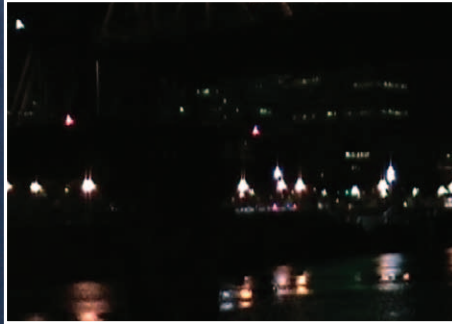




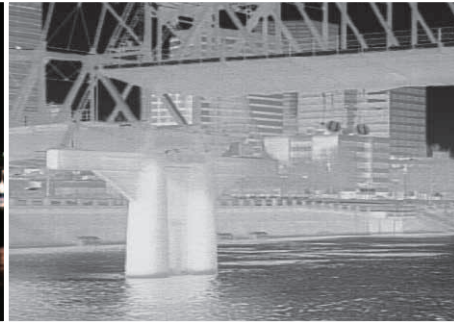
First Mate

Low-Cost, High-Performance Line of
Handheld Maritime Thermal Cameras





Your Vision



FLIR Vision



Your Vision



FLIR Vision

See At Night Like Never Before

First Mate gives every mariner the power to see at night like never before. The world's first line of waterproof, handheld, high-performance maritime thermal night vision cameras is available for as little as \$2,999; so you can navigate with confidence anywhere, anytime! Whether you're on a yacht, recreational powerboat, fishing boat, sailboat, or anything in between, you'll be able to see clearly and navigate safely in total darkness.

First Mate gives you the power to see more – and to see farther – than every other night vision technology around:

- See clearly in total darkness – unlike other night vision systems, First Mate requires no light at all
- See logs, rocks, land, and other hazards that radar can miss
- Boat with confidence at night knowing that you can see harbor entrances and navigation channels in total darkness
- See with FLIR's award-winning maritime thermal night vision technology in the palm of your hand

First Mate can help you see people in the water better than any other night vision technology. Finding someone in the water after dark with a searchlight is more a matter of luck than skill, but First Mate lets you search large areas quickly. Bottom line: there is no better tool around to help you find a person in the water.

Flexible Thermal Night Vision for any Vessel

The First Mate thermal night vision camera comes with everything you need to navigate with confidence, 24-hours a day, including:

- Switch between White-hot and Black-hot Image Presentation Modes
- On-Screen Symbolology
- An Optional 2x Lens Extender For Improved Long-Range Imaging Performance

Advanced configurations are also available for those needing added functionality and flexibility:

- 2x E-Zoom
- Still Image Storage
- Video Capture and Storage
- Improved Environmental Survivability



Rugged, Lightweight Design

Intuitive Controls:

- 2x E-Zoom*
- Image Polarity
- Still Image Storage and Video Capture

Fully Submersible Enclosure is Built to Last – First Mate Even Floats!

Four rechargeable AA NiMH batteries provide five hours of continuous operation; also uses non-rechargeable alkaline and Lithium Ion AA batteries.

Optional 2x Lens Extender Available

* Not available on all models.



- 1) SD Card Slot for Image Storage*
- 2) USB Connector for Field Upgrades
- 3) Standard Tri-Pod Mount for External Installation
- 4) Composite Video Output
- 5) Power Input for Operation and Battery Charging



Use Anywhere You Need to See At Night

Because First Mate isn't permanently mounted to the vessel, you can take it anywhere you need to see clearly after dark.

Home Security

Use First Mate to investigate that sound in the back yard, or to make sure no one is approaching uninvited.

Watch Wildlife

Take First Mate camping or hiking to look for wildlife that would otherwise escape notice due to natural camouflage.

The First Mate Advantage



Portable Thermal Night Vision

- First Mate can be mounted on your boat or held in the palm of your hand
- Long battery life; no vessel power supply required
- Because it's not permanently mounted, First Mate provides "go-anywhere" thermal night vision



Navigation When You Need It

- Instant-on for images when you need them
- Take First Mate with you from vessel to vessel
- Improved security while sitting at anchor or docked for the night



24-Hour Vision

- See more all day, all night
- Head out early, come home late, and stay safe
- Won't get blinded by bright marina lights



About Thermal Night Vision

First Mate thermal night vision cameras make pictures by detecting and displaying tiny differences in heat, not light. Even the friction from a person's finger, and the heat from a hand on a wall leaves enough thermal energy behind to show up clearly to the First Mate.

Everything generates thermal energy, even ice! And even though thermal energy is invisible to the naked eye, First Mate thermal night vision cameras can detect it and turn it into a video image that is easy to understand, allowing you to see what your eyes never could.

Using the same technology as FLIR's best-in-class Navigator II, Voyager II, and M-Series thermal night vision systems, First Mate gives boaters the information they need to see at night and stay safe. Available for less than \$3,000, First Mate is affordable enough for every mariner.

First Mate



System	HM-224	HM-224 Pro	HM-324 XP	HM-324 XP+	HM-307 XP	HM-307 XP+
Sensor Type	240 x 180 VOx Microbolometer		320 x 240 VOx Microbolometer			
FOV	24° x 18° NTSC				7° x 5° NTSC	
Start up from stand-by	< 1.5 seconds					
Focal Length	19 mm				65 mm	
Thermal Sensitivity	<50 mK @ f/1.0					
Image Processing	FLIR Proprietary Digital Detail Enhancement					
User Interface						
Power Button	On/Off/Standby					
Picture Button	Freeze Frame	Still image capture to SD card	Freeze Frame	Still image capture and video capture to SD card	Freeze Frame	Still image capture and video capture to SD card
Zoom Button	Non-Operable	2x E-zoom				
Black Hot/White Hot	BH/WH					
Brightness	Brightness					
Image Presentation						
Built-In Display	LCD Display					
Video Output	NTSC or PAL composite video; RCA jack					
Image Polarity	White Hot/Black Hot; Selectable					
On-Screen Symbology	Standard					
Other						
SD Card	Stores still images		Stores still images and video			
Upgradeability	Upgrade to HM-224 Pro via software update through SD card slot	N/A	Upgrade to HM-324XP+ via software update through SD card slot	N/A	Upgrade to HM-307XP+ via software update through SD card slot	N/A
Power						
Battery Type	4 AA Batteries; NiMH, Li-Ion, or Alkaline					
Battery Life (Operating)	>5 Hours On NiMH batteries					
Battery Life (Stand-By)	120 hours on NiMH batteries					
Environmental						
Water Ingress	IP-67, Submersible (Floats)					
Operating Temp.	32°F to 122°F (0°C to 50°C)		-4°F to 140°F (-20°C to 60°C)			
Storage Temp.	-4°F to 158°F (-20°C to 70°C)		-40°F to 167°F (-40°C to 75°C)			
Drop	1 m drop					
Physical						
Weight (incl. lens)	1.45 lb (653 g) with batteries				2.2 lb (984 g) with batteries	
Size (L x W x H)	9.36" x 3.33" x 2.62" (238 x 84.5 x 66.5 mm)				10.96" x 3.33" x 2.69" (278.4 x 84.5 x 68.3 mm)	
Standard Package	First Mate Handheld Thermal Camera, Hot Shoe Charging & Video Output Accessory, 4 Rechargeable AA Batteries, AC Power Adapter/Charger, Car Adapter/Charger, Neck Lanyard, Operator's Manual, USB Cable, Video Output Cable, and SD Card					
Warranty	2 Year					
Accessories	2x Extender, Soft Case, Hard Case					
Range Performance (No Extender)†						
Detect Man (1.8 m x 0.5 m)	~1,033' (315 m)		~1,500' (450 m)		~4,757' (1,450 m)	
Detect Small Vessel (2.3 m x 2.3 m)	~2,940' (896 m)		~4,200' (1,280 m)		~2.4 mi (3,900 m)	
Range Performance (2X Extender)†						
Detect Man (1.8 m x 0.5 m)	~1,815' (553 m)		~2,590' (790 m)		N/A	
Detect Small Vessel (2.3 m x 2.3 m)	~4,938' (1,505 m)		~1.3 mi (2,150 m)		N/A	

[†]= Actual object detection range performance may vary depending on camera set-up, environmental conditions, user experience, and type of display use.
Visit www.flir.com for the most up-to-date specifications.