



eosens TS5

High-Speed Handheld Camera



High-Speed Handheld Camera

Performance to Fit

With four models, there is an eosens TS5 that is perfect for your needs. All models use an advanced 5-Megapixel sensor that produces remarkably clean images at all resolutions.

Easy to Use

With its small form factor, battery operation, large built-in LCD screen and intuitive on-screen menu system, the eosens TS5 puts the power of both a traditional high-speed camera and long-record system into the palm of your hand.

Ultra-Fast Save Times

While the eosens TS5 is saving to the onboard media you can simultaneously record your next high-speed snapshot. Uncompressed images are transferred via the Gigabit Ethernet at rates of 50 - 80 MB/sec, depending on your PC performance.

Long Record Option

Unlike traditional high-speed camera systems that record for only a few seconds, the long record option allows the eosens TS5 to record at high speed for more than 30 minutes, or even hours at reduced resolutions.

eosens TS5 Advantages at a Glance:

- Battery powered handheld high-speed camera
- Built-in LCD screen with on-screen menu system
- TS5-H and TS5-Q models record full 1080 px at 634 fps
- Advanced 5-Megapixel CMOS sensor
- Multiple recording modes to suit any situation
- More than 30 minutes recording time at full resolution and speed with long record option

Technical Data

(More detailed specifications are available on request)

eosens TS5	
System design	Handheld, battery-powered, portable with touchscreen LCD
Sensor	12-bit CMOS sensor with 5 µm square pixels, color or monochrome
Sensor Modes	Standard, binning 2x2, 4x4; sub-sampling 2x2, 4x4; 2x bin + 2x sub
Resolution by Model	TS5-Q: QSXGA 2,560 x 2,048 pixel; TS5-H: HD 1,920 x 1,080 pixel; TS5-S: SXGA 1,280 x 1,024 pixel; TS5-L: SVGA 800 x 600 pixel
Light Sensitivity	1,600 to 12,800* ISO monochrome, 800 to 6,400* ISO color (depending on mode)
Shutter	Global electronic shutter from 3 µsec to 41.654 ms
Image Memory	4 GB, optional 8 GB
Removable Storage	SDHC - 32GB maximum; USB flash drive
File Formats	Stacks – BMP, DNG, JPEG, TIFF, TIFF (raw); Video – AVI, CAP (raw); Still – JPEG
Lens Mounts	C-Mount, optional F-Mount or PL-Mount
Built-in Monitor	High resolution, 178 mm (7") diagonal LCD
Communication Ports	USB 2.0 device (micro-B), Ethernet (10/100/1000 Base-T)
Control Software	Mac, Windows or Linux OS compatible via web browser
Six External I/O Ports	Markers, Trigger In/Out, Sync In/Out, Arm In/Out (LVTTTL (3.3V) or switch closure)
Video Out	HDMI (1080P, 720P, 480P)
Construction	anodized machined aluminum housing
Power	rechargeable Lithium-Ion Pack – 4 hours, or 10 - 26 VDC external power supply
Power Consumption	42W
Operating Environment	5°C ... 40°C
Camera Size	228 x 114 x 89 mm
Weight	1.8 kg, without lens

Optional Extensions

WiFi	802.11 b/g/n, Security: open, WEP, WPA(2) - PSK Solid
Solid State Drive (SSD)	256 GB, 512 GB or 1 TB
Long Record Option	Streams uncompressed video to SSD at 480 MB/sec; 8 GB memory and SSD required; ships with an external battery pack

Sample Record Rates and Times

Model	Resolution	Frame Rate	Recording Time
Normal Mode with 8 GB memory			
TS5-Q	2,560 x 2,048 px	253 fps	6.3 sec
	2,560 x 1,440 px	359 fps	6.3 sec
TS5-H	1,920 x 1,080 px	634 fps	6.5 sec
	1,440 x 1,080 px	634 fps	8.5 sec
TS5-S	1,280 x 1,024 px	668 fps	9.7 sec
	1,024 x 768 px	886 fps	12.0 sec
TS5-L	800 x 600 px	1,126 fps	15.5 sec
	512 x 384 px	1,732 fps	24.7 sec
Long Record Mode with 1 TB SSD			
TS5-Q	2,560 x 1,440 px	130 fps	34.7 min
TS5-H	1,440 x 1,080 px	308 fps	34.7 min
TS5-S	1,024 x 768 px	610 fps	34.7 min
TS5-L	320 x 240 px	5,000 fps	42.8 min

MIKROTRON GmbH

MIKROTRON GmbH provides a full range of high-speed imaging solutions for challenging applications in industry, engineering, science and sports. The company's extreme slow-motion recording enables customers to optimize manufacturing processes, improve product design, revolutionize quality management and analyze motion.

Germany

Landshuter Str. 20-22
D-85716 Unterschleißheim
Phone: +49(0)89-726342-00
E-Mail: info@mikrotron.de
Web: www.mikrotron.de

North America

14032 Hermosillo Way
US-Poway, CA 92064
Phone: +1-858-774-1176
E-Mail: steve.ferrell@mikrotron.de
Web: www.mikrotron.de





eosens TS3 100-L

High-Speed Handheld Camera



High-Speed Handheld Camera

Suited for Various Applications

With its small form factor, battery operation, large built-in LCD screen and intuitive on-screen menu system, the eosens TS3 100-L puts the power of a traditional high-speed camera in the palm of your hand. The eosens TS3 is truly a point-and-shoot high-speed camera.

Detailed High-Speed Images

The eosens TS3 100-L records up to 1,250 fps at 800 x 600 resolution, providing ultra-sharp images.

Flexible and Easy to Use

The eosens TS3 100-L can be operated as a self-contained, handheld camera, or controlled over Gigabit Ethernet using a PC or Mac. The camera can be operated over the internet as well as wirelessly while using any device with a web browser.

Multiple Storage Options

The eosens TS3 100-L features USB-ports, SATA-ports and a SD-card slot to allow easy downloads of images and videos to thumb drives, SD-cards or portable hard drives. Additionally, an optional built-in SSD (Solid State Drive) provides for up to 256 GB of non-volatile internal storage. This enables high-speed recordings without having an interim download to a computer.

eosens TS3 100-L Advantages at a Glance:

- Battery powered handheld high-speed camera
 - Built-in LCD-screen with on-screen menu system
 - 1,250 frames per second at 800 (H) x 600 (V) pixel resolution
 - Up to 14 seconds onboard Recording Memory at full resolution and speed
 - Up to 512 GB of onboard image storage
 - Multiple removable storage options
 - Web camera control via browser
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Technical Data

(More detailed specifications are available on request)

	eosens TS3 100-L
System design	stand-alone, battery powered, portable with multiple I/O ports
Sensor	10-bit CMOS sensor with 14 µm square pixel, color or monochrome
Resolution	800 (H) x 600 (V)
Light sensitivity	3,200 ISO monochrome, 1,600 ISO color
Image speed	1 – 1,250 fps at full 800 (H) x 600 (V) resolution
Recording time	7 s at full resolution and full speed, extended recording times at reduced resolution and/or frame rate
Shutter	global electronic shutter from 2 µs to > 40 ms
Image memory	4 GB, optional 8 GB
Removable storage	SDHC, 32 GB maximum
Memory partition	1, 2, 4, 8 or 16 individual recording partitions
Frame storage	Stack – JPG, TIF, BMP, DNG Video – AVI, CAP (raw)
Still image format	JPEG
Lens mount	C-Mount or F-Mount and PL-Mount
Built-in monitor	high resolution, 178 mm (7") diag. LCD
PC I/O ports	USB (1 Host & 1 Device), SD-Card, Ethernet (10/100/1000 Base-T)
PC-Control Software	Mac, Windows or Linux OS compatible via web browser or custom app.
Trigger	contact closure or low voltage TTL (3.3 V rising or falling)
External I/O sync	Trigger In/Out, Sync In/Out, Arm In/Out, (inputs via BNC)
Video out	HDMI (1080P, 720P, 480P)
Construction	machined aluminum housing
Power	rechargeable Lithium-Ion Pack – 4 hours, or 10 – 26 V DC external power supply
Power consumption	40 W
Camera body temperature	+5 ... 40 °C
Camera size	228 x 114 x 89 mm
Weight	1.8 kg, without lens

fps = frames per second

Optional Extensions

- Ring Buffer extension up to 14 s recording time at full resolution and full speed
- Solid State Drive (SSD) with 256 GB or 512 GB

MIKROTRON GmbH

MIKROTRON is a renowned manufacturer of small and robust high-speed cameras on the international industrial image processing market. Due to their outstanding performance characteristics the cameras are perfectly suited for usage in industrial and scientific applications, as well as in sports analysis, advertisements or documentaries.

Germany

Landshuter Str. 20-22
D-85716 Unterschleissheim
Phone: +49(0)89-726342-00
E-Mail: info@mikrotron.de
Web: www.mikrotron.de

North America

12172 Caddy Row, Ste. 100
San Diego, CA 92128 - USA
Phone: +1(0)858-521-0496
E-Mail: steve.ferrell@mikrotron.de
Web: www.mikrotron.de/en

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eosens TS3 100-S

High-Speed Handheld Camera



High-Speed Handheld Camera

Suited for Various Applications

With its small form factor, battery operation, large built-in LCD screen and intuitive on-screen menu system, the eosens TS3 100-S puts the power of a traditional high-speed camera in the palm of your hand. The eosens TS3 is truly a point-and-shoot, high-speed camera.

Detailed High-Speed Images

The eosens TS3 100-S records over 500 frames per second at 1,280 x 1,024 resolution, providing ultra-sharp images. With recording rates in excess of 60,000 frames per second at reduced resolution, almost no event is too fast for the eosens TS3.

Flexible and Easy to Use

The eosens TS3 100-S can be operated as a self-contained, handheld camera, or controlled over Gigabit Ethernet using a PC or Mac. The camera can be operated over the internet as well as wirelessly while using any device with a web browser.

Multiple Storage Options

The eosens TS3 100-S features USB-port, SATA-ports and a SD-card slot to allow easy downloads of images and videos to thumb drives, SD-cards or portable hard drives. Additionally, an optional built-in SSD (Solid State Drive) provides for up to 512 GB of non-volatile internal storage. This enables high-speed recordings without long download breaks between the recordings.

eosens TS3 100-S Advantages at a Glance:

- Battery powered handheld high-speed camera
 - Built-in LCD-screen with on-screen menu system
 - 500 frames per second at 1,280 (H) x 1,024 (V) pixel resolution
 - Up to 13 seconds onboard Recording Memory at full resolution and speed
 - Up to 512 GB of onboard image storage
 - Multiple removable storage options
 - Remote control via WIFI
 - Adjustable frame rate up to 60,000 fps
-

Technical Data

(More detailed specifications are available on request)

	eosens TS3 100-S
System design	stand-alone, battery powered, portable with multiple I/O ports
Sensor	10-bit CMOS sensor with 14 µm square pixel, color or monochrome
Resolution	1,280 (H) x 1,024 (V)
Light sensitivity	3,200 ISO monochrome, 1,600 ISO color
Image speed	1 – 500 fps at full 1,280 (H) x 1,024 (V) resolution, up to more than 60,000 fps at reduced resolution
Recording time	12.8 s at full resolution and full speed, extended recording times at reduced resolution and/or frame rate
Shutter	global electronic shutter from 2 µs to > 40 ms
Image memory	4 GB
Removable storage	SDHC, 32 GB maximum
Memory partition	1, 2, 4, 8 or 16 individual recording partitions
Frame storage	Stack – JPG, TIF, BMP, DNG Video – AVI, CAP (raw)
Still image format	JPEG
Lens mount	C-Mount or F-Mount and PL-Mount
Built-in monitor	high resolution, 178 mm (7") diag. LCD
PC I/O ports	USB (1 Host & 1 Device), SD-Card, Ethernet (10/100/1000 Base-T)
PC-Control Software	Mac, Windows or Linux OS compatible via web browser or custom app.
Trigger	contact closure or low voltage TTL (3.3 V rising or falling)
External I/O sync	Trigger In/Out, Sync In/Out, Arm In/Out, (inputs via BNC)
Video out	HDMI (1080P, 720P, 480P)
Construction	Machined aluminum housing
Power	rechargeable Lithium-Ion Pack – 4 hours, or 10 – 26 V DC external power supply
Power consumption	40 W
Camera body temperature	+5 ... 40 °C
Camera size	228 x 114 x 89 mm
Weight	1.8 kg, without lens

Resolution and corresponding frame rate

1,280 x 1,024	500 fps
640 x 480	1,869 fps
512 x 51	2,033 fps
320 x 240	4,000 fps
300 x 286	5,000 fps
160 x 86	20,000 fps

fps = frames per second

Optional Extensions

- Upgrade of the Image Memory to 8 GB total
- Solid State Drive (SSD) with 64 GB, 128 GB or 256 GB

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12172 Caddy Row, Ste. 100
San Diego, CA 92128 - USA
Phone: +1(0)858-521-0496
E-Mail: steve.ferrell@mikrotron.de
Web: www.mikrotron.de/en

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