# **T200 Series**

# Fixed Mount Thermal Night Vision Cameras



Now even small boats can see at night with the T200 Series fixed mount thermal night vision cameras. Detect floating objects, navigation aids, other vessels, and even people in the water using the T200 Series superior FLIR thermal imaging technology.

Engineered for smaller vessels, the T200 Series is both compact and lightweight. The small footprint allows the T200 Series to easily mount on any T-top, cabin roof, radar arch or mast.

The T200 Series cameras are available in either 320 x 240 or 640 x 480 resolutions. The 320 x 240 resolution model features a wide-angle 13 mm lens and  $2\times$  digital zoom. The high-resolution 640 x 480 version offers enhanced long-range performance using a 25mm lens and  $4\times$  digital zoom capability.





All T200 Series thermal cameras feature multiple user-selectable colour palettes and white-hot/black-hot selection. Best of all, the camera can be controlled entirely from the IR Camera application on Raymarine e-Series or c-Series Multifunction Display. Both cameras are simple to install thanks to camera Power-Over-Ethernet (POE) and analog video output.

# **Key Features**

- Fixed mount camera system targets objects in the vessel's path
- Lightweight, compact enclosure mounts easily on any vessel
- Superior FLIR Thermal Imaging technology
- User-selectable colour palettes
- Digital zoom
- Composite video output
- Controllable from Raymarine e and c-Series Multifunction Displays plus qS Series



		T200 Series Specifications									
Thermal Imaging	T203	T200	T253	T250	T223	T220	T273	T270			
Part Number	E70110	E70111	E70120	E70121	E70112	E70113	E70122	E70123			
Format		NTSC			PAL						
Field of View (FOV)	24° × 1	24° × 18° NTSC		25° × 20° NTSC		24° × 18° NTSC		25° × 20° NTSC			
Focal Length	13	13mm		25mm		13mm		25mm			
E-Zoom	2×		2× and 4×		2×		2× and 4×				
Image Processing		FLIR Proprietary Digital Detail Enhancement									
Video Resolution	320	320 x 240 640 x 480		320 x 240		640 x 480					
Frame Refresh Rates	30Hz	<9Hz	30Hz	<9Hz	25Hz	<9Hz	25Hz	<9Hz			
Range Performance											
Detect Man (1.8 m x 0.5 m)	~1,500 ft	~1,500 ft (0.24 nm)		~2,700 ft (0.44 nm)		~1,500 ft (0.24 nm)		~2,700 ft (0.44 nm)			
Detect Small Vessel (2.3 m x 2.3 m)	~4,200 ft	~4,200 ft (0.67 nm) ~1.2 nm		2 nm	~4,200 ft (0.67 nm)		~1.2 nm				
System Specifications											
Size	6" (152.4mm) dia. × 7" (177.8) ht.										
Weight	~ 3 lbs (6.6kg)										
Pan/Tilt Adjustment Range	Pan: ±30° per key, Tilt: +34°, -27° (Locked in at Installation)										
Video Output	NTSC or PAL										
Connector Types	F-type or BNC with BNC-to-RCA adapter included for video out										
Power Requirements	PoE injector required per IEEE 802.3af. Power over Ethernet (PoE) injector included										
PoE Injector Power Requirement	12-24 VDC										
Power Consumption		4.8 W nominal; 12.5 W max									
Environmental											
Operating Temperature Range		-13°F to +131°F (-25°C to +55°C)									
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)										
Automatic Window Defrost	Standard at Power-Up										
Sand/Dust	Mil-Std-810E										
Water Ingress	IPx6 (heavy seas, powerful jets of water)										
Shock	15 g vertical, 9 g horizontal										
Vibration		IEC 60945; MIL-STD-810E									
Lightning Protection		Standard									
Salt Mist	IEC60945										
Wind	100 knot (115.2 mph)										
EMI	IEC 60945										



#### **Safety Notice**

Raymarine products are intended to be used as aids to navigation and must never be used in preference to sound navigation judgement. Their accuracy can be affected by many factors, including environmental conditions, equipment failure or defects, and incorrect installation, handling or use. Only official government charts and notices to mariners contain all the current information needed for safe navigation, and the captain is responsible for their prudent use. It is the user's responsibility to use official government charts, notices to mariners, caution and proper navigational skill when operating any Raymarine product.

#### **Content Note**

The technical and graphical information contained in this brochure, to the best of our knowledge, was correct as it went to press. However, the Raymarine policy of continuous improvement and updating may change product specifications without prior notice. Therefore, unavoidable differences between the product and this brochure may occur from time to time, for which liability cannot be accepted by Raymarine.

#### **Specifications**

All specifications are subject to change without prior notice. Visit www. raymarine.com for the most up-to-date specifications. Some images are for illustration purposes only.

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**Note:** Equipment described herein may require US Government authorisation for export purposes. Diversion contrary to US law is prohibited.



# FREE WARRANTY UPGRADE FROM 2 YEARS TO 3 YEARS

Raymarine offers a 2 year Limited Warranty (upgradable to 3 years upon product registration) on products installed in vessel use classifications within this brochure, full details of the Global Warranty Policy and how to register your products can be found at **www.raymarine.com/warranty**. If you require local assistance, please contact a Raymarine certified dealer near you, details of which can be found at www.raymarine.com/dealerlocator.

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