

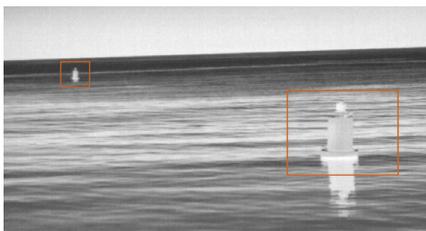


FLIR M364C & M364C LR

MULTISPECTRAL MARINE CAMERAS FOR USV APPLICATIONS



The M364C and M364C LR marine cameras are indispensable tools for remote and unmanned scientific research, surveillance, and enforcement applications. Featuring a high-definition low light camera and one of the most advanced FLIR thermal imaging cores, the M364C and M364C LR provide an elite level of awareness on the water. Engineered to support remote-control and the specific needs of autonomous applications, unmanned surface vehicle developers will appreciate FLIR's commitment to simple integration, high performance, and rugged reliability.



ELITE AWARENESS WITH MULTISPECTRAL IMAGING

Dual-payload camera systems equipped with thermal and visible spectrum imaging, Color Thermal Vision (CTV), Marine Video Analytics (MVA) and Multispectral Dynamic Imaging (MSX)

- CTV blends the thermal and visible cameras to easily add color detail to thermal images like navigation lights and visual markings
- MVA intelligently recognizes and highlights non-water objects like other vessels, marine life or floating debris
- MSX creates high-contrast edges in thermal images for enhanced visual detail and text readability



HIGH DEFINITION NAVIGATION, DAY AND NIGHT

Low light capable, HD visible imaging sensor with long-range zoom for enhanced target identification.

- Superior long-range imaging and positive target identification using a 30X optical zoom lens paired with mechanical and digital image stabilization.
- Ultra-low light capabilities provide visible imagery in the most challenging of lighting conditions
- Integrated AHRS sensor delivers a steady view when seas are rough. Two-axis stabilization counteracts the effects of ocean swells and pounding



ENGINEERED FOR UNMANNED APPLICATIONS

As Commercial Off-The-Shelf (COTS) devices, M364C and M364C LR marine cameras were developed with USV and remote integrations in mind.

- Available Nexus CGI documentation and open source SDK for easy integration, control and viewing.
- Built-in support for Network Time Protocol (NTP) with fully embedded pan, tilt and zoom metadata
- Removeable on-screen symbology and flexible video stream options
- ONVIF compliant for streamlined integration with a wide variety of video management systems

SPECIFICATIONS

THERMAL CAMERA	M364C	M364C LR
Detector Type	640x512 VOx Microbolometer	
Video Refresh Rate	30 Hz or <9 Hz	
Field of View	24 ° x 18 °	18 ° x 13.5 °
Focal Length	18 mm	25 mm
Focus	Fixed 12 ft (3m) to infinity	
Optical Zoom	N/A	
Digital-Zoom	4x Continuous	
VISIBLE CAMERA		
Detector Type	1/2.8" CMOS	
Resolution	Up to 1920 x 1080 @ 30fps	
Minimum Illumination	Low Light Setting ON: 0.006 lux / Low Light Setting OFF: 0.1 lux	
Optical Zoom	30x	
Digital-Zoom	12x	
Focal Length	129 mm to 4.3 mm	
Field of View	63.7° x 35.8° WFOV to 2.3° x 1.29° NFOV	
SYSTEM SPECIFICATIONS		
Gyro Stabilized	Yes	
Marine Video Analytics (MVA)	Yes	
Pan/Tilt Adjustment Range	360° Continuous Pan, +/- 90° Tilt	
Color Thermal Vision	Yes	
Analog Video Output	NTSC/PAL User Settable	
Analog Video Connector Types	BNC	
Network Video Output	2 HD H.264 Main Streams, 2 H.264 Sub Streams, 1 Live Stream	
HD-SDI Lossless Video Output	Yes	
Power Requirements	12 to 24 VDC	
Power Consumption	41W nominal; 56W w/ heaters	
ONVIF	Profile S Conformance	
ENVIRONMENTAL		
Operating Temperature Range	-13°F to +131°F (-25°C to +55°C)	
Storage Temperature Range	-30°F to +158°F (-30°C to +70°C)	
Automatic Window Defrost	Standard at Power-Up	
Water Ingress	IPX6	
Shock	15g vertical, 9g horizontal	
Vibration	IEC60945	
Lightning Protection	Near Strike up to 2kV	
Salt Mist	IEC60945	
EMI	IEC60945	
PHYSICAL		
Weight	Camera: 13.9lbs (6.3kg) / Camera with Top-Down Riser: 14.9lbs (6.8kg)	
Size	Camera: 8.7" (222mm) x 12.9" (328mm) / Camera with Top-Down Riser: 10.0" (254mm) x 14.4" (366mm)	
CLEAR WEATHER RANGE PERFORMANCE		
Detect a 30-foot Vessel	1.7nm (3150m)	2.0nm (3700m)
NATO Target 2.3m x 2.3m @50%	0.9nm (1690m)	1.3nm (2370m)
Detect Human Sized Target	0.5nm (925m)	0.6nm (1030m)

* Always check display manufacturer's website and technical documentation for the latest information regarding camera/display compatibility

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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.teledynelifir.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.teledynelifir.com/maritime.

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