports and media options
Sensor	10-bit CMOS sensor with 14µm square pixels, color or monochrome
Resolution	1280 x 1024 pixels maximum (TS3-S), 800 x 600 maximum (TS3-L)
Light Sensitivity	3,200 ISO monochrome, 1,600 ISO color
Record Rate	24 to over 60,000 fps (TS3-S), 24 to 1250 fps (TS3-L)
Shutter	Global electronic shutter from 2µsec to 41.667ms
Image Memory	4GB. Optional upgrade to 8GB
Removable Storage	SD card (SDHC: 32GB maximum), USB Flash drive
Session Length	256MB up to full image memory
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
PC 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 (LVTTTL (3.3V) or switch closure)
Marker Data Views	Camera display info line, playback timeline, FasMotion o-scope mode, XML file
Video Out	HDMI (1080P, 720P, 480P)
Construction	Anodized machined aluminum housing
Power	Rechargeable Li-ion battery (4+ hours operating), 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
Image Memory	Upgrade to 8GB total
Built-In Storage	Solid State Drive (SSD) 256GB or 512GB
Lens Mounts	F-Mount, PL-Mount
TimeStamps and Sync	IRIG-B (modulated and unmodulated)

TS3-S

Sample Frame Rates and Resolutions

TS3-L

Frame Rate	Resolution		4GB / 8GB Memory	
	H.	V.	Time: sec.	Frames
Rate: fps				
125	1280	1024	25.9 / 52.2	3240 / 6517
250	1280	1024	13.0 / 26.0	3240 / 6517
510*	1280	1024	6.4 / 12.8	3240 / 6517
725*	1280	720	6.4 / 12.8	4608 / 9269
1250	800	600	7.1 / 14.2	8848 / 17796
1950	640	480	7.1 / 14.3	13825 / 27805
2150	512	512	7.5 / 15.0	16201 / 32583
4000	416	312	8.2 / 17.5	32719 / 69994
5000	366	274	8.4 / 17.0	42113 / 84965
10000	228	170	10.9 / 22.0	109433 / 220082
20000	162	102	12.7 / 25.5	253326 / 509466

Frame Rate	Resolution		4GB / 8GB Memory	
	H.	V.	Time: sec.	Frames
Rate: fps				
125	800	600	70.8 / 142.4	8848 / 17796
250	800	600	35.4 / 71.2	8848 / 17796
500	800	600	17.7 / 35.6	8848 / 17796
1000	800	600	8.8 / 17.8	8848 / 17796
1250*	800	600	7.1 / 14.2	8848 / 17796
125	640	480	110.6 / 222.6	13825 / 27825
250	640	480	55.3 / 111.3	13825 / 27825
500	640	480	27.7 / 55.7	13825 / 27825
1000	640	480	13.8 / 27.8	13825 / 27825
1250*	640	480	11.1 / 22.3	13825 / 27825
250	256	256	259.9 / 521.1	64784 / 130288

Record times and frames calculated for 8-bit pixel depth.

* Maximum frame rate