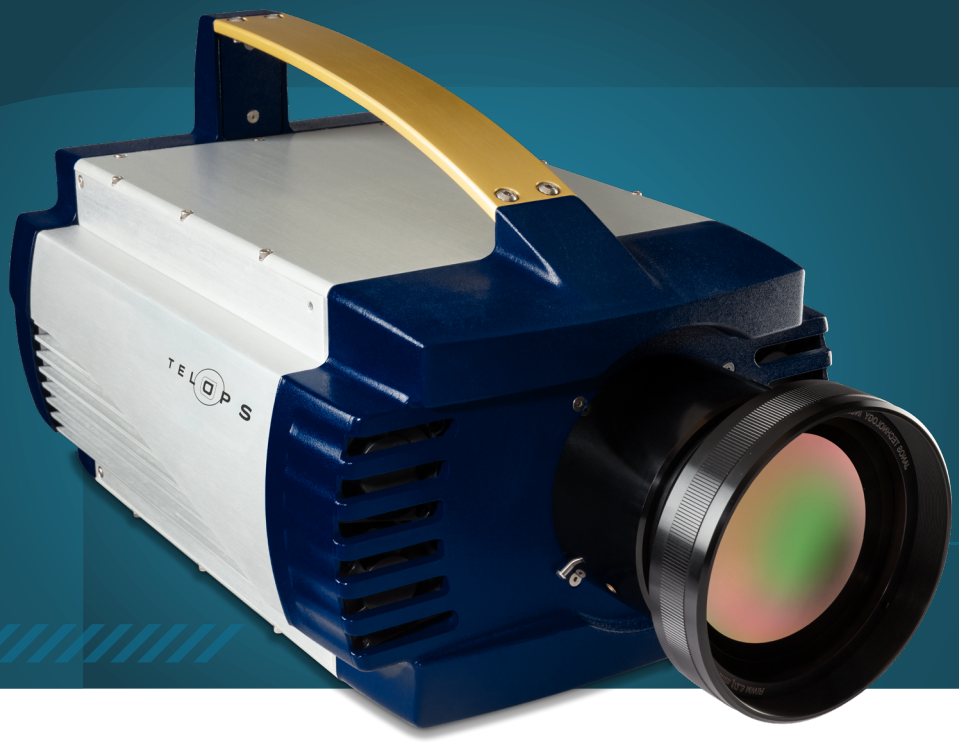
MULTISPECTRAL INFRARED CAMERAS

MS-IR FAMILY



THE MS-IR

KEY FEATURES

- **MULTISPECTRAL CAPABILITIES**
- **HIGH DYNAMIC RANGE**
- **ADVANCED CALIBRATION**
- **HIGH SENSITIVITY**

The MS-IR infrared camera allows the scene to be split into eight different spectral bands rather than only one broadband image, thus enabling spectral signature analysis. The filter wheel is a fast-rotating mechanism designed to maximize the cameras' frame rate. Rotating speed is adjustable up to 105 Hz per filter, allowing a frame rate up to 2 900 fps in a synchronised mode.

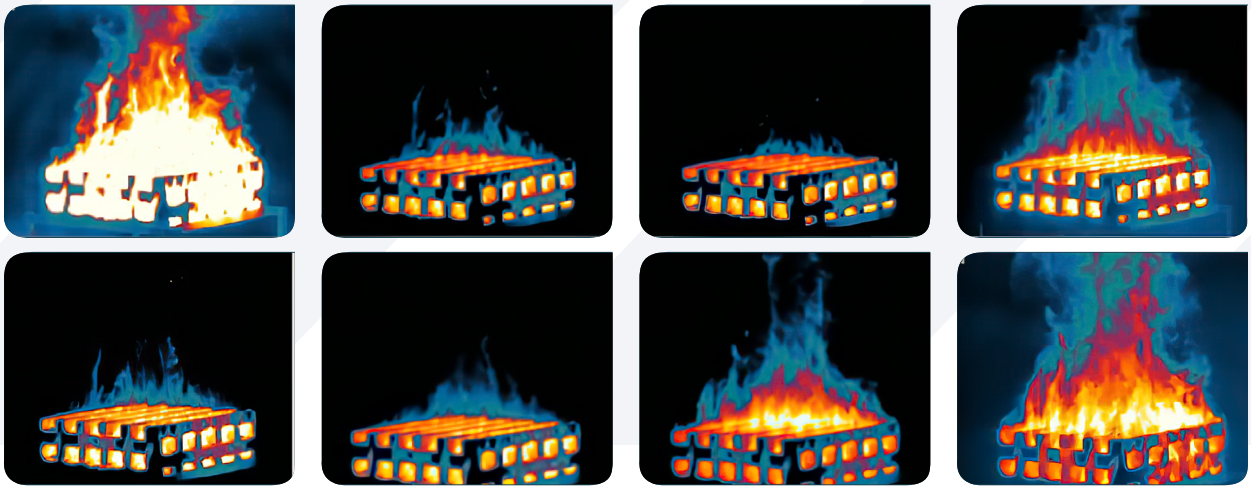
MIDWAVE SERIES

SPECIFICATIONS	MS M3*k*	MS M2*k* UD	MS M2*k*	MS M1*k*
Detector Type	Cooled InSb	Cooled InSb	Cooled InSb	Cooled InSb
Detector Format	320 x 256 pixels	640 × 512 pixels	320 x 256 pixels	640 × 512 pixels
Spectral Range	1.5 µm to 5.5 µm	1.5 µm to 5 µm	1.5 µm to 5.5 µm	1.5 µm to 5 µm
Detector Pitch	30 µm	25 µm	30 µm	25 µm
Optical Aperture	F/2.5	F/2.5	F/2.5	F/2.5
Max. Frame Rate in Full Window (Static Filter Wheel Mode)	3 100 Hz	1 500 Hz	1 900 Hz	1 012 Hz
Max. Frame Rate in Subwindow (Static Filter Wheel Mode)	100 000 @ 64 x 4	42 000 Hz @ 64 x 8	90 000 Hz @ 64 x 4	40 000 Hz @ 64 x 8
Max. Frame Rate in Rotating Filter Wheel Mode	800 Hz	800 Hz	800 Hz	800 Hz
Minimum Exposure Time	1 µs	0.5 µs	1 µs	0.3 µs
Typical NETD	30 mK	≤ 23 mK	30 mK	25 mK
Lens Mount	Bayonet	Threaded	Bayonet	Threaded

MIDWAVE HD SERIES

SPECIFICATIONS	MS M350	MS M10hd
Detector Type	Cooled InSb	Cooled InSb
Detector Format	640 × 512 pixels	1280 × 1024 pixels
Spectral Range	1.5 – 5.4 µm	1.5 – 5.4 µm
Detector Pitch	15 µm	15 µm
Optical Aperture	F/3	F/3
Max. Frame Rate in Full Window (Static Filter Wheel Mode)	350 Hz	105 Hz
Max. Frame Rate in Subwindow (Static Filter Wheel Mode)	4 980 Hz @ 132 x 4	2 900 Hz @ 132 x 8
Max. Frame Rate in Rotating Filter Wheel Mode	350 Hz	800 Hz
Minimum Exposure Time	0.5 µs	1 µs
Typical NETD	20 mK	25 mK
Lens Mount	Bayonet	Bayonet

EXAMPLES OF TYPICAL USES

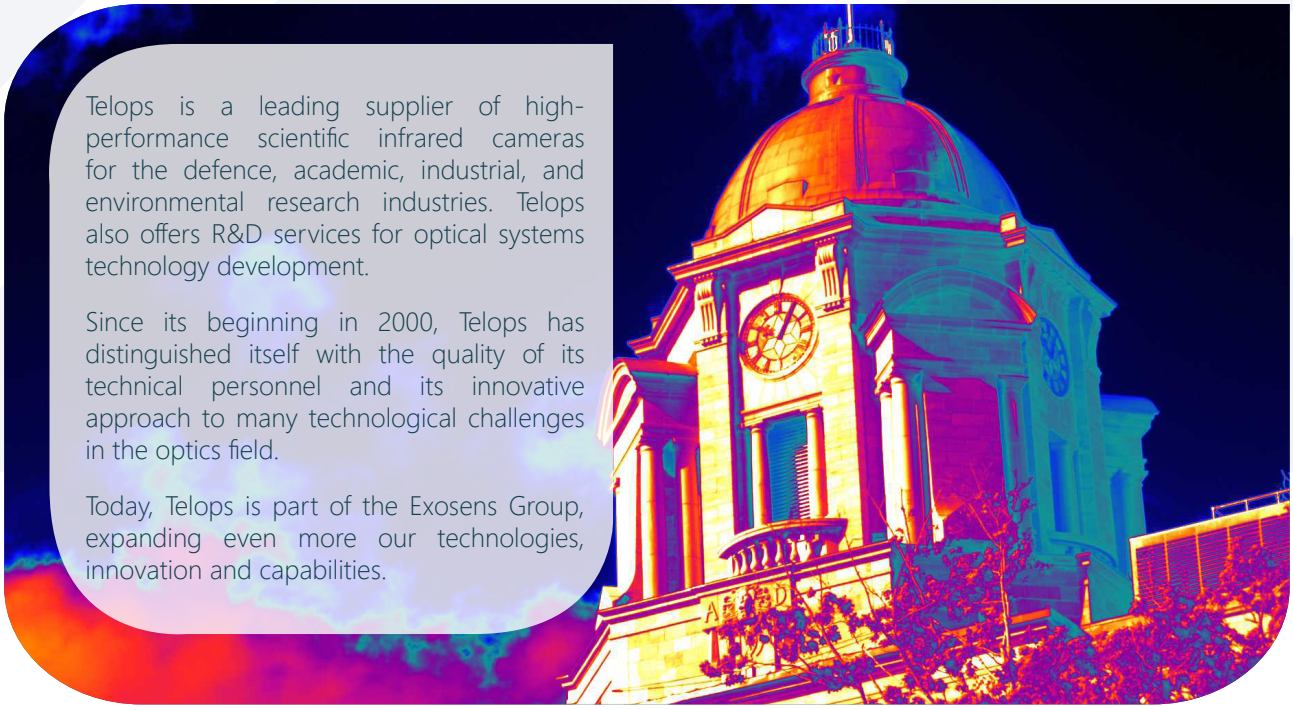


Multispectral analysis of combustion experiment

VERY LONGWAVE SERIES

SPECIFICATIONS	MS V1*K*	MS V350
Detector Type	Cooled SLS	Cooled SLS
Detector Format	640 × 512 pixels	320 × 256 pixels
Spectral Range	7.5 –11. 5 µm	7.7 – 11.5 µm (other ranges available)
Detector Pitch	25 µm	30 µm
Optical Aperture	F/2.5	F/2
Max. Frame Rate in Full Window (Static Filter Wheel Mode)	1 012 Hz	340 Hz
Max. Frame Rate in Subwindow (Static Filter Wheel Mode)	40 000 Hz @ 64 x 8	14 000 Hz @ 128 x 8
Max. Frame Rate in Rotating Filter Wheel Mode	800 Hz	340 Hz
Minimum Exposure Time	0.3 µs	5.1 µs
Typical NETD	30 mK	25 mK
Lens Mount	Threaded	Threaded

ABOUT US



Telops is a leading supplier of high-performance scientific infrared cameras for the defence, academic, industrial, and environmental research industries. Telops also offers R&D services for optical systems technology development.

Since its beginning in 2000, Telops has distinguished itself with the quality of its technical personnel and its innovative approach to many technological challenges in the optics field.

Today, Telops is part of the Exosens Group, expanding even more our technologies, innovation and capabilities.

FEATURES & OPTIONS

OUR INFRARED CAMERAS' KEY FEATURES & SPECS

All of our MS-IR infrared cameras offer a common set of advanced features to address the most demanding research applications. They include:

- Closed-cycle rotary Stirling sensor cooling
- Blackbody-free permanent calibration (up to 150 C)
- Calibration up to 2500 C (optional)
- Fast-rotating 8-position filter wheel (6000 rpm)
- High speed data transfer capabilities:
  - Internal memory buffer up to 32 GB
  - Gig-E
  - Camera Link
- Trig-In/Trig-Out
- SDI, GPS, IRIG-B, RS232, and thermistor ports
- Automatic Exposure Control (AEC
- Enhanced Dynamic Range Imaging (EHDRI)
- 16 bits dynamic range
- Size w/o lens: 13.8" x 8.5" x 9.3" (352 x 216 x 236 mm)

OUR INFRARED CAMERAS' LENS OPTIONS

Telops offers a variety of lens options depending on your camera configurations using either a threaded or bayonet mount interface.

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