TELEDYNE FLIR

FLIR M400 Series

M400/M400XR LONG-RANGE HIGH-PERFORMANCE MULTI-SENSOR SYSTEM

PREMIUM MULTI-SENSOR THERMAL NIGHT VISION

The M400 and M400XR's advanced 640 x 480 sensor delivers crisp thermal video images in total darkness and lowlight conditions. Both models feature an integrated near-infrared HD color visible camera, and tight-beam LED spotlight for augmenting target identification. A continuous optical, thermal zoom lens with 4X magnification allows operators to see other vessels and targets at longer ranges. Active gyro-stabilization ensures a steady image in rough seas. Designed for first responders, the M400XR model adds target video tracking, plus fire-fighting mode. The M400XR's fire-fighting mode provides an isothermic color palette and spot temperature display to help pinpoint trouble areas through smoke and steam.

LONG RANGE DETECTION

- Optimized for long-range detection with 4X optical, thermal zoom
- Active gyro-stabilization provides a steady view in rough seas
- Enhanced awareness and low light detection with 30X high definition visible camera

M400XR FIRE FIGHTING MODE

- Engineered for first responders encountering vessels in distress and shoreside fire scenes
- An isothermic color palette instantly reveals fire and hotspots through smoke and steam
- On-screen temperature display helps pinpoint trouble areas
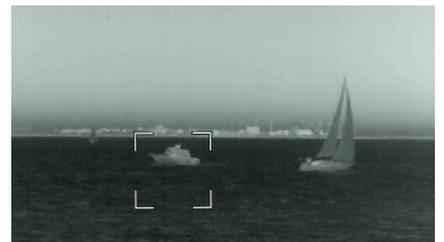
M400XR VIDEO TRACKING

- Designed for surveillance operations, video tracking allows the crew to monitor a target of interest
- Video tracking keeps the M400XR pan and tilt locked on any target using both visible or thermal cameras
- ONVIF compatibility and IP video enables integration with NVRs and Network Video Management systems

SPECIFICATIONS		
	M400	**M400XR**
MAIN THERMAL CAMERA		
Field of View	24° to 6° HFOV / 1.5° HFOV with e-zoom	24° to 6° HFOV / 1.5° HFOV with e-zoom
Video Refresh Rate	<9 Hz or 30 Hz (NTSC and PAL)	<9 Hz or 30 Hz (NTSC and PAL)
Focal Length	26 mm (Wide) to 105 mm (Narrow)	26 mm (Wide) to 105 mm (Narrow)
Optical Zoom	4×	4×
Digital Zoom	4x Continuous	4x Continuous
Detector Type	640 × 480 VOx Microbolometer	640 × 480 VOx Microbolometer
MAIN VISIBLE CAMERA		
Detector Type	1/2.8" CMOS	1/2.8" CMOS
Lines of Resolution	Up to 1920 x 1080 @ 30fps	Up to 1920 x 1080 @ 30fps
Minimum Illumination	Low Light Setting ON: 0.006 lux / Low Light Setting OFF: 0.1 lux	
Optical Zoom	30× Optical Zoom	30× Optical Zoom
Digital Zoom	12x	12x
Focal Length	129 mm to 4.3 mm	129 mm to 4.3 mm
Field of View	63.7° x 35.8° WFOV to 2.3° x 1.29° NFOV	63.7° x 35.8° WFOV to 2.3° x 1.29° NFOV
Spotlight		
Spotlight Type, Lumens, Beam°	LED, 580 Lumens, 5° Divergence Angle	LED, 580 Lumens, 5° Divergence Angle
SYSTEM SPECIFICATIONS		
Gyro Stabilized	Yes	Yes
Video Tracking	No	Yes
Radiometry (Firefighter Mode)	No	Yes
Pan/Tilt Adjustment Range	360° Continuous Pan, ± 90° Tilt	360° Continuous Pan, ± 90° Tilt
Analog Video Output	NTSC or PAL, 30 Hz or <9 Hz	NTSC or PAL, 30 Hz or <9 Hz
Analog Video Connector Types	F-type BNC with BNC-to-RCA adapter included for video out	F-type BNC with BNC-to-RCA adapter included for video out
Network Video Output	Four, Independent H.264 Network Video Streams	Four, Independent H.264 Network Video Streams
HD-SDI Lossless Video Output	Yes	Yes
Power Requirements	12-24V DC	12-24V DC
Power Consumption	<50 W nominal; 130 W peak, 270 W 2/heaters	<50 W nominal; 130 W peak, 270 W 2/heaters
ENVIRONMENTAL		
Operating Temperature Range	-13°F to +131°F (-25°C to +55°C)	-13°F to +131°F (-25°C to +55°C)
Storage Temperature Range	-56° F to + 176°F (-50°C to +80°C)	-56° F to + 176°F (-50°C to +80°C)
Automatic Window Defrost	Standard at Power-Up	Standard at Power-Up
Sand/Dust Ingress	Mil-Std-810E	Mil-Std-810E
Water Ingress	IPX6	IPX6
Shock	15 g vertical, 9 g horizontal	15 g vertical, 9 g horizontal
Vibration	IEC 60945; MIL-STD-810E	IEC 60945; MIL-STD-810E
Lightning Protection	Standard	Standard
Salt Mist	IEC60945	IEC60945
Wind	100 knot (115.2 mph)	100 knot (115.2 mph)
EMI	IEC 60945	IEC 60945
PHYSICAL		
Weight	28 lbs (12.7 kg)	28 lbs (12.7 kg)
Size	Camera: 10.8" (273mm) x 15.7" (398mm) / Camera with Top-Down Riser: 12.8" (324mm) x 18.1" (459mm)	
CLEAR WEATHER RANGE PERFORMANCE		
Detect a 30-foot Vessel	3.7nm (6850m)	3.7nm (6850m)
NATO Target 2.3m x 2.3m @50%	2.5nm (4720m)	2.5nm (4720m)
Detect Human Sized Target	1.0nm (1800m)	1.0nm (1800m)

WARRANTY

Teledyne FLIR's service commitment of outstanding warranty and technical support now offers you even more; by registering your system with FLIR at www.teledyneflir.com, the 2-Year Standard Limited Warranty is upgraded and replaced by the 3-Year Extended Limited Warranty for FREE.

For complete details on FLIR's industry-leading warranty please visit www.teledyneflir.com/maritime.

10.8" / 273 mm

15.7"
398 mm

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Everywhere**you**look™