

# Raymarine®

PERFORMANCE MARINE ELECTRONICS



2017 v2



## SIMPLY SUPERIOR

Raymarine products are engineered to deliver the very best in visual navigation information and with a legacy of marine technology spanning over 80 years, we are renowned today for ease-of-use, rugged design, and reliability.

At Raymarine, we are constantly innovating to deliver high-performance sensors and intelligent navigation systems so your time on the water is stress-free and fun. We are committed to you with an industry-leading warranty and worldwide service network. Whether you fish, sail, or cruise you can get underway with the confidence of Raymarine on board.

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**NEW** Axiom and Axiom Pro Touchscreen  
and HybridTouch Displays





# LIGHTHOUSE 3

THE INTUITIVE AND POWERFUL OS BEHIND AXIOM AND AXIOM PRO

The easy-to-use operating system inside every Raymarine multifunction display, LightHouse puts you in command with a fluid touch-screen or HybridTouch™ user experience. LightHouse lets you navigate with the best charts and makes navigating as simple as using a smartphone.

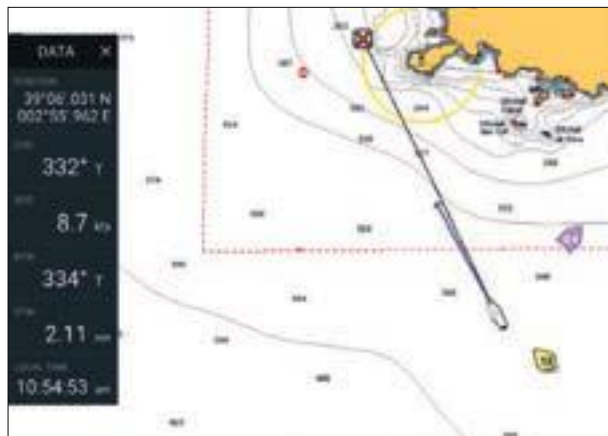


### HOME SCREEN

The LightHouse 3 home screen offers bold and simple app icons. Customize the home screen with your favourite apps.

### TAKE COMMAND

LightHouse 3's easy-to-use interface will put you in complete command with just a few touches.



### YOUR DATA – JUST A SWIPE AWAY

Swipe the side of the display to reveal the Side Bar data display. The Side Bar also appears automatically if a GOTO command is initiated.



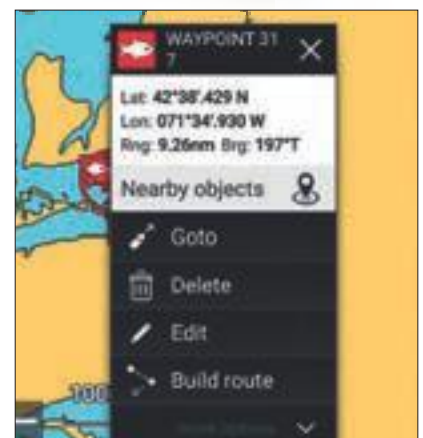
#### BEAUTIFUL DATA

Drag and drop your databoxes anywhere on your screen. Choose from 4 different size options and up to 14 different data types.



#### NEW CHART MODES

Uncluttered menus with quick access to Simple, Detailed, and Fishing chart modes.



#### SMART CONTEXT MENUS

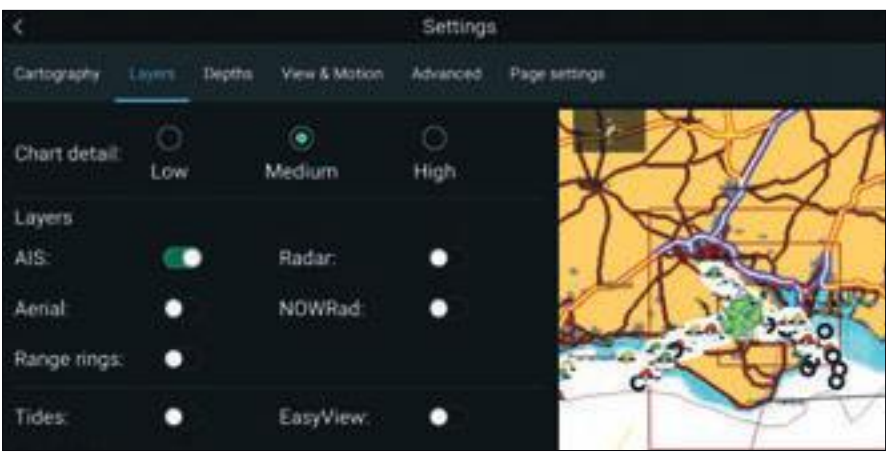
Put frequently used functions and nearby chart objects right at your fingertips.



**USER PROFILES**  
LightHouse 3 User Profiles saves your personal home screen and configuration preferences.



**REGULAR LIGHTHOUSE UPDATES**  
LightHouse is an expanding user interface with regular downloadable FREE updates. Make sure you are up to date with latest features including LightHouse charts available from [www.raymarine.com/software](http://www.raymarine.com/software)

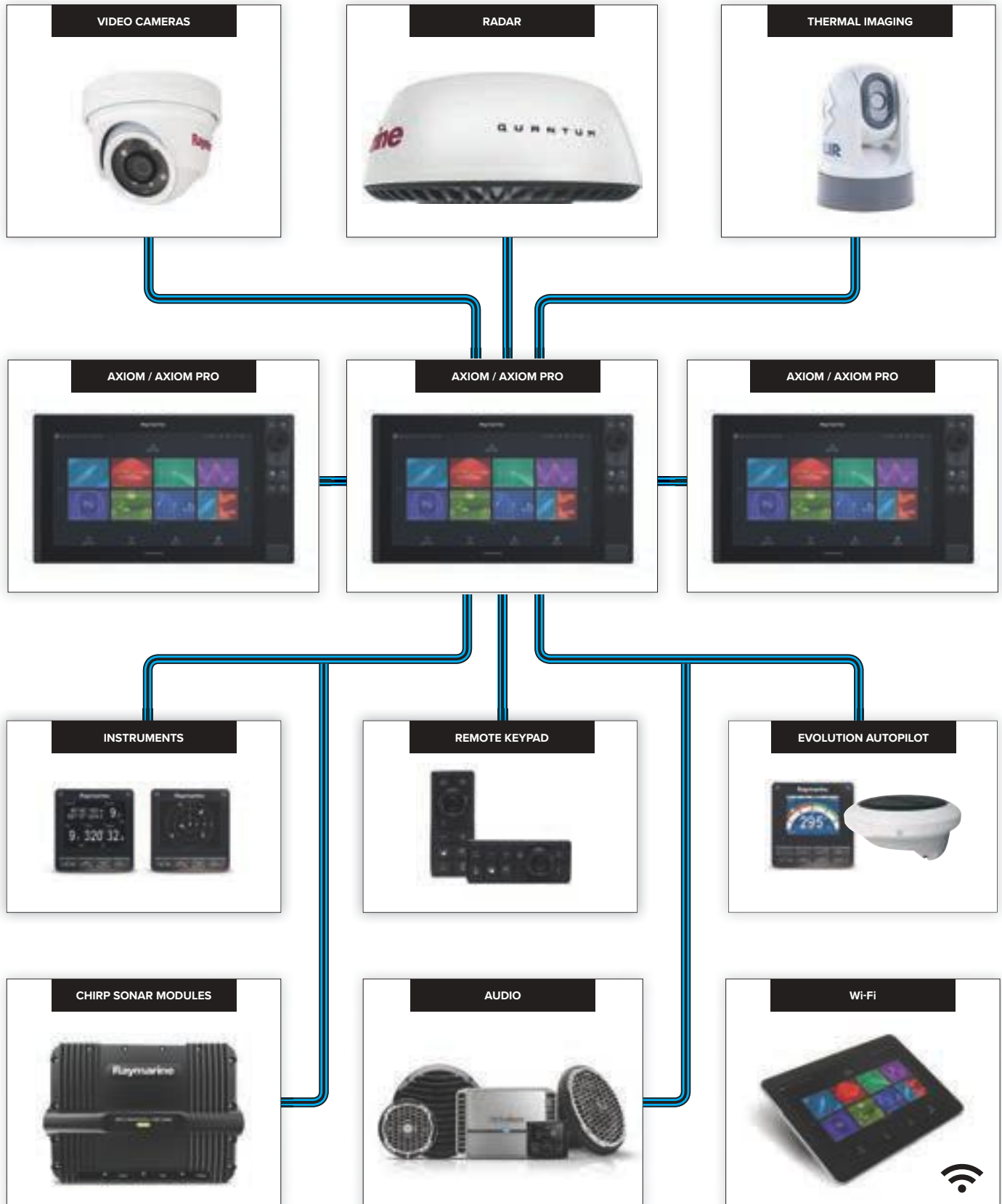


**LIGHTHOUSE LIVEVIEW MENU™ CONTROLS**  
Easily customize the chart and see the navigation display change in real time.

# LIGHTHOUSE 3

## NETWORKING

The LightHouse 3 OS and Axiom are expandable and support the full range of Raymarine accessories, including Quantum radar, CHIRP Sonar, FLIR thermal cameras, audio integration, instruments, cameras, and Evolution autopilot. Standard Wi-Fi connectivity allows connection to the latest Raymarine apps for tablets and smartphones.





## AXIOM™ TOUCHSCREEN DISPLAYS

AXIOM™ – a powerful new multifunction navigation system from Raymarine. With built-in RealVision 3D™ sonar, the all new LightHouse 3 operating system, and blazing fast quad core performance, AXIOM will transform your time on the water.







Axiom is expandable so its capabilities can grow as needed. It supports the full range of Raymarine accessories, including Quantum radar, CHIRP Sonar, FLIR thermal cameras, audio integration, instruments, cameras, and Evolution autopilot. Standard Wi-Fi connectivity allows connection to the latest Raymarine apps for tablets and smartphones.

Axiom includes surface and trunion mounting kits, mounting hardware, power/data cable, and installation instructions.



## AXIOM™



### RUGGED ALL-GLASS DISPLAY

Optimized for flush or surface mounting. Sleek button-less design with swipe to power control.



### NEW LIGHTHOUSE 3 OS

Fast, fluid, and easy to learn. An uncluttered interface that is easily personalized for your style of navigating.



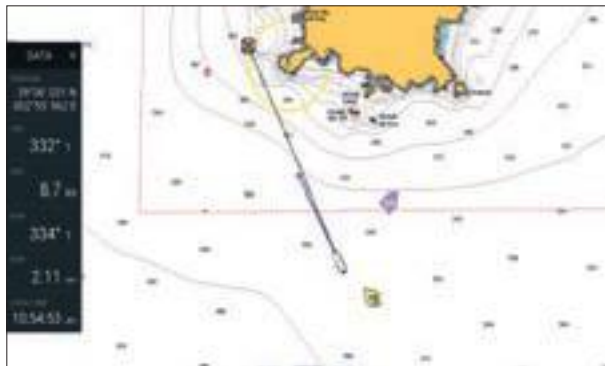
### SUPPORT FOR THE BEST CHARTS

From Navionics and C-MAP. Or choose LightHouse vector and raster charts from leading mapmakers like NV Digital, Blue Latitude and more...



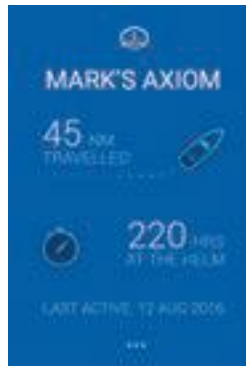
**BEAUTIFUL DATA**

Drag and drop your databoxes anywhere on your screen. Choose from 4 different size options and up to 14 different data types.



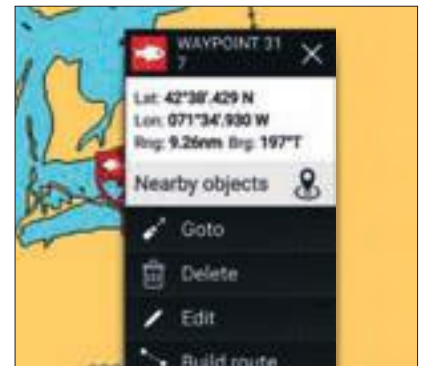
**YOUR DATA – JUST A SWIPE AWAY**

Swipe the side of the display to reveal the Side Bar data display. The Side Bar also appears automatically if a GOTO command is initiated.



**USER PROFILES**

LightHouse 3 User Profiles saves your personal home screen and configuration preferences.



**SMART CONTEXT MENUS**

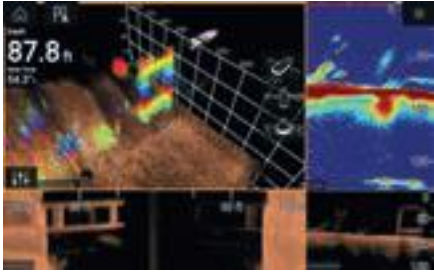
Put frequently used functions and nearby chart objects right at your fingertips.



**EVOLUTION AUTOPILOT CONTROL**

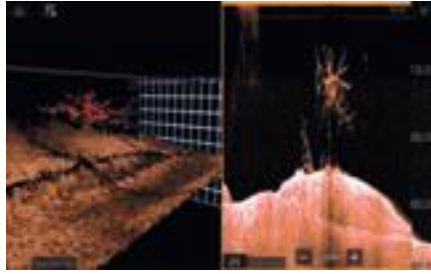
Seamless integration with the smartest autopilot on the water – Evolution from Raymarine. LightHouse 3 autopilot controls let you follow a waypoint or route make autopilot course changes right from any Axiom or Axiom Pro display.

## NEW REALVISION™ 3D SONAR



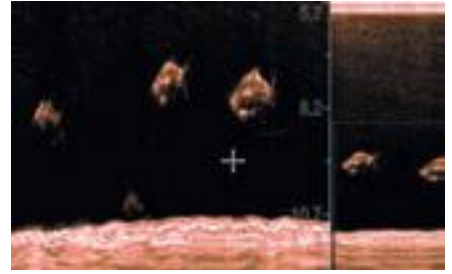
### EASY FISH IDENTIFICATION

Easily identify structure and locate fish with the life-like clarity of RealVision™ 3D sonar.



### POWERFUL 4 CHANNEL SONAR

Supports RealVision 3D, CHIRP DownVision, SideVision, High Frequency CHIRP with 600 Watt (50/200 kHz) sonar.



### WIDE SPECTRUM CHIRP SONAR

Transmits on 60 different frequencies for the most life-like sonar imagery and simply the best fish targeting— hands down!

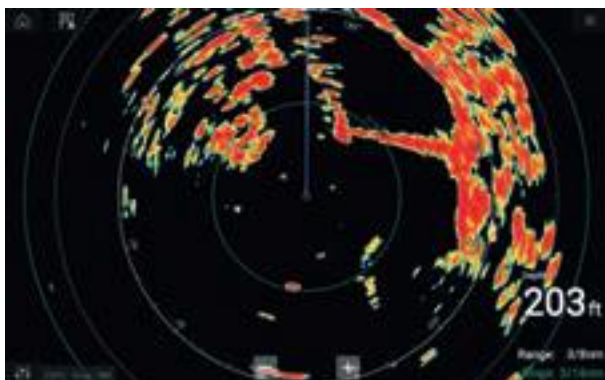


### GYRO STABILIZED SONAR TECHNOLOGY

Gyro stabilization compensates for boat movement, delivering life-like 3D sonar imagery.

### ALL-IN-ONE TRANSDUCER

RealVision 3D Transducers combine CHIRP DownVision, CHIRP SideVision, High Frequency CHIRP, and RealVision 3D into a single transducer housing.



### RADAR

Integrate seamlessly with Raymarine Quantum CHIRP or any other Raymarine radar system for all-weather, night-or-day navigation capability.

- Quantum Solid State CHIRP radar delivers superior imaging at long and short ranges. Wired or Wi-Fi connectivity.
- HD and Super HD radar. Ideal for coastal and offshore anglers with features including bird mode and high speed scanning.



**ENHANCED THERMAL AWARENESS WITH M100/M200**

Exclusive FLIR ClearCruise™ thermal video analytics technology actively monitors the scene and provide alerts when any non-water objects enter the camera's field of view.



RMK-10 remote keypad

AUDIO BY Rockford Fosgate

**MARINE AUDIO**

Integrate with multi-source, multi-zone marine audio from Rockford Fosgate. Change sources, select tracks, control zones, and much more right from your Raymarine multifunction display.



**VIDEO MONITORING**

Works with above and below decks marine cameras from Raymarine and FLIR.

- Connect up to 8 HD video sources with IP video, and view up to 4 cameras simultaneously
- Analog inputs can be distributed across the network
- Supports Miracast wireless video streaming to smart TVs and video monitors



External SD / USB Card Reader (accessory)

**USB PORT**

For external drives, remote card readers and Smartphone charging.

**microSD CARD READER**

For charts, data archiving or IP camera video recording (up to 2TB).

**READY TO NETWORK**

Network with Raynet Ethernet and NMEA2000. Connect multiple Axiom displays or expand with Quantum, HD radar, IP cameras, engine gauges, autopilots, instruments, and more.





**AXIOM SPECIFICATIONS**

**SCREEN SIZE**

7.0" Optically Bonded LCD  
 9.0" Optically Bonded LCD  
 12.1" IPS Optically Bonded LCD

**DISPLAY RESOLUTION**

Axiom 7 800 x 480 WVGA  
 Axiom 9 800 x 480 WVGA  
 Axiom 12 1280 x 800 WXGA

**SCREEN TYPE**

Touchscreen

**MOUNTING OPTIONS**

Top / Flush / Bracket / Rear Mounting

**NETWORKING**

1 x 10/100 Mbps/ Network (RayNet)

**WATERPROOFING**

IPX6 / IPX7

**MEMORY CARD SLOT**

1x MicroSD  
 Support for external SD/USB card reader

**WI-FI**

WiFi - 802.11 b / g

**RADAR COMPATIBLE**

Yes

**THERMAL NIGHT VISION COMPATIBLE**

Yes – compatible with FLIR M100 and M200 cameras

**VIDEO OVER IP CAMERA SUPPORT**

Add up to 10 Video over IP network cameras

**BUILT-IN SONAR**

3D RealVision or DownVision - model dependent

**EXTERNAL SONAR COMPATIBLE**

Yes – support for Digital and CHIRP sonar modules

**GPS**

Built-in GNSS Receiver: GPS/GLONASS/Beidou\* - 10Hz 72 Channel

**OPTIONAL REMOTE CONTROLS**

RMK-10

**AIS**

With optional receivers and transceivers

**AUDIO INTEGRATION**

Support for NMEA2000 compatible audio devices

**VOLTAGE**

12V DC (8 V to 16 VDC)

**OPERATING TEMPERATURE**

-13° F to +131° F (-25° C to +55° C)

**NMEA2000**

NMEA2000 via DeviceNet port. SeaTalk<sup>ng</sup> compatible using an optional adapter

**AXIOM DIMENSIONS**

	AXIOM 7		AXIOM 9		AXIOM 12	
	mm	in	mm	in	mm	in
<b>A</b>	250.4	7.92	244.08	9.64	314	12.36
<b>B</b>	133	5.24	157.78	6.21	217	8.54
<b>C</b>	162.5	6.4	187.8	7.39	226.8	8.93
<b>D</b>	76.4	3.0	74.9	2.96	79.3	3.12
<b>E</b>	218	8.59	177	6.97	183	7.2

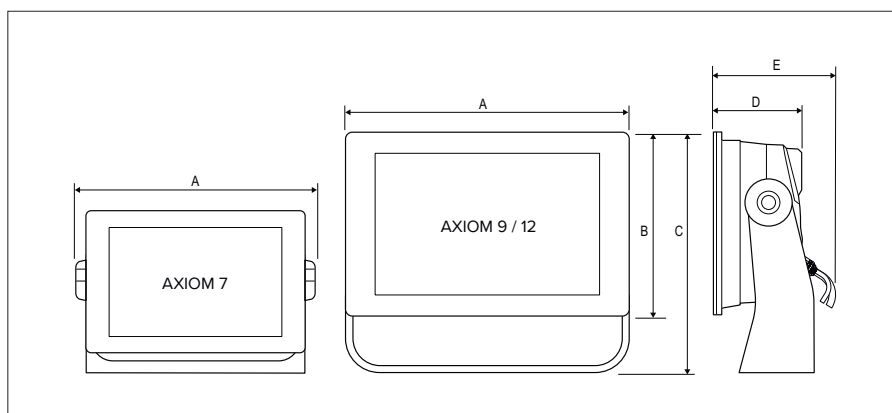
**WHAT'S IN THE BOX**

**AXIOM 7**

- (1) Display (supplied with Trunnion adaptor fitted)
- (2) Trunnion bracket
- (3) Trunnion knobs x 2
- (4) Suncover — Trunnion mount
- (5) Panel mount gasket for surface/flush mounting
- (6) M5x58 Threaded studs x 4
- (7) M5 Thumb nuts x 4
- (8) Documentation pack
- (9) Power/NMEA 2000 cable (with 1.5 m (4.92 ft) power lead and 0.5 m (1.64 ft) NMEA 2000 lead).

**AXIOM 9 AND 12**

- (1) Display
- (2) Trunnion bracket
- (3) Trunnion knobs x 2
- (4) Suncover
- (5) Panel mount gasket for surface/flush mounting
- (6) Rear mounting brackets: a. supplied with 9" MFD I b. supplied with 12" MFD
- (7) Documentation pack
- (8) Power/NMEA 2000 cable (with 1.5 m (4.92 ft) power lead and 0.5 m (1.64 ft) NMEA 2000 lead)
- (9) M5x58 Threaded studs x 4
- (10) M5 Thumb nuts x 4




# AXIOM™ PRO

## HYBRIDTOUCH DISPLAYS


Axiom Pro is engineered for captains that want it all. Available with RealVision 3D, 1kw CHIRP sonar, and Raymarine HybridTouch control, Axiom Pro is the new standard for “all-in-one” multifunction devices. And with a blazing fast quad core processor, a super bright high-definition IPS display, and the smart LightHouse OS, Axiom Pro delivers a fluid and intuitive navigation experience. Axiom Pro is easy to expand into an advanced navigation network that includes multiple Raymarine Axiom displays, CHIRP radar, Evolution autopilot, FLIR thermal night vision technology, and more.




## AXIOM™ PRO



**INTUITIVE CONTROL**  
With Raymarine HybridTouch you can enjoy simple touch screen interaction or take control of Axiom Pro from its keypad and multi-function rotary control. The choice is yours.





**BLAZING FAST**

Quad core processor delivers instantaneous response and the ability to run multiple apps simultaneously without any slowdowns.

**BOLD AND BRIGHT**

Optical bonding technology and high definition IPS display panels give you stunning color, clarity, and contrast in all lighting conditions. Axiom Pro looks great even through polarized sunglasses.

**HYBRIDTOUCH™**

Control Axiom Pro from its multi-touch screen, its buttons and rotary knob, or any combination of both. This choice is yours.

**CUSTOM KEY**

Get instant access to your favorite function with user-programmable Custom Key.

**LIGHTHOUSE 3 OS**

Fast, fluid and easy to learn. The Lighthouse 3 interface is uncluttered and easy to personalize for your style of boating.

**BUILT-IN SONAR MODELS**

Select from Pro S or Pro RVX sonar for cruising, sailing, coastal, or offshore sonar needs.



**REALVISION 3D**

Easily identify structure and locate fish with the life-like clarity of RealVision 3D sonar.

**SCROLL BACK**

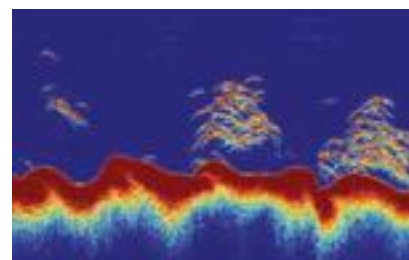
Rewind, pause and playback recorded DownVision™ SideVision™ and RealVision 3D sonar history to take a closer look fish and structure, and easily plot waypoints.

**GPS TRAILS**

RealVision 3D combines with precision GPS to construct the most accurate 3D model of the underwater world, in real-time.

**HISTORICAL SENSITIVITY SETTINGS**

Adjustments to sonar gain, sensitivity and filtering are also applied to recorded sonar history, enabling you to reveal previously concealed fish and structure.



**OFFSHORE RATED 1KW CHIRP SONAR**

Add a compatible offshore transducer and experience the stunning definition and clarity of dual-channel CHIRP sonar.

No gimmicks or games, this a true 1kW CHIRP sonar – no compromise performance. Target bait, fish, thermoclines and more at depths to 5,000 feet.

**LOW MEDIUM OR HIGH CHIRP**

Axiom Pro 1kW sonar offers a wide spectrum of CHIRP sonar bands for deep, mid-range and shallow water fishing.



**RADAR**

Integrate seamlessly with Raymarine Quantum CHIRP or any other Raymarine radar system for all-weather, night-or-day navigation capability.

- Quantum Solid State CHIRP radar delivers superior imaging at long and short ranges. Wired or Wi-Fi connectivity.
- HD and Super HD radar. Ideal for coastal and offshore anglers with features including bird mode and high speed scanning.



**SUPPORT FOR THE BEST CHARTS**

From Navionics and LightHouse Raster and Vector Charts sourced from leading map makers like NV Digital, Blue Latitude, and more.



**THERMAL CAMERAS**

Combine Axiom Pro with the FLIR M132 or M232 thermal camera and enjoy ClearCruise™ IR Analytics. Axiom Pro will automatically alert you to obstacles in your path.

**VIDEO MONITORING**

Works with above and below decks marine cameras from Raymarine and FLIR.

- Connect up to 8 HD video sources with IP video, and view up to 4 cameras simultaneously
- Supports analog composite video sources, including thermal and underwater cameras
- Analog inputs can be distributed across the network
- Supports Miracast wireless video streaming to smart TVs and video monitors



AUDIO BY  **Rockford Fosgate**

**MARINE AUDIO**

Integrate Axiom Pro with multi-source, multi-zone marine audio from Rockford Fosgate. Change sources, select tracks, control zones, and much more right from your multifunction display.

**MOBILE APPS**

View and control your Axiom Pro MFD over Wi-Fi using Raymarine's free RayRemote app for Smartphones and RayControl app for tablets. Apps are available for both iOS and Android devices.

**BUILT-IN WiFi**

Lets you to stream and control Axiom right from your smartphone or tablet. You can also sync waypoints, routes, and charts with Navionics mobile apps.

**FAST 10 HZ 72 CHANNEL GPS/GLONASS RECEIVER**

Rapid position updates and smooth on screen tracking.





**AXIOM PRO SPECIFICATIONS**

**SCREEN SIZE**

Axiom Pro 9: 9" Optically Bonded HD IPS LCD  
 Axiom Pro 12: 12.0" Optically Bonded HD IPS LCD  
 Axiom Pro 16: 15.6" Optically Bonded HD IPS LCD

**DISPLAY RESOLUTION**

Axiom Pro 9 1280 x 720 pixels  
 Axiom Pro 12 1280 x 800 pixels  
 Axiom Pro 16 1920 x 1080 pixels

**SCREEN TYPE**

Super bright high definition IPS display with optical bonding. Multitouch support

**MOUNTING OPTIONS**

Top / Flush / Bracket / Rear Mounting (Axiom Pro 16 front only)

**VOLTAGE**

12 / 24 V dc

**ETHERNET**

2 x 10/100 Mbits/ Network (RayNet)

**NMEA2000**

1 x NMEA2000 port (DeviceNet microC)

**NMEA0183**

x2 NMEA 0183 input and x1 NMEA 0183 output (part of power cable)

**WATERPROOFING**

IPX6 / IPX7

**MEMORY**

16GB Internal / x2 microSDXC slots

**WI-FI**

WiFi - 802.11 b / g

**RADAR COMPATIBLE**

Yes

**THERMAL NIGHT VISION COMPATIBLE**

Compatible with all FLIR thermal cameras

**VIDEO**

Up to 8 HD IP video sources and 1 analogue video input

**BUILT-IN SONAR**

RealVision 3D & 1kW CHIRP Sonar built in – RVX models only. High CHIRP Sonar built in – S models only

**EXTERNAL SONAR COMPATIBLE**

Yes – support for Digital and CHIRP sonar modules

**GPS**

Built-in GNSS Receiver: GPS/GLONASS/Beidou - 10Hz 167 Channel | External Accessory: GA150 (A80288)

**OPTIONAL REMOTE CONTROLS**

RMK-10

**AIS**

With optional receivers and transceivers

**AUDIO INTEGRATION**

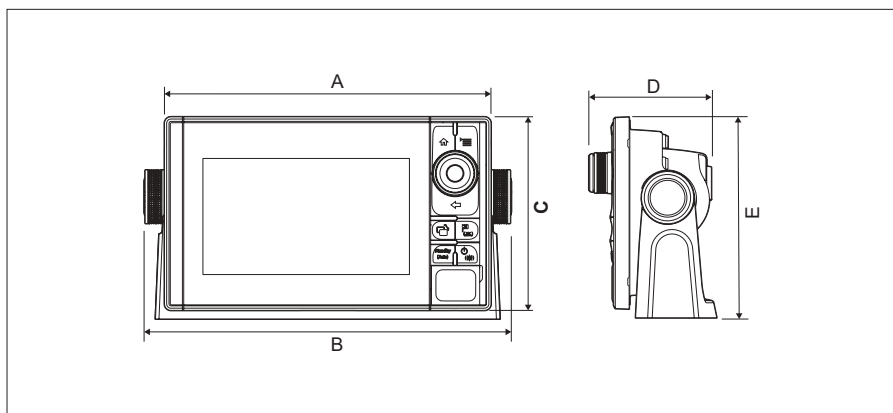
Support for NMEA2000 compatible audio devices

**OPERATING TEMPERATURE**

-13° F to +131° F (-25° C to +55° C)

**AXIOM PRO DIMENSIONS**

	AXIOM PRO 9		AXIOM PRO 12		AXIOM PRO 16	
	mm	in	mm	in	mm	in
<b>A</b>	299.32	11.78	358	14.1	452	17.8"
<b>B</b>	329.5	12.97	388.5	15.3	–	–
<b>C</b>	173.8	6.84	222.8	8.77	258	10.2
<b>D</b>	97.9	3.3	96.3	3.79	101.8	4.0
<b>E</b>	186.2	7.3	246.13	9.69	–	–



**WHAT'S IN THE BOX**

**AXIOM PRO 9 AND 12**

- (1) Display
- (2) Trim Kit
- (3) Suncover
- (4) Trunnion Kit
- (5) PWR/VIDEO/NMEA0183 CBL, STRT 1.5M
- (6) Mounting Hardware
- (7) Mounting Template
- (8) Quick Start Guide
- (9) Warranty Card
- (10) Raymarine window decal

**AXIOM PRO 16**

- (1) Display
- (2) Trim Kit
- (3) Suncover
- (4) PWR/VIDEO/NMEA0183 CBL, STRT 1.5M
- (5) Mounting Hardware
- (6) Mounting Template
- (7) Quick Start Guide
- (8) Warranty Card
- (9) Raymarine window decal



## gS SERIES

PREMIUM  
GLASS BRIDGE  
MULTIFUNCTION  
NAVIGATION DISPLAYS

Elegant, flexible and simple to use, gS Series multifunction displays will transform your helm station into a powerful glass bridge navigation system. A step above black-box systems, each gS Series display is a smart, self-contained multifunction navigation display equipped with Raymarine's fastest dual-core processor plus a third dedicated-graphics processor, delivering super-fast and responsive performance.



**STAY INFORMED**

Display the full suite of navigational information, graphics and data in stunning clarity. Network gS Series with NMEA 2000 engine instruments and access engine and fuel consumption data. For engines with J1939 interface protocols, the optional ECI-100 Universal Engine and Control Interface bridges engine data to the gS Series network.

**A PERFECT FIT**

The edge-to-edge glass appearance of gS Series allows the displays to be completely flush-mounted in the helm panel for an attractive and integrated navigation experience.

**TOUCH OR REMOTE CONTROL**

Enjoy fluid and effortless full touch-screen interaction with Raymarine's easy-to-use LightHouse user interface or interact with any gS Series display from a single RMK-10 remote keypad.

**HD VIDEO INPUT AND OUTPUT**

HDMI output enables connection to remote monitors or big screen TVs. Connect gS Series to your TV in the saloon and take control of the system with your tablet or smartphone via Raymarine mobile apps. HD-SDI video input on gS195.

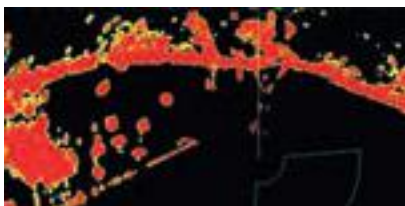


**DISPLAYS**

- Four display sizes 9.0", 12.1", 15.4" or 19"
- Ultra-bright sunlight-viewable LCD
- Optically bonded for sharp colour and contrast
- Low power consumption LED backlighting

**CONNECTIVITY**

- 2x composite analogue video input for thermal cameras and entertainment
- HDMI video output
- HD-SDI video input on gS195
- Each gS Series display is equipped with 3x RayNet POE Ethernet ports with integrated network switching for simple, reliable connectivity
- NMEA 2000 support using SeaTalk<sup>ng</sup> cabling
- NMEA 0183 input and output
- Built in Wi-Fi for syncing with Raymarine mobile apps on smartphones or tablets
- Bluetooth connectivity to smartphones with remote audio controls
- External alarm connection



**RADAR**

Display radar data with an optional Raymarine Digital, HD Color, Super HD Color or Quantum radar antennas.



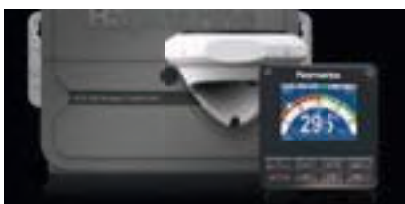
**COLLISION AVOIDANCE**

Intuitive Target Interception graphic overlays for tracking AIS targets.



**DIGITAL SWITCHING**

Control lighting, monitor AC and DC electrical systems, remotely monitor fluid tanks and battery levels and much more.



**EVOLUTION AUTOPILOTS**

Experience full autopilot control directly from your gS Series display by connecting the Evolution autopilot.



**THERMAL IMAGING**

Integrate thermal night vision technology to enhance your situational awareness in limited visibility.



**VIDEO**

Monitor the engine room, crew quarters or docking. The gS195 also features HD-SDI video input for high-definition serial digital interface capable cameras.



**RMK-10 REMOTE**

The optional RMK-10 Remote keypad gives you full control of single or multiple displays from a remote location.



**RCU-3 REMOTE**

Stay in command of your gS Series without leaving the wheel with the wireless Bluetooth RCU-3 Remote.



**MOBILE**

Access Raymarine anywhere onboard via Raymarine mobile apps and gS Series built-in Wi-Fi. Take full control of your gS Series direct from your tablet or smart phone. Also, transfer routes and markers, upload sonar logs and update charts with Navionics Boating apps.



**ENGINE MONITORING**

Monitor engine and fuel performance using NMEA 2000 or Raymarine's exclusive ECI-100 Universal Engine and Control Interface.

**SPECIFICATIONS**

**LCD SCREEN SIZES**

gS95: 9.00in | gS125: 12.1in | gS165: 15.4in | gS195: 19.0in

**DISPLAY RESOLUTION**

gS95: 800x480 | gS125: 1280x800 | gS165: 1280x800 | gS195: 1280x1024

**TOUCH SCREEN**

Multi-touch with pinch-to-zoom

**GPS**

Requires external GPS sensor (RS150 recommended)

**MOUNTING OPTIONS**

Flush or surface mount

**WATERPROOF RATING**

IPX6

**MEMORY CARD READER**

Dual MicroSD external card reader for charts and data

**INTERFACES**

NMEA0183 / SeaTalk<sup>®</sup> / Raynet  
 HD SDI video port (gS195 only)  
 Analogue Video Input  
 HDMI Video Output  
 Auxiliary Alarm Output

**POWER REQUIREMENTS**

12V or 24V systems

**MULTI-LANGUAGE**

Yes

Images for illustrative purposes only. Product information subject to change without prior notice

**WHAT'S IN THE BOX  
gS SERIES**

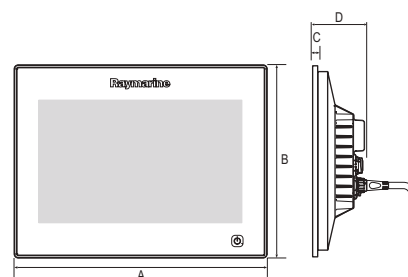
- (1) Multifunction display
- (2) 2x Display mounting brackets
- (3) RCR-2 Remote Card Reader
- (4) Mounting gasket for RCR-2
- (5) Document pack
- (6) RCR-2 inlay card x2
- (7) Sun cover
- (8) 4x Mounting bolts, washers, lock nuts and feet
- (9) 4x Bracket fixings
- (10) 4x RCR-2 fixings (self tapping screws)
- (11) 10x M5 pan head screw (not supplied with gS95)
- (12) M5 Wavy washer (for additional grounding strap)
- (13) 1.5m (4.9 ft) Power / Data cable
- (14) 2m (6.6 ft) Video / Alarm cable
- (15) Display mounting gasket
- (16) 2m (6.6 ft) RayNet cable
- (17) Auxiliary alarm
- (18) 1m (3.28 ft) SeaTalk<sup>®</sup> spur cable



**NEW** RS150 GPS Sensor

**gS SERIES DIMENSIONS**

	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
<b>gS95</b>	246.8	9.7	188.2	7.4	8.0	0.3	69.0	2.72
<b>gS125</b>	311.8	12.3	237.0	9.3	8.0	0.3	70.0	2.75
<b>gS165</b>	383.2	15.0	284.7	11.2	8.0	0.3	69.0	2.72
<b>gS195</b>	433.9	17.1	391.2	15.4	8.0	0.3	75.9	3.0





# MARINE CHARTS

AN UNPRECEDENTED CHOICE



Raymarine chartplotters and multifunction displays now have the option of three cartography choices in one MFD: Navionics cartography, C-MAP and Raymarine's ever-expanding range of LightHouse charts give you a powerful and flexible navigation experience.

Transform the way you navigate with fully-featured vector charts, dynamic raster charts, plus 3D and satellite chart options.





Visit the Raymarine Lighthouse Chart store to purchase charts from leading map makers.



### RAYMARINE LIGHTHOUSE CHARTS

- LightHouse Charts are available in Raster or Vector formats
- Ever-expanding cartography library. Check [raymarine.com/charts](http://raymarine.com/charts) for latest listing
- General navigation and specialty titles from leading mapmakers around the world including:
  - ➔ Blue Latitude Press
  - ➔ Fugawi Aboard
  - ➔ NV Charts
  - ➔ Solteknik HB
  - ➔ Standard Mapping
  - ➔ Wavey Line
  - ➔ IMRAY Digital Charts
  - ➔ Delius Klasing Leisure Charts
  - ➔ Fishing Hot Spots

### C-MAP

- C-MAP 4D MAX and 4D MAX+ products compatible with Raymarine's range of multifunction displays and Dragonfly Sonar/ GPS displays
- C-MAP Essentials charts bundled with Raymarine products provide coastal navigation data: includes all critical navigation aids, chart objects, marina icons, all normal contours, spot depths, and three shaded depth areas
- C-MAP Essentials charts are eligible for free or paid upgrades
- Upgrades available to full C-MAP 4D MAX or 4D MAX+
- Easy-routing available with C-MAP 4D MAX+ products

### NAVIONICS CHARTS


- Choice of Navionics+ for 2D charts or Platinum+ and HotMaps Platinum for additional advanced features such as 3D View and satellite overlay and panoramic photos
- Keep charts up to date, free for one year with a Freshest Data subscription included with every Navionics product.
- SonarChart Live- Create personal HD bathymetry maps in real time.
- Various charts bundled with Raymarine products
- Autorouting and Dock to dock routing available with Navionics+ and Platinum charts



## VISIBLE LIGHT MARINE VIDEO CAMERAS


Raymarine video cameras transform your Raymarine multifunction display into a powerful video observation system

Connect multiple IP based cameras to your Raymarine LightHouse powered MFD and keep an eye on all the action. Switch from camera-to-camera with a simple swipe of the MFD's touchscreen. LightHouse supports video viewing, recording, playback, and snapshot.



**CAM50**

- Analogue video camera with composite video output
- Ideal for mounting in the saloon, wheel house or engine room
- Plug-and-play with Raymarine MFDs
- Ceiling or wall mount
- Manually adjustable pan and tilt



**CAM100**

- Analogue video camera with composite video output
- Auto switching between true colour (day) and black and white (night)
- Clear focus at night with Anti-IR focus distortion technology built-in
- Ideal for monitoring blind spots, decks, engine room and cabins

Images for illustrative purposes only.  
Product information and pricing subject to change without prior notice.







### CAM210IP CAMERA

Ruggedised, High Definition, Day and Night network bullet video camera suitable for all above deck applications. Integrated sun-cover for maximum visibility and small frame size for easy installation anywhere on the boat.

- Plug and play integration with Raymarine MFDs running LightHouse
- Power over Ethernet (PoE) or direct 12v DC power supply
- High bright IR LEDs for operation in total darkness
- Digital Defog processing improves the captured image in poor weather conditions (such as smog, fog or smoke)
- Intelligent IR technology for clear video images at night in all conditions

### SPECIFICATIONS

#### FORMAT

CAM50:	PAL 500 x 582 pixels NTSC 512 x 492 pixels
CAM100:	PAL 752 x 582 pixels NTSC 768 x 494 pixels
CAM2XX:	Up to 1920 x 1080 (FHD)

#### IMAGE SENSOR

CAM50:	1/3 Sony DSP Color CCD
CAM100:	1/3 Sony Super HAD CCD (Super Hi-resolution)
CAM2XX:	2.0 Megapixel 1/2.8" SONY progressive scan, CMOS (Exmor)

#### WATERPROOF RATING

CAM50:	IP63
CAM100:	IPX6 and CFR46
CAM2XX:	IP67

#### LENS

CAM50:	3.6mm Best focus - 1.5m Viewable distance - 3.5m
CAM200:	6.0mm Megapixel Board Lens
CAM210:	3.6mm Megapixel
CAM220:	6.0mm Megapixel

#### POWER

CAM50:	12V DC (+30% -10%)
CAM100:	12V DC (+30% -10%)
CAM2XX:	DC12V/1.5A, PoE (Power over Ethernet): 802.3af-Optional

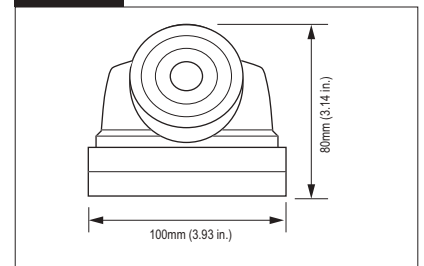
### CAM220IP CAMERA

Ruggedised, High Definition, Day and Night network eyeball video camera suitable for above or below deck applications. Eyeball design provides all round selected viability whilst the small frame size allows for rapid installation. Stylised to blend in with your boat's aesthetic design.

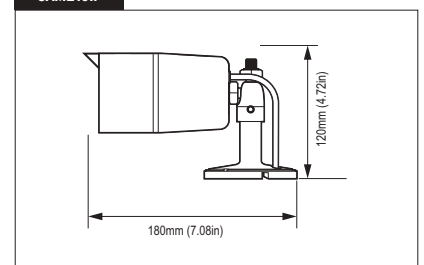
- Plug and play integration with Raymarine MFDs running LightHouse
- Power over Ethernet (PoE) or direct 12v DC power supply
- Simple mechanical frame allows the camera to be locked, rock steady, into position
- High bright IR LEDs for operation in total darkness



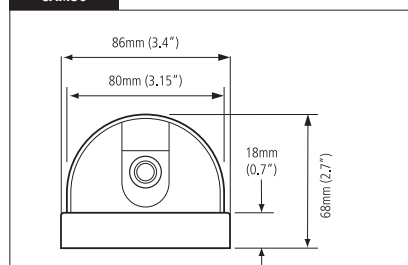
CAM220IP



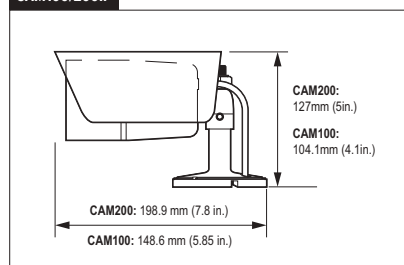
CAM210IP



CAM50



CAM100/200IP





## RADAR SCANNERS

Day and night, radar systems from Raymarine keep you aware of surrounding traffic, hazards, rain, sea birds and much more. From Quantum™ CHIRP radar, to ultra-high performance Super HD Color open arrays, Raymarine has the perfect radar solution for every boat.



## QUANTUM™ CHIRP RADAR

Raymarine Quantum Radar, by FLIR, is the next generation of marine radar featuring CHIRP pulse compression technology. Setting a new standard for compact solid state radar, Quantum delivers superior radar imaging on both long and extremely short ranges. Integrated Wi-Fi and thin cabling simplifies installation plus Quantum's energy efficient and lightweight design provides safe radiated emissions and substantially reduced power consumption.

### ENERGY EFFICIENT AND LIGHTWEIGHT DESIGN

- Weighs 50% less than traditional magnetron radars
- Safe Emissions thanks to Quantum's low power solid state transmitter
- Very low power consumption (17 Watts transmit and 7 Watts standby)
- Extended vessel battery life when under sail

### SUPERIOR PERFORMANCE

- Quantum's CHIRP Pulse Compression technology uses multiple compressed radar pulses with FLIR's exclusive ATX™ advanced target separation technology
- Quantum with ATX™ displays targets like boats, landmarks, buoys, and weather cells with unsurpassed resolution and separation quality versus traditional magnetron radars.
- Excellent short-range detection and enhanced target detail with 18' (6m) minimum range
- Immediate awareness – Quantum starts up and is ready to go in seconds
- Superior interference rejection eliminates noise from other radars

### SIMPLIFIED INSTALLATION

- Simple Wi-Fi connection between Quantum and any Raymarine LightHouse powered MFD
- Quantum's small diameter power cable is easy to route through tight spaces
- Easy to upgrade – Quantum uses the same bolt pattern as previous generation radars.
- Optional Quantum adapter cable eliminates the need to run new radar cables

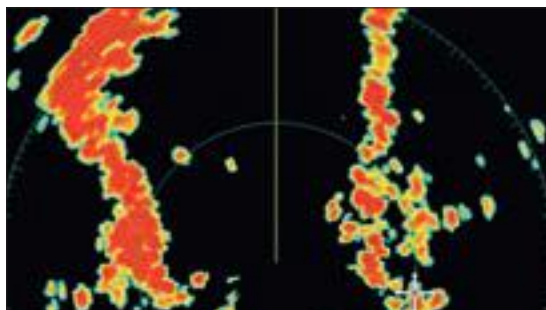
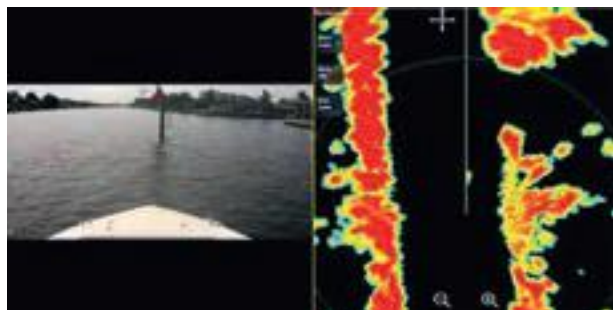


### EXCELLENT SHORT-RANGE DETECTION

CHIRP Pulse Compression technology lets you detect targets as near as 18-feet, giving you extra confidence in dense fog and low visibility.

### EXCEPTIONAL DETAIL AND CLARITY

Sharp, crisp targets and automatic sea clutter rejection produce radar images with stunning, life-like clarity.



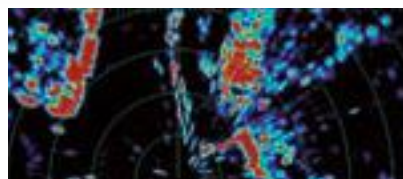


#### HD AND SUPER HD COLOR OPEN ARRAY SCANNERS

The choice of mid to large-sized powerboats and large sailing vessels, open array radar scanners deliver higher sensitivity, better target detection and improved target separation. Open array systems are available with 4kW or 12kW transmitters for exceptional performance at all ranges.

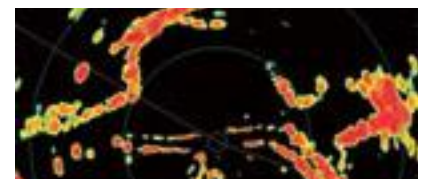
#### HD COLOR RADOME SCANNERS

Radome antennas are the perfect blend of compact size, light weight and high performance. Choose a radome antenna when space is at a premium or restricted by rigging. Radome scanners also consume less power than open array scanners which is essential for long-distance cruising sailboats.



#### SUPER HD DIGITAL COLOR RADAR

- 48 and 72 inch open array options
- Choice of 4kW or 12kW power output
- Greater dynamic range than conventional radar
- Acquires and processes vast amounts of echo information normally lost by conventional analogue radar
- Intelligently isolates and identifies true radar targets and simultaneously eliminates unwanted clutter
- Extra-narrow beam width pinpoints targets with stunning clarity and gives dramatically clearer radar displays



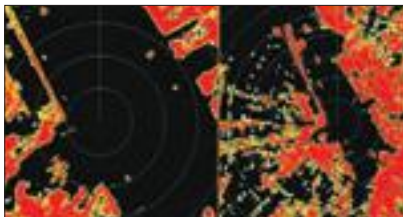
#### HD DIGITAL COLOR RADAR

- 18 and 24 inch 4kW radomes
- 48 and 72 inch open arrays with 4kW or 12kW power output
- Superior target detection and interpretation
- Identify target types, detect weak and distant contacts automatically, and virtually eliminate clutter and noise
- Adaptive transmitter and receiver automatically adjusts to changing environmental and sea conditions
- Dramatically clearer radar images
- Crisp, well-defined contact echoes
- Superior target separation and life-like target presentation



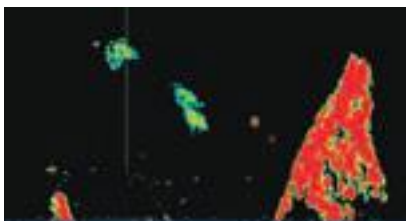
**RADAR & THERMAL IMAGING**

Every Raymarine radar integrates with T-Series thermal night vision camera systems. Instantly identify radar contacts night or day. Slew-to-cue target tracking with Raymarine T300/T400 Series thermal night vision camera systems.



**DUAL RANGE SCANNING**

Simultaneously monitor near and far targets from a single radar antenna with dual-range scanning, found on the HD Color and Super HD Color radar systems, and dual-scanner support.



**BIRD MODE**

Bird Mode automatically tracks flocks of seabirds, giving fishermen the heads up on where the fish are. Available on the HD Color and Super HD Color Radar Systems.



**TRACK TARGETS**

Not everything transmits AIS. Using MARPA (mini-automatic radar plotting aid) allows you to identify vessel, speed, bearing, closest point of approach (CPA) and time to closest point of approach (TCPA), set dangerous/proximity alarms, and overlay AIS info for further target clarification.

**SPECIFICATIONS**

**QUANTUM**

- INPUT VOLTAGE:** 12 – 24 Vdc (Min: 10.8 V, Max: 31.2 V)
- NETWORKING:** Wi-Fi or wired Ethernet (RayNet)
- ANTENNA TYPE:** Patch Array
- MAXIMUM RANGE SCALE:** 24 nm
- WATERPROOFING:** IPX6

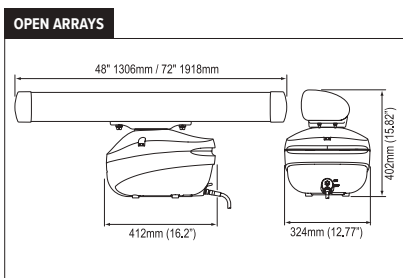
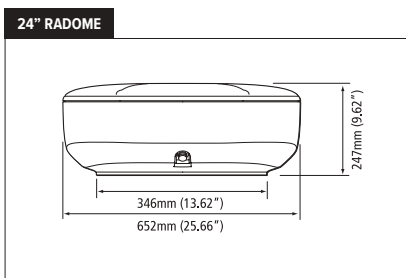
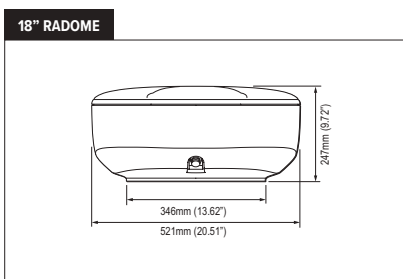
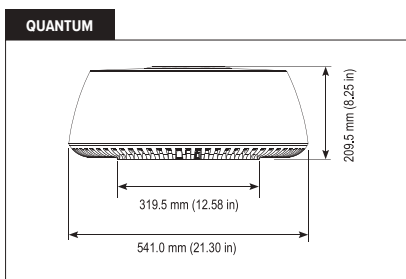
**HD COLOR RADOMES**

- INPUT VOLTAGE:** 12–24 Vdc
- NETWORKING:** SeaTalk<sup>ds</sup>
- PEAK POWER OUTPUT:** 4kW (nominal)
- MAXIMUM RANGE SCALE:** 48 nm
- WATERPROOFING:** IPX6

**HD & SUPER HD COLOR**

- OPEN ARRAYS**
- INPUT VOLTAGE:** 10.8–32 Vdc (using VCM100)
- NETWORKING:** Raynet
- PEAK POWER OUTPUT:** 48" and 72" HD and SHD available in 4kW or 12kW options
- MAXIMUM RANGE SCALE:** 72 nm
- WATERPROOFING:** IPX6

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.



**WHAT'S IN THE BOX QUANTUM**

- (1) Quantum Radome
- (2) Power Cable
- (3) Installation kit
- (4) Documentation including installation template

**WHAT'S IN THE BOX HD COLOR RADOMES**

- (1) Radome Scanner
- (2) Installation kit
- (3) Documentation including Installation template

**WHAT'S IN THE BOX OPEN ARRAYS**

- (1) Pedestal
- (2) VCM100 Voltage Converter Module
- (3) Installation kit
- (4) Documentation including installation template



## DRAGONFLY SONAR/GPS DISPLAYS

Welcome to Dragonfly®, superior fishing electronics made incredibly simple by Raymarine. With advanced technologies like wide-spectrum CHIRP DownVision™ and all-weather optically bonded displays, Dragonfly sonars let you spend more time catching fish and less time looking for them.





**THE DRAGONFLY DIFFERENCE**

A leap into the future of sonar, Dragonfly sonars employ true wide spectrum CHIRP technology. With wide spectrum CHIRP more sonar signals are transmitted into the water allowing Dragonfly to interpret more detail, target more fish, and image structure with unmatched clarity.

**CHIRP DOWNVISION™: SIMPLY THE BEST IMAGING SONAR**

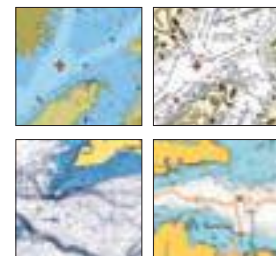
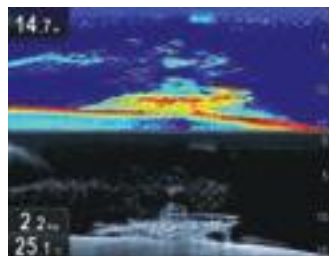
CHIRP DownVision™ will change your underwater view with incredibly clear, photo-like sonar images. Dragonfly's CHIRP DownVision™ surpasses ordinary imaging sonars with superior deep water penetration and reliable high-speed bottom tracking.

**A BETTER VIEW**

Each Dragonfly is engineered with optical bonding LCD display technology. Once only available on high-end marine displays, Dragonfly's all weather optically bonded displays deliver brighter colours, sharper contrast, and are guaranteed to never fog up.

**CONNECT AND SHARE**

Dragonfly PRO models feature built in Wi-Fi. Stream sonar data right to your smartphone or tablet with the Raymarine Wi-Fish™ mobile app. With Wi-Fish you can rewind and capture sonar images to share online with friends.



**DUAL-CHANNEL CHIRP**

CHIRP DownVision™ plus a CHIRP-powered fish-targeting channel for conventional sonar imagery.

**SUPERIOR SONAR**

Unlike conventional imaging sonars that transmit at a single frequency with each pulse, Dragonfly's DownVision™ sonar uses CHIRP technology to transmit across a wide spectrum of sonar frequencies simultaneously— the result is much higher-resolution, life-like sonar images.

**THE BEST MAPS**

Dragonfly models with GPS built-in give you the choice of Navionics, C-MAP or Raymarine LightHouse compatible charts.



**THE BIGGEST  
AND BRIGHTEST  
DRAGONFLY**

**DRAGONFLY-7 PRO**

**7" DUAL-CHANNEL CHIRP  
DOWNVISION™ SONAR  
WITH CHARTPLOTTER**

- 7" Super-Bright LCD
- All-Weather Bonded Display
- 10Hz GPS
- Fish-Targeting Sonar
- CHIRP Technology
- DownVision™ Sonar
- Wi-Fish Mobile





**DRAGONFLY-4 PRO**

**4.3" DUAL-CHANNEL CHIRP DOWNVISION™ SONAR WITH CHARTPLOTTER**

- All-Weather Bonded Display
- 10Hz GPS
- Fish-Targeting Sonar
- CHIRP Technology
- DownVision™ Sonar
- Wi-Fish Mobile

**DRAGONFLY-5M**

**5" GPS/ CHARTPLOTTER**

- All-Weather Bonded Display
- 10Hz GPS

**DRAGONFLY-5 PRO**

**5" DUAL-CHANNEL CHIRP DOWNVISION™ SONAR WITH CHARTPLOTTER**

- All-Weather Bonded Display
- 10Hz GPS
- Fish-Targeting Sonar
- CHIRP Technology
- DownVision™ Sonar
- Wi-Fish Mobile

**DUAL CHANNEL CHIRP TRANSDUCER**

DownVision produces a 60° side-to-side and 1.4° fore to aft beam. The second element provides a conical shaped beam for imaging fish targets, ensuring you will never miss any of the action below your boat.

DownVision transducers are available in transom mount, trolling motor and thru-hull mounting options.

CPT-70 and CPT-80 plastic/bronze through hull transducers also available.

For detailed information about the range of transducers available for use with Dragonfly, please visit our website [www.raymarine.com](http://www.raymarine.com)

CPT-DV Downvision only or CPT-DVS Downvision and conventional sonar transducers



	DRAGONFLY 4, 5 AND 7				Wi-FISH
	4-PRO	5M	5-PRO	7-PRO	Wi-Fish
Screen size	4.3in	5.0in		7.0in	
Screen resolution (pixels)	480 x 272	800 x 480		800 x 480	
CHIRP Sonar	●		●	●	
CHIRP DownVision™	●		●	●	●
All weather viewable	●	●	●	●	
Raymarine Wi-Fish app	●		●	●	●
Android and iOS compatible	●		●	●	●
Save and share sonar screen shots	●		●	●	●
Built-in GPS	●	●	●	●	
LightHouse vector and raster chart compatibility	●	●	●	●	
Navionics +, Hotmaps and SonarChart compatible	●	●	●	●	
C-MAP chart compatibility	●	●	●	●	
microSD card reader	●	●	●	●	
Navionics Boating and SonarChart Live compatible	●		●	●	●
Dual Channel Sonar: DownVision™ plus conventional fish targeting sonar	●		●	●	
Depth range	183m (600ft) CHIRP Downvision™ and CHIRP Sonar models 275m (900ft)				



### WI-FISH SONAR

#### WI-FI CHIRP DOWNVISION™ SONAR FOR SMARTPHONES AND TABLETS

Transform your smartphone into a powerful CHIRP DownVision™ sonar with Wi-Fish™. Simply download the free Wi-Fish app and connect using standard Wi-Fi and you will be streaming real-time sonar direct to your phone or tablet.



- Connect with the free Wi-Fish mobile app for iOS and Android devices (iOS7 or Android 4.0 minimum)
- Pause, zoom, and rewind the sonar right on your phone. Save your favourite catch and share with friends online
- Wide-spectrum CHIRP DownVision™ sonar technology for photo-like images, high-speed tracking, and better deep water resolution
- Access Wi-Fish sonar on Navionics Boating Apps and generate bathymetric charts with Navionics Sonar Chart Live
- Includes transom mount CHIRP transducer with temperature sensor

### WI-FISH MOBILE



Wi-Fish Augmented Reality View (full screen)



New Wi-Fish App View Switcher (left), Augmented Reality View (center), and Map View (right)

#### NEW WI-FISH MOBILE WITH AUGMENTED REALITY

The all-new Wi-Fish App brings the power and performance of Dragonfly right to your smartphone or tablet!

Using the Wi-Fi access point in every Dragonfly-PRO and Wi-Fish system, the app allows you to see and control live sonar right on your mobile device. Play, pause and rewind the sonar. Take screen shots to share instantly on social media.

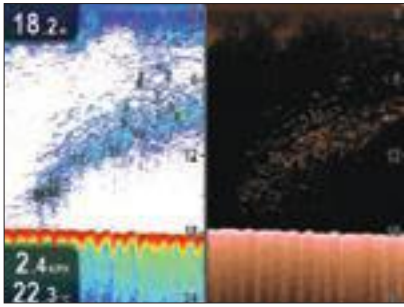
When used with Dragonfly-PRO, the Wi-Fish app also offers Augmented Reality waypoint navigation and mobile-friendly mapping. Use your mobile device like a virtual periscope to see your waypoints and fishing spots overlaid on the real world around you.

#### SYSTEM REQUIREMENTS

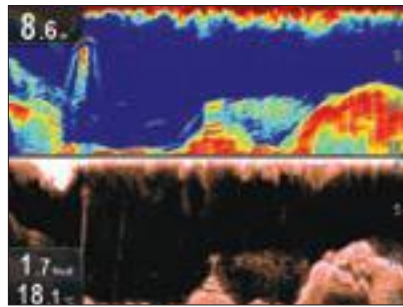
The new Wi-Fish Augmented Reality App is free and available for Apple and Android devices.

A GPS-enabled smartphone or tablet is required to use the app's Augmented Reality mode.

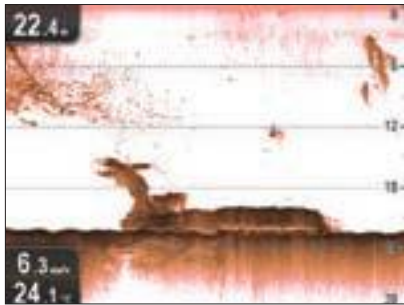
Dragonfly-PRO systems must be updated to software version 12.10 or higher, available free at [www.raymarine.com/software](http://www.raymarine.com/software)



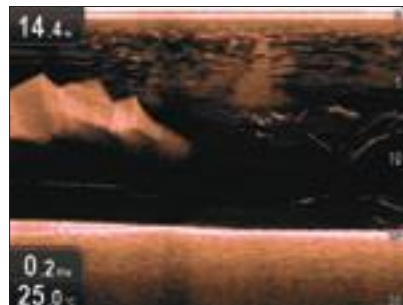
Shoal of fish



Submerged statue, fish and bottom structure



Submerged airliner



Massive ball of bait followed by Hairtail



**MOUNT ANYWHERE**

The Dragonfly 4, 5 and 7's compact ball-and-socket mounting system makes installation simple. Easy to upgrade to after-market ball and socket mounting systems.

**SPECIFICATIONS**

**LCD SCREEN SIZES**

Dragonfly-4: 4.3in  
 Dragonfly-5: 5.0in  
 Dragonfly-7 PRO: 7.0in

**DISPLAY RESOLUTION**

Dragonfly-4: 480x272  
 Dragonfly-5: 800x480  
 Dragonfly-7 PRO: 800x480

**SONAR TYPE (EXCEPT 5M)**

CHIRP Sonar - CPT-60 dual-beam CHIRP transducer supplied with product (check ordering information) (Cable length 6m)

**DEPTH RANGE (EXCEPT 5M)**

CHIRP DownVision™ 183m (600ft) and CHIRP Sonar imagery 275m (900ft)

**GPS**

Dragonfly 4/5/7-PRO: 72 channel GPS

**CHART COMPATIBILITY**

Support for Navionics, C-MAP and Raymarine LightHouse chart formats on microSD cards

**MOUNTING OPTIONS**

Ball and socket bracket or surface mount

**WATERPROOF RATING**

IPX6/IPX7

**MEMORY CARD READER**

MicroSD

**CONNECTIONS**

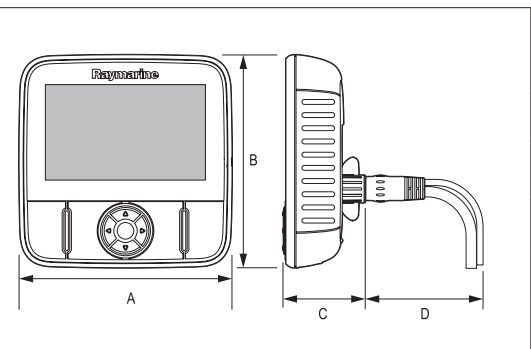
Power/transducer combined input

**POWER REQUIREMENTS**

10.8–15.6V

Images for illustrative purposes only. Product information and pricing subject to change without prior notice

DRAGONFLY DIMENSIONS								
	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
<b>DF-4</b>	145	5.7	145	5.7	56	2.2	90	3.5
<b>DF-5</b>	145	5.7	145	5.7	56	2.2	90	3.5
<b>DF-7 PRO</b>	199	7.83	178	7.0	62.2	2.45	90	3.5
<b>Wi-Fish</b>	145	5.7	145	5.7	54	2.1	90	3.5



**WHAT'S IN THE BOX  
 DRAGONFLY-5M**

- (1) Display unit
- (2) Locking collar
- (3) Pivot ball
- (4) M6 Hex bolt
- (5) Display bracket base
- (6) x3 M5 pozi-drive bolt
- (7) x3 M5 washer
- (8) x3 M5 locking nut
- (9) Documentation
- (10) 1.5m (4.9ft) power cable

**WHAT'S IN THE BOX  
 DRAGONFLY-4 AND 5 DV/DVS/PRO AND 7 PRO**

- (1) Display unit
- (2) Locking collar
- (3) Pivot ball
- (4) M6 Hex bolt
- (5) Display bracket base
- (6) x3 M5 pozi-drive bolt
- (7) x3 M5 washers
- (8) x3 M5 locking nut
- (9) Documentation
- (10) Mounting bracket
- (11) M5 Hex ratchet bolt
- (12) Ratchet plate
- (13) Compression washer
- (14) M5 washer
- (15) M5 locking nut
- (16) x3 self-tapping screws
- (17) Documentation
- (18) Transducer with combined power cable

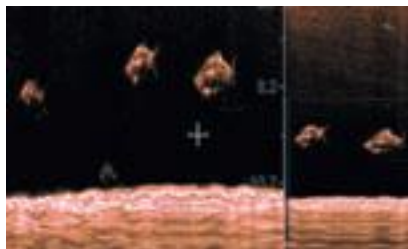


## CP100

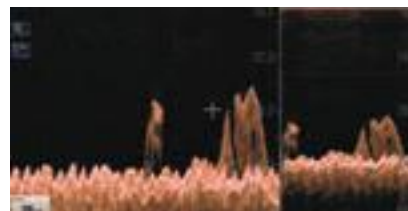
### CHIRP DOWNVISION™ SONAR MODULE

#### UNDERWATER VISION

The CP100 network sonar module brings CHIRP DownVision technology to Raymarine's multifunction displays. CP100's CHIRP DownVision delivers a photo-like view of the world beneath your boat, allowing you to image bottom structure with amazing detail and simultaneously target fish.



CHIRP technology lets you image structure and pinpoint fish on a single sonar display



**WIDE SPECTRUM CHIRP TECHNOLOGY**

Unlike conventional imaging sonars that transmit a single frequency with each pulse, the CP100 uses CHIRP technology to transmit across a wide spectrum of sonar frequencies with each pulse – the result is much higher resolution, photo-like sonar images.

**KEY FEATURES:**

- Photo-like images of bottom structure with CHIRP DownVision
- Dual-channel; view high resolution CHIRP DownVision structure images and target fish with CHIRP sonar at the same time
- Network with Raymarine's latest multifunction displays. From the aSeries to the flagship –gS Series the CP100 brings underwater vision in resolutions up to 1280 x 800 pixels
- Perfectly matched dual-beam CHIRP transducers available in transom mount, plastic and bronze thru-hull configurations

**FRESHWATER FISHING**

CP100 is ideal for freshwater anglers. Combined with Raymarine eSeries HybridTouch displays, the CP100 lets freshwater anglers create a multi-display network with HybridTouch control. Photo-realistic CHIRP DownVision™ easily identifies the habitat of bass and other fresh water species.

**COASTAL FISHING**

With depths down to 183m (600ft) for DownVision and 277m (900ft) conical, CP100 is perfect for coastal and bay fishing. View wrecks with unmatched clarity and use the second CHIRP channel to target bait and predators.



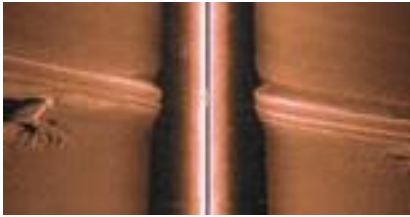
# CP200

## SIDEVISION™ SONAR MODULE

The CP200 CHIRP SideVision™ Sonar expands your underwater horizon with crystal-clear, bank-to-bank displays of fish, bait and underwater structure. Engineered with the same CHIRP sonar technology as Raymarine's award winning DownVision™ the CP200 uses advanced CHIRP signal processing technology to let you see further, see more clearly, and detect more fish than traditional side scanning sonars.

### SUPERIOR RANGE PERFORMANCE

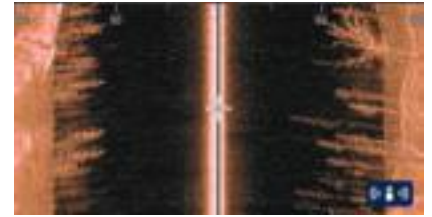
Raymarine CHIRP signal processing delivers high resolution and excellent long range performance. Identify objects and see fish even further, out to 183m (600 ft.) on each side.



Underwater tree



Wreck



Underwater brush

### DUAL INDEPENDENT TRANSDUCER ARRAYS

Best-in-class side scan performance using two high-performance transducer arrays with dedicated CHIRP sonar channels.

### SEE FURTHER

Independently adjustable transducer arrays enable anglers to preset their SideVision™ transducer angle for either shallow or deep water applications. Left and Right sonar images up to 183m (600ft.) either side of the boat.

### CHIRP SIDEVISION™ AND DOWNVISION™ TOGETHER

Combine the CP200 with CHIRP DownVision™ for the ultimate in sonar intelligence, giving you a full 180 degree view of your underwater surroundings.

### CP200 KEY FEATURES

- Network compatible CHIRP SideVision™ sonar for aSeries, cSeries, eSeries, eS Series, and gS Series MFDs
- Multi-sonar compatible: view CHIRP SideVision™ alongside other sources, simultaneously
- Image fish, bait and bottom structure at distances up to 183m (600 feet) horizontally per side
- CHIRP signal processing delivers crystal-clear images with amazing detail
- Adjustable CPT-200 transducer optimises performance for shallow or deep water scanning



CP200 delivers amazing photo-like imagery of underwater terrain and man-made objects.



**CPT-200: CHIRP SIDEVISION™ TRANSDUCER**

Engineered for high performance CHIRP sonar, the CPT-200 transducer is perfectly matched to the CP200's CHIRP transceiver.

**CP100**

**SONAR TYPE**

CHIRP

**CHANNELS**

2x CHIRP DownVision plus a high frequency CHIRP channel for fish targeting

**NOMINAL SUPPLY VOLTAGE**

12/24V DC Systems

**OPERATING VOLTAGE RANGE**

10.2 - 32 V DC

**POWER CONSUMPTION AT FULL POWER**

3W

**CONNECTIONS**

Power (power cable), transducer (9 pin connector), and Raynet network connector

**TRANSDUCER INFO**

Max depth DownVision - 600ft, CHIRP - 900ft.

**CP200**

**SONAR TYPE**

CHIRP SideVision

**CHANNELS**

2 x CHIRP SideVision™ (port and starboard)

**NOMINAL SUPPLY VOLTAGE**

12/24V DC Systems

**OPERATING VOLTAGE RANGE**

10.8 - 32 V DC

**POWER CONSUMPTION AT FULL POWER**

5.6W (Max)

**CONNECTIONS**

Power (power cable), transducer (9 pin connector), and Raynet network connector

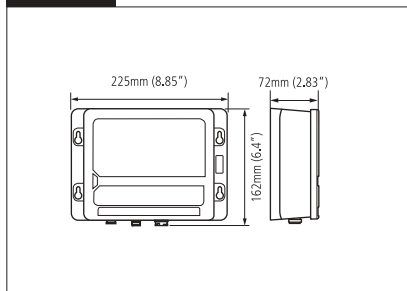
**BEAM COVERAGE**

Port and starboard facing fan beams - wide (port / starboard) and thin (fore / aft)

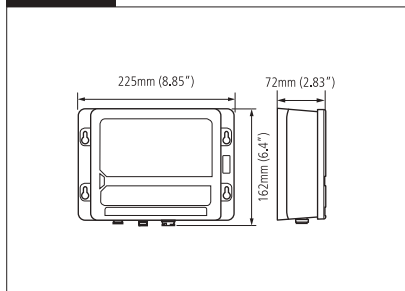
**TRANSDUCER INFO**

Range performance up to 183m (600ft)

CP100



CP200



**WHAT'S IN THE BOX CP100**

- (1) Sonar module
- (2) Documentation pack
- (3) Mounting screws
- (4) Power cable 1 m (3.28 ft)

**WHAT'S IN THE BOX CP200**

- (1) Sonar module
- (2) Documentation pack
- (3) Mounting screws
- (4) Power cable 1 m (3.28 ft)

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.



# CP370 DIGITAL

DIGITAL SONAR MODULE  
FOR OFFSHORE &  
COASTAL FISHING







The CP370 delivers exceptional clarity, sharper fish targets, and automatic operation using Raymarine's next-generation ClearPulse™ digital sonar processing. The CP370 boasts up to 1,000 watts of power and operates at 200kHz for inshore and 50kHz for offshore fishing. ClearPulse™ signal processing intelligently manages the CP370 sonar parameters in all conditions so anglers can spend more time fishing and less time adjusting the sonar.

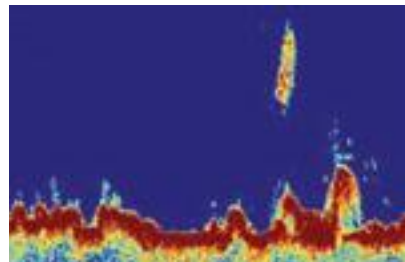


**SHARPER, CLUTTER-FREE TARGETS**

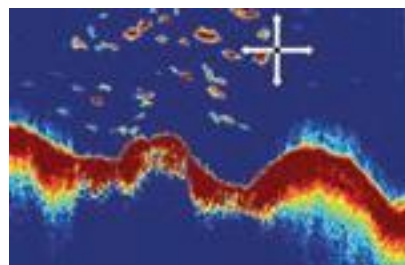
- Smarter target intensity controls reveal bait and game fish with exceptional clarity
- Enhanced digital filtering reveals fish targets through the entire water column
- Spend less time looking for fish and more time fishing. CP370 takes the guesswork out of interpreting the sonar display.

**ACCURATE BOTTOM TRACKING**

- Track the bottom in extreme conditions with advanced ClearPulse™ signal processing.
- New and improved bottom tracking algorithms deliver reliable performance in challenging conditions like running at high speeds and transitioning across canyons.



Better Noise Reduction



Enhanced Bottom Tracking



Enhanced Automatic Sensitivity Control



**TRANSDUCERS**

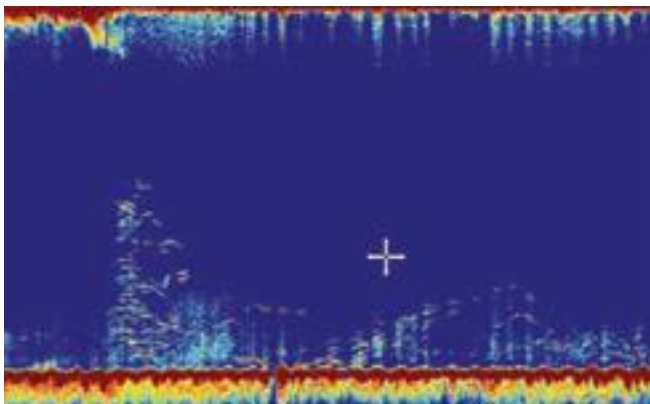
For detailed information about the range of transducers available for use with CP370, please visit our website [www.raymarine.com](http://www.raymarine.com)



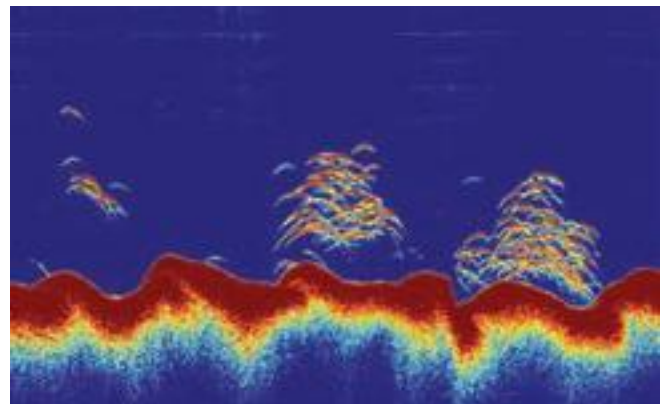
## CP470 CHIRP

### HIGH PERFORMANCE CHIRP FOR COASTAL AND OFFSHORE BLUE WATER FISHING

Engineered for serious anglers, the CP470 and CP570 sonars bring best-in-class target separation and high-resolution CHIRP sonar imagery to Raymarine multifunction displays. Using a wide spectrum of frequencies and greater sensitivity, the CP470 and CP570's advanced CHIRP transceiver can see through dense schools of baitfish, identify thermoclines, and simultaneously target desired game fish. Rated for offshore use and rough conditions, the CP470 and CP570 intelligently filter out unwanted noise while producing high resolution fish targets and reliable bottom tracking. Both models offer dual CHIRP sonar capabilities. For the professional angler the CP570's two fully independent sonar channels deliver faster target identification and up to 4kW of combined output power.



Bait fish



Predator fish



#### EASY TO CUSTOMISE

Choose optional low, medium, and high CHIRP frequency transducers in standard or wide-beam to match your fishing preferences.

- CP470 and CP570 automatically recognise connected transducers and adjust sonar parameters for optimised performance.
- View and control each CHIRP channel independently and create your own combination of full or split-screen sonar windows on Raymarine's LightHouse II powered multifunction displays.



## CP570 CHIRP

### PROFESSIONAL CHIRP SONAR MODULE FOR TOURNAMENT AND OFFSHORE BLUE WATER FISHING

#### SERIOUS OFFSHORE SONAR

Superior target definition and enhanced sensitivity using Raymarine's exclusive wide spectrum CHIRP sonar technology.

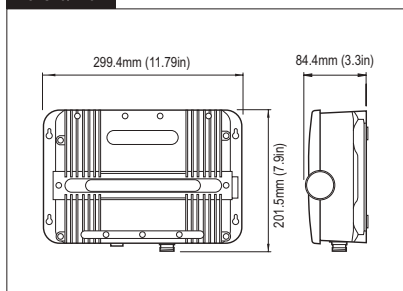
- Target fish, identify bait, and track the sea floor down to 10,000ft. (3,000m) with two adjustable CHIRP sonar channels.
- Hunt for fish in different parts of the water column simultaneously with the CP570's two fully independent 2kW sonar channels.

#### STUNNING DETAIL & CLARITY

With 10 times the resolution of ordinary sonars the CP470 and CP570 deliver sharper, more defined fish targets and automatically filter out unwanted noise so you never miss the action below.

- TruZoom™ magnification mode reveals extra target detail without any loss of resolution.
- CP570's ultra-fast ping rate processing delivers accurate bottom tracking in extreme offshore conditions.

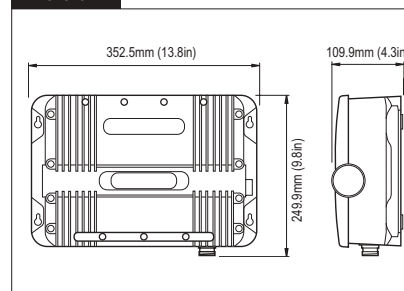
CP370/470



#### WHAT'S IN THE BOX CP370 SONAR

- (1) Sonar Module
- (2) Power Cable
- (3) Fixing Screws
- (4) Documentation Pack
- (5) RayNet Cable

CP570



#### WHAT'S IN THE BOX CP470/CP570 SONAR

- (1) Sonar Module
- (2) Power Cable
- (3) Fixing Screws
- (4) Documentation Pack
- (5) RayNet Cable

#### CP370

##### SONAR TYPE

Digital

##### POWER

600W / 1000W Depending on transducer

##### FREQUENCY & CHANNELS

Fixed frequency 50KHz and 200KHz channels

##### DEPTH RANGE

5000ft. (1,500m)

##### WATERPROOFING STANDARD

IPX6

##### NOMINAL SUPPLY VOLTAGE

12/24 V DC

##### CONNECTIONS

Power connection | Network connection (RayNet connector) 10/100 Mb/s | Transducer connection

#### CP470/CP570

##### SONAR TYPE

Wide Spectrum CHIRP

##### POWER

CP470: 1kW / 2kW depending on transducer

CP570: Max 4kW output using 2 independent CHIRP channels

##### FREQUENCY & CHANNELS

CP470: Dual CHIRP from 25 to 250kHz

CP570: Dual independent CHIRP channels from 25 to 250kHz

##### DEPTH RANGE

10,000ft (3,000m)

##### WATERPROOFING STANDARD

IPX6

##### NOMINAL SUPPLY VOLTAGE

12/24 V DC

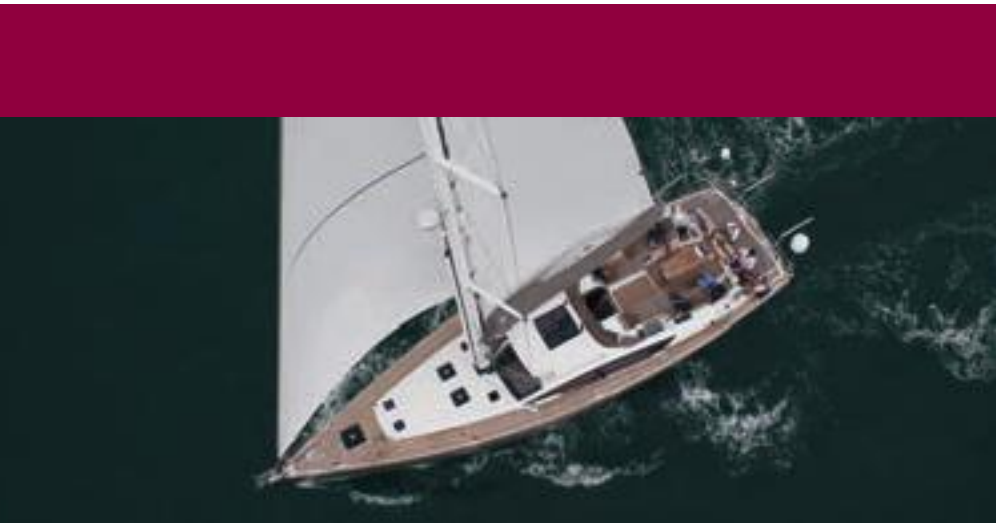
##### CONNECTIONS

Power connection | Network connection (RayNet connector) 10/100 Mb/s | Transducer connection



#### TRANSDUCERS

For detailed information about the range of transducers available for use with CP470/CP570, please visit our website [www.raymarine.com](http://www.raymarine.com)



## RACE, CRUISE OR FISH

EVOLUTION WILL TAKE  
COMMAND





**RACE PERFORMANCE**

When only the best will do. Razor-sharp course keeping. Fine-tuned for racers!



**CRUISING PERFORMANCE**

Superb course keeping and crisp turns in all conditions – the Raymarine skippers choice



**LEISURE PERFORMANCE**

For relaxed boating, when soaking up the sun is more attractive than precise course keeping



**EVOLUTION R4**  
AUTOPILOT PERFECTION

**EVOLUTION TECHNOLOGY**

The culmination of Raymarine autopilot expertise, FLIR Systems' R&D, and advanced aerospace guidance technology, Evolution Ai™ control algorithms deliver a new level of accurate autopilot control.

**EASY TO INSTALL**

- Freedom from restrictions of conventional heading sensors
- EV sensor core can be installed above or below deck, upside-down or off the vessel's centre line
- No lengthy calibration procedures to perform
- Automatic compass calibration
- Plug and play connections

**AEROSPACE TECHNOLOGY**

9-axis precision monitoring of pitch, roll, yaw and heading

**FUEL EFFICIENT**

Evolution autopilots steer so accurately they can save fuel and get you to your destination faster.

**EVOLUTION R4: AUTOPILOT PERFECTION**

With the FREE R4 upgrade, Evolutions 9-axis EV sensor core now uses patented algorithms for improving the accuracy of measured wind conditions. Enhanced awareness of wind angle and wind speed allows Evolution to deliver crisp and responsive steer-to-wind control, giving both cruising and racing skippers the confidence to let Evolution take command in the most challenging conditions.

The R4 upgrade introduces Evolution TrackIQ™ technology for best-in-class steer to GPS waypoint tracking. Patented TrackIQ™ algorithms compensate for the effects of sea conditions and vessel motion, enabling Evolution to make smoother steering commands and keep the vessel on a plotted GPS course with incredible accuracy regardless of boat size.





**AUTOPILOT CONTROL**

Complete your Evolution autopilot system with a p70s or p70Rs autopilot control head. The p70s and p70Rs feature vibrant colour displays and are powered by Raymarine's intuitive LightHouse user interface. LightHouse organises all options into simple menu structures, so with Evolution's Automagic 3-step setup process you will be up and running in minutes.

**p70s CONTROL HEAD**

Designed for sailing yachts, the p70s offers simple 1 and 10 degree direct course changes at the touch of a button.



**p70Rs CONTROL HEAD**

Features a rotary dial control for power boaters. Use the rotary dial for menu and course changes or activate power steer mode and steer manually right from the p70Rs.



**EV-1 COCKPIT AND INBOARD AUTOPILOTS**

EV-1 autopilots consist of a Control Head, EV-1 Sensor, Autopilot Control Unit (ACU) and drive unit. The drive unit (inboard mechanical/hydraulic or cockpit mounted), and correct ACU for your vessel is dependent on the steering system and displacement of the vessel itself.

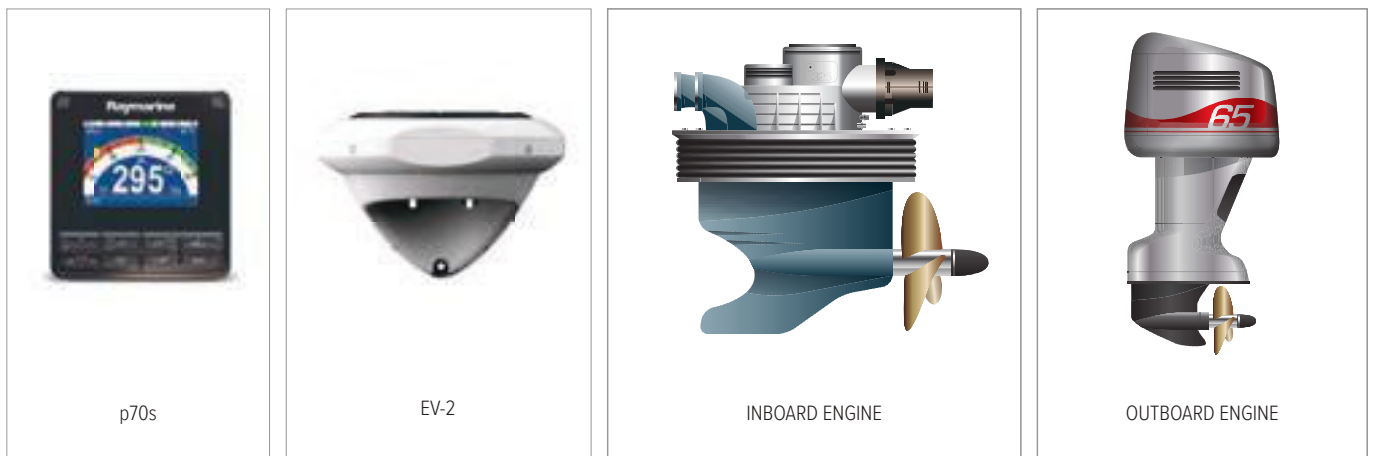


**EV-2 FOR DRIVE-BY-WIRE PROPULSION**

EV-2 has been designed for the latest drive-by-wire steering systems and connects directly to Raymarine’s SeaTalk<sup>™</sup> bus. EV-2 also has a dedicated CAN Bus port for direct connection to steer-by-wire steering systems such as ZF Pod Drives, Yamaha Helm Master, Volvo IPS\* and SeaStar Solutions Optimus systems.

A single CAN Bus connection to the EV-2 eliminates the need for an Autopilot Control Unit (ACU), further simplifying installation.

\* Use a Raymarine ECI-100 Universal Control and Engine Interface for a quick and easy install.



**ECI-100 UNIVERSAL ENGINE AND CONTROL INTERFACE**



The ECI-100 Universal Engine and Control Interface is an innovative and affordable solution for bridging engine instrumentation and drive-by-wire steering with Raymarine autopilot and navigation systems.

A simple isolated CAN Bus solution, the ECI-100 offers reliable integration with Raymarine’s latest generation of multifunction displays and delivers a seamless autopilot steering interface to Raymarine’s Evolution EV-2 Drive-By-Wire autopilot system.

Note: See our website for a list of compatible engines.



## AUTOPILOT SYSTEM PACKS

### COCKPIT AUTOPILOTS

EV-100 autopilots are installed in the cockpit of tiller and wheel steered yachts and smaller power boats. An EV-100 system consists of an EV-1 Sensor, ACU-100 Autopilot Control unit, drive unit and control head.

#### EV-100 WHEEL

Wheel-steered sail up to 16,000 lbs / 7,500 kg



EV-1



ACU-100



p70s



Wheeldrive

#### EV-100 TILLER

Tiller-steered sail up to 13,200 lbs / 6,000 kg



EV-1



ACU-100



p70s



Tillerdrive

#### EV-100 POWER

Hydraulic-steering 3.1in<sup>3</sup> - 6.7in<sup>3</sup> / 50-110cc



EV-1



ACU-100



p70Rs



0.5L Hydraulic Drive

#### EV-150 HYDRAULIC POWER 12 VOLTS

Hydraulically-steered power 4.9in<sup>3</sup> - 14.0in<sup>3</sup> / 80-230cc



EV-1



NEW ACU-150



p70Rs



Type 1 Hydraulic Drive





## AUTOPILOT SYSTEM PACKS

### INBOARD AUTOPILOTS

The Evolution inboard range consists of autopilot packs designed to suit specific vessel types, steering systems and vessel displacements. Autopilot pack selection is, therefore, determined by:

1. The type of steering system installed on your vessel
2. Hydraulic steering systems; the pump has to be matched to volume of hydraulic steering ram (in cc)
3. The size and displacement of your vessel – always take the fully laden displacement of your vessel into account (often 20% above the designed displacement)

#### EV-200 HYDRAULIC 24 VOLTS

Hydraulically-steered power 4.9in<sup>3</sup> - 14.0in<sup>3</sup> / 80-230cc



EV-1



ACU-200



p70Rs



Type 1 Hydraulic Drive

#### EV-200 LINEAR

Mid-size sail up to 24,000 lbs / 11,000 kg



EV-1



ACU-200



p70s



Type 1 Mechanical Linear

#### EV-300 SOLENOID

Vessels with solenoid controller systems



EV-1



ACU-300



p70s

#### EV DRIVE-BY-WIRE

Drive-by-wire steering systems



EV-2



p70Rs



**MFD PILOT CONTROL**

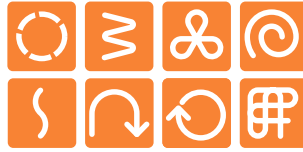
Evolution pilots can also be controlled from aSeries, cSeries, eSeries, eS Series, Axiom, Axiom Pro and gS Series Raymarine multifunctional displays (MFD).



**HYDROBALANCE**

Hydro-Balance™ Technology delivers superior autopilot performance on boats with hydraulic steering, and particularly on boats with rudder reference-less steering and outboard motors.

Patented Hydro-Balance technology automatically compensates for trapped air, hose expansion and torque steer. Hydro-Balance is available as part of the free Evolution R4 software update



**FISHING PATTERNS**

Fishing patterns are available when the p70s and p70Rs control heads are used with Evolution.



**EVOLUTION PERFECT ON ALL POINTS OF SAIL**

- Upwind in short chop
- Downwind with kite up
- Broad reach with quartering sea

**SPECIFICATIONS**

**p70s/p70Rs**

Nominal voltage: 12V  
 Screen size: 3.5" TFT LCD 320 x 240 pixels  
 Connections: SeaTalk™ (x2) and SeaTalk1 Compatible  
 Waterproofing: IPX6

**EV1/EV2**

Nominal voltage: 12V (powered by SeaTalk™ system)  
 Connections: SeaTalk™ | NMEA 2000  
 DeviceNet (EV-2 only)  
 Sensors: 3-axis digital accelerometer | 3-axis digital compass | 3-axis gyro digital angular rate sensor

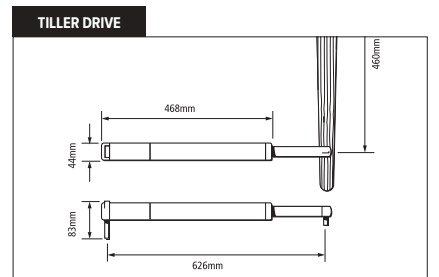
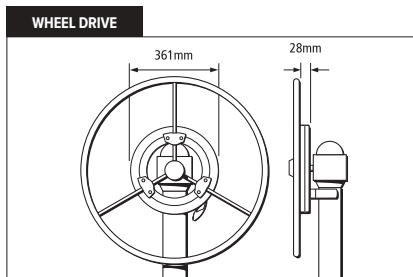
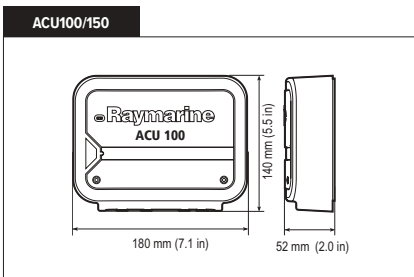
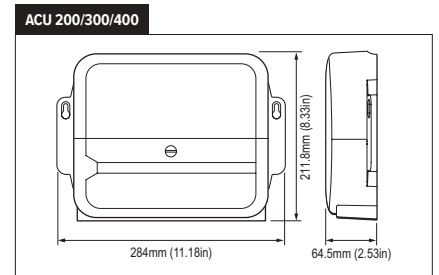
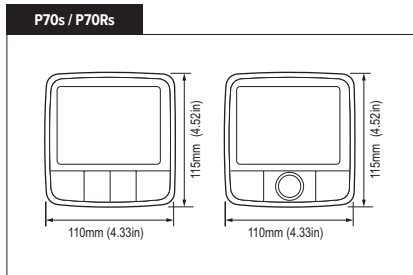
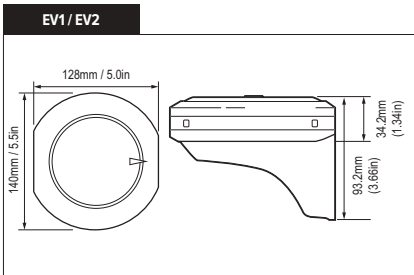
**ACU-100/150**

Nominal voltage: 12V  
 Data connections: SeaTalk™  
 Waterproofing: Connector panel IPX2, Drive electronics - IPX6

**ACU-200/300/400**

Nominal voltage: 12V or 24V  
 Data connections: SeaTalk™  
 Waterproofing: Drip resistant

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.



**WHAT'S IN THE BOX EVOLUTION EV1/EV2**

- (1) Mounting Trim
- (2) EV-1/EV-2
- (3) Sealing ring
- (4) Mounting tray
- (5) Sealing ring

**WHAT'S IN THE BOX ACU 100/150**

- (1) ACU Unit
- (2) Documentation pack
- (3) Screws (pan head type)
- (4) SeaTalk™ spur to bare wires cable 1m (3.3ft)

**WHAT'S IN THE BOX ACU 200/300/400**

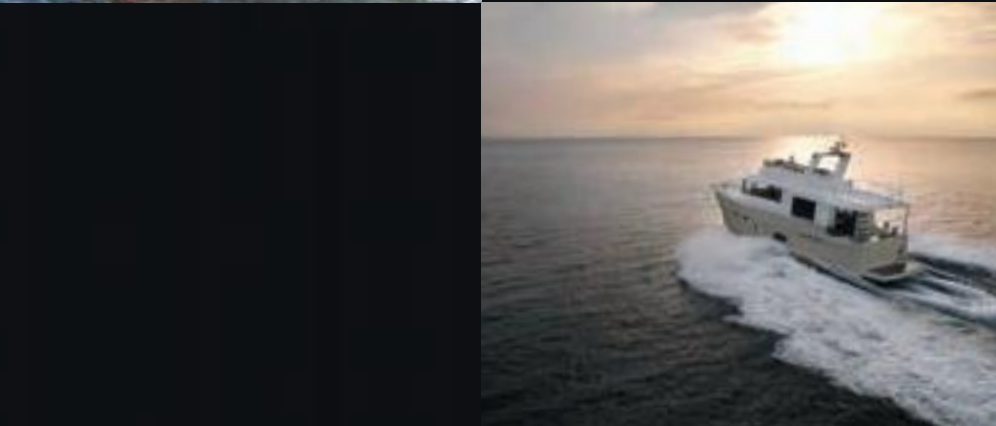
- (1) ACU Unit
- (2) Documentation pack
- (3) ACU SeaTalk™ spur power cable 0.3m (1.0ft)
- (4) Rudder reference unit (if supplied; refer to separate installation sheet for list of parts supplied)
- (5) Screw pack, consisting of: Cable ties; Pan head screw; Countersunk screw.



## THERMAL NIGHT VISION CAMERAS

Thermal night vision cameras from Raymarine give captains the confidence to navigate safely in total darkness.

Engineered with genuine FLIR thermal imaging technology, Raymarine's thermal night vision cameras are designed for simple, seamless operation with Raymarine multifunction displays.



Day or night, thermal imaging cameras deliver enhanced levels of safety and situational awareness, allowing you to clearly see other vessels, navigation hazards, buoys and much more.



**DAY AND NIGHT OPERATION**

Thermal imaging camera systems are amazing at night, but are also just as effective at seeing through bright sun, glare, haze and more.

**SUPERIOR FLIR THERMAL IMAGING TECHNOLOGY**

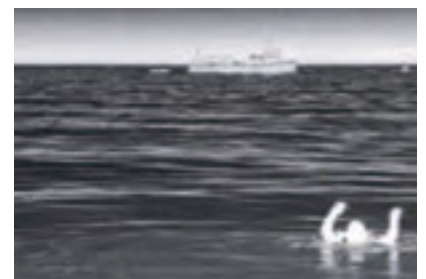
As the worldwide leader in thermal technology, FLIR Systems are the choice of military and law enforcement professionals.



Your night vision



Thermal night vision



**FIXED-MOUNT, OR FULL-MOTION SYSTEMS**

Previously reserved for military, law-enforcement and ultra-luxury vessels only, thermal night vision technology is now available for every boater.

Choose from the affordable T200 Series fixed mount thermal cameras or, for a 360 degree view, step up to T300 and T400 with pan, tilt and zoom.

**THE BEST MAN-OVERBOARD DETECTION**

If one of your crew should fall overboard, a Raymarine thermal camera is your best bet in low visibility to find and track them so you can quickly get them back on board.



Images for illustrative purposes only. Product information subject to change without prior notice



### M100 AND M200 SERIES

The M100 and M200 marine thermal night vision cameras from FLIR take affordability and easy integration to a whole new level. Packing 320x240 thermal resolution, video over IP, and digital zoom into the smallest, lightest pan/tilt housing on the market, the M100 and M200 are the perfect additions to any vessel.

Combine Axiom or Axiom Pro with the FLIR M132 or M232 thermal camera and enjoy ClearCruise™ IR Analytics. Axiom will automatically alert you to obstacles in your path.



### T300 AND T400 SERIES

- Full pan, tilt and zoom capabilities
- Simple touchscreen control from Raymarine multifunction displays. Simply swipe your finger across the screen to slew the camera
- T300 models feature a single-payload thermal camera to produce standard or high-resolution FLIR thermal images
- T400 dual-payload models add a high-resolution day/night, lowlight camera. Anywhere your eyes can see just a little, the lowlight camera will show you a whole lot more
- Optional 2-axis gyro-stabilised models provide steady imagery in heavy seas and a colour low-light camera with 10x optical zoom



#### SLEW-TO-CUE TARGET TRACKING

Slew-To-Cue improves situational awareness and safety. Thermal camera automatically keeps "cued" targets in view at all times

#### CHART OBJECT SLEW-TO-CUE

Touch the display (cue) and the thermal camera automatically moves to the cursor position (slew), allowing you to keep chart objects like buoys or obstructions in constant view.

#### AUTO SLEW TO AIS AND MARPA TARGETS

T Series cameras and Raymarine MFDs can Auto Slew to dangerous MARPA and AIS targets, keeping dangerous targets in the camera's sight during limited visibility situations.

#### MOB AUTO SLEW

The MFD and thermal camera will Auto Slew to a Man Over Board alarm location, maintaining the Man Over Board position in view at all times during a rescue situation.



**GYRO-STABILISATION**

The Raymarine T470SC and T473SC thermal cameras feature gyro-stabilisation. The images to the left demonstrates the effectiveness of gyro-stabilization. As the vessel approaches these oil rigs it gradually speeds up so you can see how the camera compensates for the varying rates of boat movement up and down the waves.



**T200 SERIES**

The affordable T200 series fixed mount camera is designed to increase your situational awareness without blowing your budget.

Simple to mount and easy to integrate into your existing Raymarine electronics, the T200 Series outputs standard analogue video that can be easily displayed on almost any monitor at the helm or other locations on the vessel.

- Compact, fixed mount cameras
- Look-ahead visibility, targeting objects in the vessel's path
- Simple installation
- Easy integration with Raymarine multifunction displays
- User-selectable colour palettes for enhanced on-screen visibility
- 2x and optional 4x digital zoom for enlarging far-away targets
- Standard and high resolution options



**FLIR OCEAN SCOUT HANDHELD THERMAL SCOPE**

Ocean Scout is a rugged, compact thermal night vision camera that lets you see other vessels, landmarks, buoys, and floating debris in total darkness.

Now with a high resolution LCD display and FLIR's industry-leading thermal sensor technology, Ocean Scout makes your time on the water safer and more relaxing.



**FLIR OCEAN SCOUT TK HANDHELD THERMAL SCOPE**

The FLIR Ocean Scout TK is a marine thermal camera that extends your vision on the water, day or night, for greater awareness and safety. As a thermal imager, the Ocean Scout TK creates images based on heat, not visible light. Vessels, watercraft, buoys, and other obstacles give off heat and appear clearly in all lighting conditions – from pitch darkness to blinding sun glare.

	RANGE & DETECTION	
	MOB	Small Vessel
Ocean Scout TK	100m (390ft)	
Ocean Scout 240	350m (1,150ft)	0.9 km (0.48nm)
Ocean Scout 320	550m (1,800ft)	1.5km (0.84nm)
Ocean Scout 640	1,140m (3,705ft)	3.2km (1.73nm)
T200/T203/T223/T220	450m (1,500ft)	1,280m (4,200ft)
T253/T250/T273/T270	820m (2,700ft)	2,200m (1.2nm)
T403/T400/T300/T303	450m (1,500ft)	1,280m (4,200ft)
T453/T450/T353/T350	820m (2,700ft)	2,200m (1.2nm)
T463/T460	1,200m (4,000ft)	3,200m (2.0miles)
T473SC/T470SC	1,200m (4,000ft)	3,900m (2.4miles)
M100/M200	457m (1,500ft)	1.3km (0.67nm)

**RANGE AND DETECTION**

The range at which Raymarine thermal night vision cameras detect objects is shown in the table (left). However, actual object detection range performance may vary depending on camera set-up, environmental conditions, user experience and display type.

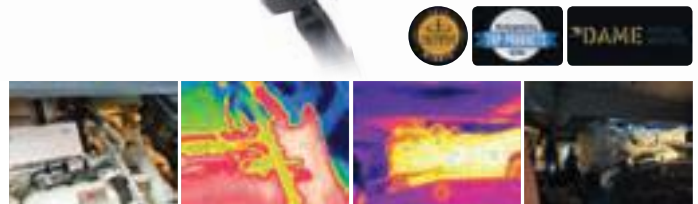
Images for illustrative purposes only. Product information subject to change without prior notice



## FLIR AX8 MARINE THERMAL MONITORING

Gain an entirely new view of your vessel's mechanical system with the new AX8 thermal monitoring camera. Combining thermal and visible cameras in a small, affordable package, the AX8 integrates with Raymarine multifunction displays (MFDs) and sends audible and visual alerts when the temperature of machine parts rise above preset thresholds.

Keep a watchful eye on such critical equipment as engines, exhaust manifolds, and shaft bearings and spot problems before they leave you stranded on the water. Exclusive MSX® imaging blends visible and thermal images for more detailed imagery that is easier to understand.



### WHAT'S IN THE BOX AX8

- (1) Infrared camera with lens
- (2) Printed documentation
- (3) User documentation CD-ROM
- (4) Cooling/mounting plate
- (5) POE injector
- (6) Camera PoE Cable
- (7) Raymarine RayNet Ethernet cable

### WHAT'S IN THE BOX OCEAN SCOUT

- (1) Ocean Scout thermal camera
- (2) Drawstring pouch
- (3) USB cable
- (4) Lens cover
- (5) Wrist wrap
- (6) Camera

### WHAT'S IN THE BOX T200 SERIES

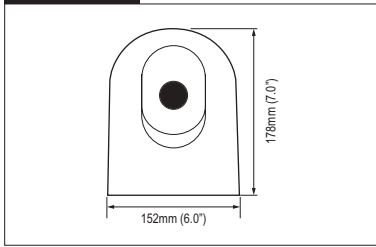
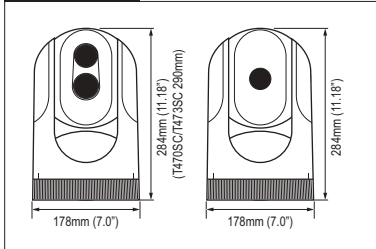
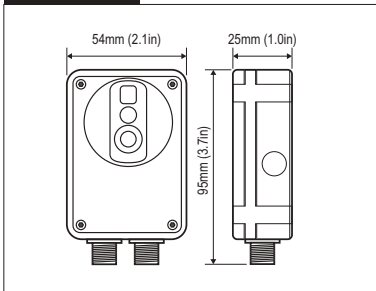
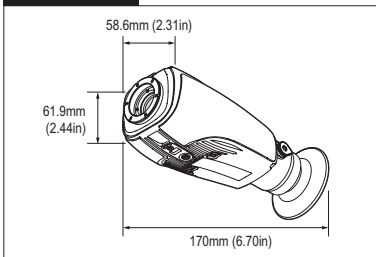
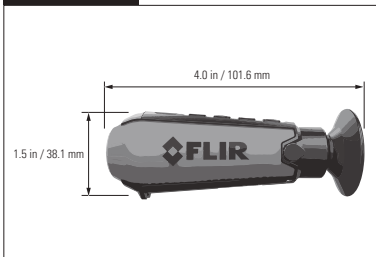
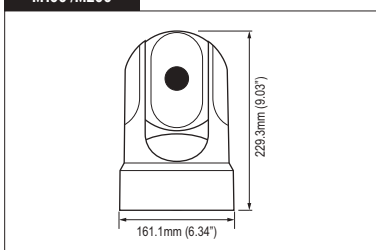
- (1) Thermal camera
- (2) Ethernet coupler
- (3) Power over Ethernet (PoE) Injector
- (4) Mounting kit, consisting of: M8 nylock nut; acorn nut; stud; washer
- (5) O-ring
- (6) Top-down fixing
- (7) Documentation pack
- (8) Grounding strap securing nut

- (9) Video connectors: Female to female F-type connector; Female F-type to Male RCA adaptor; Female F-type to BNC connector
- (10) Zip ties
- (11) 1 m (3.28ft.) RayNet to SeaTalk® cable
- (12) 7.7m (25ft.) Ethernet cable
- (13) 7.7m (25ft.) Coaxial video cable.

### WHAT'S IN THE BOX T300/T400 SERIES

- (1) T-Series thermal camera
- (2) Mounting fasteners
- (3) Ethernet waterproof coupler
- (4) Small O-ring
- (5) Large O-ring
- (6) Documentation pack (containing: camera mounting template, warranty policy and documentation CD.)



**T200****T300 / T400****AX8****OCEAN SCOUT****OCEAN SCOUT TK****M100 / M200****AX8****IR RESOLUTION**

80x60 pixels

**FOCUS**

Fixed

**FIELD OF VIEW**

48° x 37°

**DETECTOR TYPE**

Focal Plane Array (FPA) Uncooled Microbolometer

**BUILT-IN DIGITAL CAMERA**

640x480

**MEASUREMENT**

-10°C to +150°C (14°F to 302°F)

**WATERPROOF RATING**

IP67 (IEC 60529)

**ETHERNET POWER**

Power over Ethernet, PoE IEEE 802.3as class 0

**OCEAN SCOUT****DETECTOR TYPE**

OS240: 240 x 180 VOx Microbolometer

OS320: 336 x 256 VOx Microbolometer

OS640: 640 x 512 VOx Microbolometer

**VIDEO REFRESH RATE**

&lt;9Hz NTSC or 30 Hz

**FIELD OF VIEW (HXV)**

OS240: 24° x 18° NTSC

OS320: 17° x 13° NTSC

OS640: 18° x 14° NTSC

**DISPLAY**

640 x 480 LCD Display

**BATTERY TYPE**

Internal Li-ion cell

**BATTERY LIFE**

Up to 5 hours

**WATERPROOF RATING**

IP67, submersible

**T200 SERIES****DETECTOR TYPE**

T20X/T22X: 320 x 240 VOx Microbolometer

T25X/T27X: 640 x 480 VOx Microbolometer

**FIELD OF VIEW**

T20X/T22X: 24° x 18° NTSC

T25X/T27X: 25° x 20° NTSC

**IMAGE PROCESSING**

FLIR Proprietary Digital Detail Enhancement

**FOCAL LENGTH**

T20X/T22X: 13mm

T25X/T27X: 25mm

**VIDEO OUTPUT**

NTSC or PAL, 25Hz or &lt;9Hz (Check ordering information for more details)

**PAN/TILT COVERAGE**

Pan: ±30° per key | Tilt: +34°, -27° (Locked in at Installation)

**CONNECTOR TYPES**

F-type BNC with BNC-to-RCA adapter included for video out

**POWER REQUIREMENTS**

PoE injector required per IEEE 802.3af

**T300/400 SERIES****VIDEO RESOLUTION**

320 x 240 or 640 x 480

Check ordering information for more details

**FIELD OF VIEW**

T300, T303, T400, T403 = 24° x 19°

T350, T353, T450, T453 = 25° x 20°

T460, T463 = 12° x 10°

T470SC, T473SC = 18° x 14°

**IMAGE PROCESSING**

FLIR Proprietary Digital Detail Enhancement

**FOCAL LENGTH**

T300, T303, T400, T403 = 19mm

T350, T353, T450, T453 = 25mm

T460, T463 = 50mm

470SC, T473SC = 35mm

**VIDEO OUTPUT**

NTSC, 25Hz or 9Hz

Check ordering information for more details

**PAN/TILT COVERAGE**

Pan: Full 360° pan Tilt: ±90°

**CONNECTOR TYPES**

T300 models: 1x F Type Video Connector with F to BNC adaptor included T400 models: 2x F Type Video Connector (InfraRed and Low Light)

**POWER REQUIREMENTS**

12 VDC to 24 VDC (-10% / +30%)

**M100 / M200****DETECTOR TYPE**

320 x 240 VOx Microbolometer

**VIDEO REFRESH RATE**

&lt;9Hz

**FIELD OF VIEW (HXV)**

24° x 18°

**E-ZOOM**

2x

**IMAGE PROCESSING**

FLIR Proprietary Digital Detail Enhancement

**PAN AND TILT RANGE**

M132: Tilt: +110°, -90°

M232: Tilt: +110°, -90° / Pan 360deg

(continuous)

**VIDEO OUTPUT**

H264 IP Video stream

**POWER REQUIREMENTS**

12 or 24 VDC

**OCEAN SCOUT TK****DETECTOR TYPE**

160 x 120 VOx Microbolometer

**VIDEO REFRESH RATE**

&lt;9Hz

**FIELD OF VIEW (HXV)**

20° x 16°

**DISPLAY**

640 x 480 LCD Display

**BATTERY TYPE**

Internal Li-ion cell

**BATTERY LIFE**

Up to 5 hours



# **INSTRUMENTS**

ANALOGUE & DIGITAL



## i70s: MAXIMUM VISIBILITY AND MAXIMUM VERSATILITY

The i70s multifunction gives you the flexibility to display instrument and navigation data that is most important to you. Equipped with a bold and bright 4.1" display the i70s is easy to customise with digital, analogue and graphical displays of depth, speed, wind and more. Add the i70s to your existing Raymarine instrument system or create a network of i70s displays and sensors, the choice is yours.

### KEY FEATURES

- 4.1" super bright oversized LCD for maximum visibility
- All weather optically bonded display technology delivers brighter colours, sharper contrast, and a wide viewing angle
- New glass bridge industrial design compliments Raymarine eS and gS Series multifunction displays
- Simple user interface with sculpted rubber keypad for precise operation in all conditions
- Customisable data displays of depth, speed, wind and more
- SeaTalk<sup>ng</sup> networking for seamless connectivity to Raymarine systems and NMEA2000\* networks
- NMEA2000 data connectivity\* for engine, environment, fuel and navigation
- Combine the i70s with the ITC-5 instrument transducer convertor and connect to analogue depth, speed, and wind sensors
- Supplied with both black (eS Series style) and (e Series style) gunmetal bezels and protective suncover

\*NMEA2000 certification pending. A DeviceNet to SeaTalk<sup>ng</sup> adaptor is required for connecting the i70s to NMEA2000 backbone.



### CUSTOMISATION

The Raymarine i70s instrument is easily customised to suit your personal boating requirements. From traditional analogue dials to engine information and tank levels, i70s has the capability to show it all.

### NETWORKING

Raymarine i70s allows for connectivity to the following on board networks:

- First generation SeaTalk networks using a SeaTalk to SeaTalk<sup>ng</sup> adapter cable
- Current generation SeaTalk<sup>ng</sup> networks
- NMEA2000 networks using a SeaTalk<sup>ng</sup> to DeviceNet adaptor
- In addition to flexible networking capability the i70s features user-selectable data sources, for integration with multi-sensor networks.

### AIS REPEATER

Displays AIS targets from NMEA 2000 AIS receivers. View the closest 25 AIS-equipped vessels and select individual targets to obtain vessel information.



## i50 & i60 ANALOGUE & DIGITAL INSTRUMENTS

The i50 and i60 instruments are designed to complement Raymarine's latest generation multifunction displays. These stylish, dedicated-function instruments are the perfect solution for smaller power boats, yachts, and RIBs. The i50 range consists of 3 digital displays: speed and depth displays with extra-large digits and a multi-line tridata unit. Designed primarily for the sailboater, i60 covers wind and close hauled wind options in analogue and digital formats.

Excellent viewing angles for both day and night conditions, and simple push-button controls make i50 and i60 instruments extremely easy to see and use. They are also simple to install thanks to the front-mount design.

### GENERAL FEATURES

- i60: Large analogue dials
- i50: Large numerals and digits
- SeaTalk and SeaTalk<sup>ng</sup> interfaces
- NMEA 2000 support
- Built-in transducer interface
- 110mm x 115mm footprint
- Low power consumption
- Multiple data source support eliminates potential data conflicts
- Front-mounted design for simple installation



i60 CH Wind



i60 Wind



i50 Speed



i50 Depth



i50 Tridata



i40 Speed



i40 Bidata



i40 Wind

**i40 COMPACT SPEED, DEPTH, WIND & BIDATA INSTRUMENTS**

Big displays for smaller powerboats, yachts and RIBs, these compact yet powerful SeaTalk instruments offer full integration with Raymarine autopilots and navigation equipment and can be surface or trunion-mounted. Easy-to-use i40 instruments have extra-large (28mm max) digits and razor-sharp LCDs for outstanding visibility in all lighting conditions.

## RAYMARINE WIRELESS

You need instant access to accurate data and displays that are absolutely reliable. Raymarine Wireless instruments display all the data you'll need and there are no wires running through your hull or down your mast.

### RACING INSTRUMENTS

You want the best chance of crossing the line first. You need instant access to accurate data, and displays that are absolutely reliable. Raymarine wireless instruments display all the data you'll need and have user-configurable pages, crucial for racing performance and there are no wires running through your hull or down your mast.



### WIRELESS REMOTE

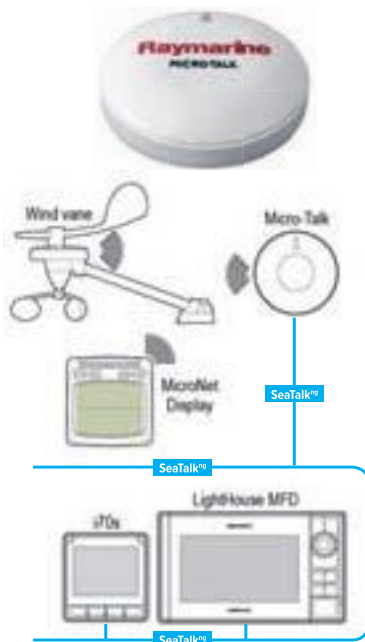
Not just a remote control. More an essential item of equipment for those serious about winning.

The Raymarine Wireless Remote Display controls, configures and repeats all the data you need to improve performance.



### CRUISING INSTRUMENTS

Cruising the open oceans, your peace of mind depends on having accurate and visible data. The range provides all this in a system designed to be completely flexible. They are simple to install with no holes to drill in your bulkhead or wires to thread down your mast.



## NEW MICRO-TALK WIRELESS PERFORMANCE SAILING GATEWAY

The Micro-Talk gateway provides a link between the Raymarine wireless Micronet system and the Raymarine SeaTalk<sup>®</sup> network. Benefits include:

- Performance sailing with wireless wind enhancement on your Raymarine MFD; with accurate lay lines
- Use the power of your Raymarine MFD to inspire enhanced competitive sailing
- True wind achieved with sophisticated airflow and yaw algorithms
- Provides real-time data with robust and fast refresh rate
- Mast rotation position sensing, for wing sail boats
- Quick installation, light and wireless connection to wind vane
- Low power when used with Raymarine solar-powered wireless devices



### RACE MASTER

The ultimate tactical race compass and wind shift indicator. Its two-tier display shows your heading, how far you're above or below the mean course, and how much you're being headed or lifted. It will enable you to quickly and easily establish the favoured end of the start line, and will help you sail the shortest distance to the windward mark. Downwind, you can see how far off dead downwind you are and when you should gybe for optimal VMG.



### MICRO COMPASS

Micro Compass gives you a massive racing advantage. It is light, easy to read, reliable and precise. The Micro Compass's tactical scale gives you clear stable figures for port and starboard tacks. Simple twin display for easy wind shift alert. Great aid to training.

### SPECIFICATIONS

#### NOMINAL VOLTAGE

i40/i50/i60: 12Vdc

#### WATERPROOFING

IPX6

#### CONNECTIONS

i40: SeaTalk, Transducer connections.

i50/i60: 2x SeaTalk<sup>™</sup> and transducers

Compatible with marine industry CAN systems

i70s: SeaTalk<sup>™</sup> - compliant with NMEA2000 and SeaTalk specifications

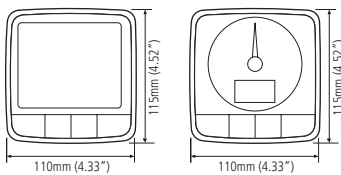
Compatible with marine industry CAN systems

#### NOMINAL VOLTAGE

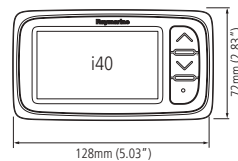
i40/i50/i60: 12Vdc

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.

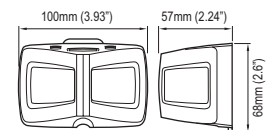
#### i50 | i60 | i70s



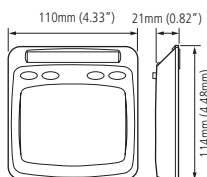
#### i40



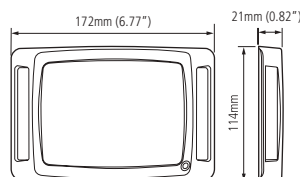
#### MICRO COMPASS



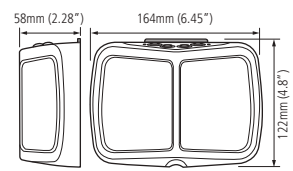
#### T100



#### T200



#### RACE MASTER



### WHAT'S IN THE BOX i40 INSTRUMENTS

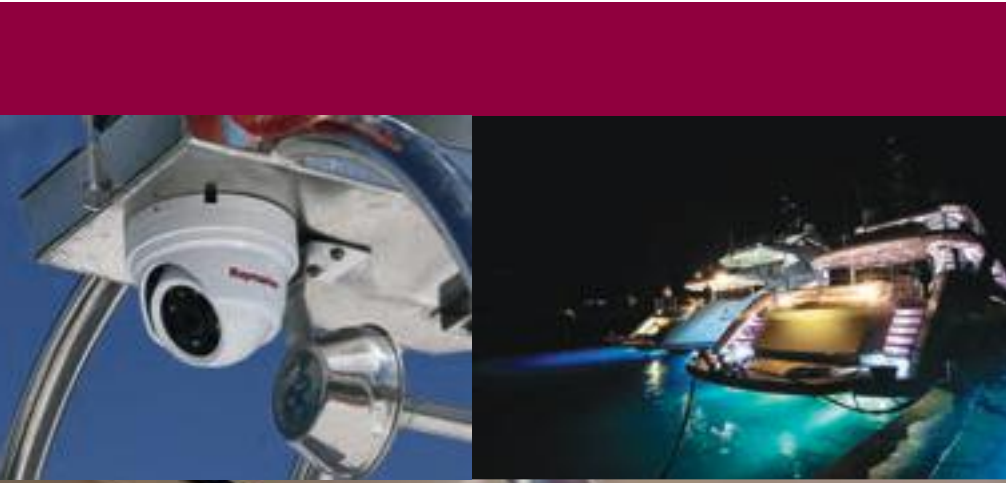
- (1) i40 Instrument
- (2) Instrument Suncover
- (3) Mounting Gasket
- (4) Clamping Bracket
- (5) Fixing Studs and Nuts
- (6) SeaTalk Power Cable
- (7) Documentation Pack

### WHAT'S IN THE BOX i50/i60 INSTRUMENTS

- (1) i50 Instrument
- (2) Front Bezel x2
- (3) SeaTalk<sup>™</sup> Spur Cable
- (4) Gasket
- (5) Suncover x2
- (6) Documentation Pack
- (7) SeaTalk<sup>™</sup> blanking plug
- (8) 4x Fixing Screws

### WHAT'S IN THE BOX i70s INSTRUMENTS

- (1) i70s Instrument
- (2) Front Bezel
- (3) SeaTalk<sup>™</sup> Spur Cable
- (4) Gasket
- (5) Suncover
- (6) Documentation Pack
- (7) SeaTalk<sup>™</sup> blanking plug
- (8) 4x Fixing Screws



# DIGITAL SWITCHING

VESSEL SYSTEM CONTROL & AUTOMATION







**WHAT IS DIGITAL SWITCHING?**

Raymarine Digital Switching brings all the power and convenience of advanced home automation to your boat. Digital Switching allows you to control onboard electrical and electronic systems like lighting, air-conditioning, navigation lights, wipers, horns, entertainment systems, security systems and much more from your network-connected multifunction displays, smartphone or tablet.

Raymarine Digital Switching replaces the standard mechanical circuit breakers and switches with state-of-the-art digital power distribution. This system not only offers convenience and ease-of-use, it also delivers on the promise of seamless, reliable operation as well as simple and cost-effective installation.



**MOBILE DEVICES**

With Raymarine Control and Remote Apps, you can take control using a tablet or smartphone.



**RAYMARINE MFDS**

Control your environment and onboard technology using Raymarine a/c/e/eS Series displays or gS Series glass bridge displays.



**DIGITAL SWITCHING: ELEGANT SIMPLICITY**

Instead of bulky and expensive switch panels, Raymarine's Digital Switching system uses rugged and compact digital Circuit Control Modules (CCMs.) Each CCM supports multiple circuits that are customised to meet the exact needs of the equipment being controlled.

Each CCM connects to the vessel's existing NMEA 2000 network backbone allowing it to communicate with other CCMs and multifunction displays onboard. This flexible network architecture enables the CCMs to be mounted near the equipment they are controlling. This benefits the boat builder and owner by creating a system that is simpler to install and troubleshoot than traditionally switched systems. Significant cost savings can be easily realised due to the faster installation and reduced amount of cable required to wire the vessel's systems.



Assets for every type of circuit switch or monitor

Fully customisable screens. Assets may be dragged and dropped into any configuration

Screens can be personalised by uploading boat images



**MASTER CONTROL UNIT (MCU)**

The Master Control Unit is the central processor that drives the system, providing computing power, intelligence and decision making. In addition, there are various interfaces for connection to external devices and a remote control port.

The MCU is a NMEA 2000 device that talks to other system components via the NMEA 2000 network. The MCU stores and executes configuration files for installation; holding data for every DC Module and Membrane Panel present. Should a Module or Membrane panel need to be replaced, the MCU distributes data to the replacement once the base address of the new component has been entered.



**CIRCUIT CONTROL MODULE**

The Circuit Control Module (CCM) is a NMEA 2000 device that is connected to the main DC Bus and provides inputs and outputs to the system. With multiple input capabilities and ranges, the CCM is an extremely versatile and cost effective means of interfacing system signals - when combined with the powerful software, complex monitoring and control systems are easily realised.



Trim tabs



Bilge Pumps



AC and DC Power



**COMPATIBLE WITH ENOCEAN WIRELESS SWITCHES, SENSORS, AND CONTROLS**

Completely wireless and self-powered, ENOcean-enabled switches, sensors, and climate controls use state-of-the-art energy-harvesting technology. Wireless-enabled CCMs can support up to 16 ENOcean wireless devices.

ENOcean wireless light switches, thermostats, and motion sensors can be installed anywhere because they never need wires, batteries, or a power connection. ENOcean channels available.

**EmpirBus**

Raymarine is proud to partner with Trigent AB and integrate with the EmpirBus NXT distributed power supply system. Based in Uddevalla, Sweden, Trigent has over 10 years of experience developing and deploying ruggedised power distribution systems for marine applications and speciality vehicles. Trigent's power distribution products are used by commercial, industrial and military customers around the world.

**DIGITAL SWITCHING SPECIFICATIONS**

**CIRCUIT CONTROL MODULE (CCM) DETAILS:**

**OUTPUTS**

- Configurable fuse setting up to 18A
- High and low-side options for reversible function
- Dimming function, including soft start/stop
- Under-current circuit detection

**INPUTS**

- Configurable thresholds for alarms and/or graphical functions
- Plus or minus sensing for digital
- Analogue inputs for voltage (0-32V), current (4-20mA) or resistive

**MULTIPLEXED CHANNELS**

Up to 4 circuits may be multiplexed onto a single channel

**TANK MONITORING**

Calibration with set points

**WINDOW WIPER FUNCTIONS**

High/low speed, interval etc...

**MASTER CONTROL UNIT (MCU) DETAILS:**

The Master Control Unit (MCU) provides numerous benefits to the existing Circuit Control Modules (CCMs):

- In larger systems, the MCU stores the full configuration and ensures effective communication between CCMs.
- The MCU-200 adds GSM capabilities to the system. A dedicated SIM card slot allows the MCU-200 to connect to a mobile GSM network and communicate with a smartphone via text messaging.
- The MCU-150 offers a dedicated CAN-bus link to third-party systems such as air conditioning, battery management etc.

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.

## AIS RECEIVERS & TRANSCEIVERS

### SEE AND BE SEEN

AIS (Automatic Identification System) systems enable the wireless exchange of navigation status between vessels and shore-side traffic monitoring centres. Commercial ships, ocean-going vessels and recreational boats equipped with AIS transceivers broadcast AIS messages that include the vessel's name, course, speed and current navigation status.



#### VHF WITH AIS

See page 68 to learn about the Ray70 multifunction VHF with an integrated AIS receiver.

#### RECEIVE-ONLY AIS

- Inexpensive and low-powered
- Receive and see other vessels Class A and Class B data on Raymarine MFD radar and/or chartplotter

#### CLASS A AIS

- Required for IMO/SOLAS commercial vessels
- Class A transmits and receives the full set of AIS information

#### CLASS B AIS

- For small commercial vessels and pleasure vessels that do not need to comply with IMO/SOLAS regulations
- Transmits shortened/simplified AIS information at a slightly less frequent rate than Class A
- Provides less AIS functionality than Class A
- Uses lower transmission power



### AIS950 TRANSCIVER (CLASS A)

- Combined receiver and transmitter
- Approved for deep sea and inland waterway standards (royalty costs apply)
- Fully compliant Class A AIS product
- Advanced radio communications technology
- Intuitive user interface for easy access to all information
- Large, high visibility mono LCD

### AIS350

#### TRANSMITTER TYPE

Listen only AIS receiver

#### RECEIVERS

2 Receivers

#### OPERATING VOLTAGE RANGE

9.6V - 31.2V DC

### AIS650

#### TRANSMITTER TYPE

Class B AIS transceiver

#### RECEIVERS

2 Receivers

#### TRANSMITTERS

1 Transmitter

#### OPERATING VOLTAGE RANGE

9.6V - 31.2V DC

### AIS950

#### TRANSMITTER TYPE

Class A AIS transceiver

#### RECEIVERS

2x TDMA 156.025 MHz to 162.025 MHz and 1x DSC 156.525 (channel 70)

#### TRANSMITTERS

1 Transmitter

#### GPS RECEIVERS (AIS INTERNAL)

IEC 61108-1 compliant

#### OPERATING VOLTAGE RANGE

10.8 to 31.2v DC



LightHouse II AIS Target Intercept graphic overlays



LightHouse II AIS Targets overlaid on radar screen



AIS Targets overlaid on chart



### AIS350 RECEIVER ONLY

- Dual-channel receive-only
- For small vessels wanting increased situational awareness, but without the need to transmit
- Low cost alternative brings AIS safety advantages to a wider range of vessels



### AIS650 TRANSCIVER (CLASS B)

- Transmit your boat's data to AIS equipped vessels
- Receive and see data on Raymarine MFD radar and/or chartplotter screens
- Engineered for high performance and seamless integration with Raymarine navigation systems

### WHAT'S IN THE BOX AIS350/AIS650

- (1) AIS unit
- (2) Documentation pack
- (3) Fixing screws
- (4) SeaTalk<sup>ng</sup> dust cap
- (5) 2m (6.5ft.) power / data cable
- (6) 1m (3.25ft.) SeaTalk<sup>ng</sup> spur cable

Note: AIS 650 includes GPS

Images for illustrative purposes only. Product information, pricing and package contents subject to change without prior notice.



## VHF RADIOS

You'll always be heard loud and clear with a VHF radio from Raymarine. Whether it's the compact Ray50, full-sized Ray60, or multifunction Ray70, you can depend on your Raymarine VHF for years of trouble-free communication at sea.



### RAY260 MODULAR VHF

Premium VHF system with remote transceiver, speaker, and handset. Built-in loudhailer/foghorn plus multi-station intercom capability. Available with an integrated AIS receiver.





**SPECIFICATIONS**

**OPERATING VOLTAGE**

9V DC to 16V DC (Ray260 10.8 to 15.6V)

**WATERPROOFING STANDARD**

Ray50/60/70: IPX6/IPX7 complies with EN60945

Ray260: IPX7

**COMMUNICATIONS PORT**

NMEA 0183 (version 4.01); NMEA2000 (version 3.0)

**POWER OUTPUT**

High Power = 25 Watt | Low Power = 1 Watt

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**EVERY RAYMARINE VHF OFFERS**

- Simple operation with intuitive icons and menus
- Easy-to-read LCD displays with red backlighting
- Commercial-grade transceivers with stable, powerful output, and high receiver sensitivity
- Sleek, premium designs that match Raymarine Instruments, MFDs and Glass Bridge Displays

**RAY50 AND RAY52 COMPACT VHF**

The Ray50 and 52 VHF pack a powerful communications system into a case that is small enough to mount just about anywhere. The Ray52 features integrated GPS for easier DSC communications.



**WHAT'S IN THE BOX RAY50**

- (1) Ray50 with Fistic
- (2) Suncover
- (3) Panel mount gasket
- (4) Mounting bracket
- (5) Mounting bracket knobs
- (6) Fistic mounting clip
- (7) 4x Mounting bracket fixings
- (8) Documentation
- (9) 4x panel mount fixings
- (10) Protective antenna boot
- (11) 2x Fistic mounting clip fixings
- (12) SeaTalk<sup>®</sup> 400mm (15.7in) spur cable

**RAY60 VHF RADIO WITH DUAL STATION CONTROL AND INTERCOM CAPABILITY**

The Ray60 is a full-sized VHF radio that is packed with essential communications features every boater needs.

**RAY70 MULTIFUNCTION RADIO: ALL-IN-ONE VHF, AIS RECEIVER, LOUDHAILER AND INTERCOM**

Hear and be heard! The Ray70 from Raymarine is the ultimate all-in-one communications solution for Captains who demand the best. Ray70 features full-function VHF, loudhailer output, AIS receiver, and is dual-station capable with the optional RayMic accessory.



**WHAT'S IN THE BOX RAY60/RAY70**

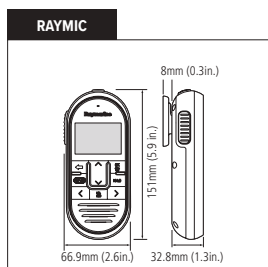
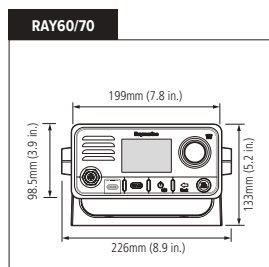
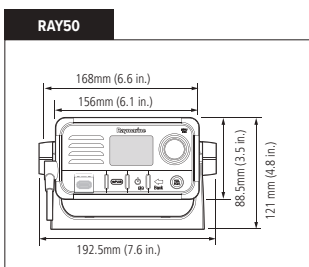
- (1) Ray60 / Ray70 radio
- (2) Sun cover
- (3) Flush mount gasket
- (4) Fistic
- (5) Mounting bracket
- (6) Mounting bracket knobs
- (7) Fistic mounting clip
- (8) Documentation
- (9) Protective antenna boot
- (10) 2x Fistic mounting clip fixings
- (12) SeaTalk<sup>®</sup> 400mm (15.7in.) spur cable

**RAYMIC**

The Ray70 VHF Radio also supports the optional second station RayMic handset for remote locations. This gives you full-function VHF and intercom capability from a second location onboard.

**WHAT'S IN THE BOX RAY260**

- (1) Ray260 Base station
- (2) Ray260 Handset
- (3) Ray260 speaker including cable
- (4) Speaker gasket
- (5) 4x screws for base station mounting
- (6) 2x Screws for handset mounting
- (7) SeaTalk<sup>®</sup> blanking plug
- (8) 2x handset station blanking plugs
- (9) Handset extension kit
- (10) 4x Thumb nut and studs for speaker mounting
- (11) Handset mounting clip
- (12) Documentation pack
- (13) Power / Data cable 1m (3.3ft.)



# SATELLITE TV ANTENNA SYSTEMS

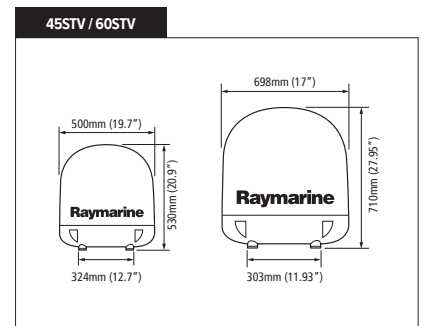
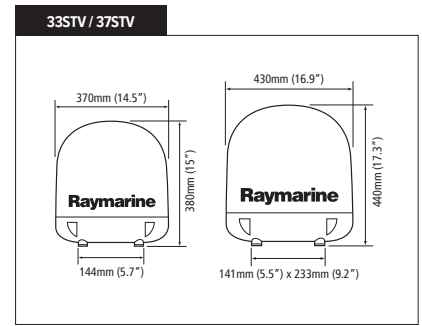






Raymarine's Satellite TV antennas bring the same combination of high performance and ease-of-use to your onboard entertainment that you would expect from your home entertainment system.

- Compact domes
- Automatically track and receive satellite TV signals in almost any conditions
- Access to hundreds of digital channels
- Quickly identify and acquire satellite signals
- Once you have a fix on the satellite signal, tracking algorithms will help you keep it
- Designed to cope with tough conditions
- Dynamic Beam Tilting (DBT) continuously measures and compensates for your vessel's heading, pitch and roll – keeping your antenna locked on a satellite for a clear picture



**WHAT'S IN THE BOX  
SAT TV**

- (1) Antenna Unit
- (2) Antenna Control Unit
- (3) Installation Kit
- (4) Cables
- (5) Documentation

Images for illustrative purposes only. Product information and package contents subject to change without prior notice.

**DUAL OR QUAD LNB**

- Connect multiple television receivers and tune in to different channels on each television
- Dual systems (33 and 37STV) allow the connection of two television receivers and the Quad systems (45 and 60STV) connection of four receivers



**SATELLITE TV FEATURES**

	33STV	37STV	45STV	60STV
Dual or Quad LNB design for multiple receivers	Dual	Dual	Quad	Quad
DVB (Digital Video Broadcast) compatible	●	●	●	●
Dish diameter (cm)	13in (33cm)	14.6in (37cm)	17.7in (45cm)	23.6in (60cm)
Wide Range Search Algorithm for high speed search and fast satellite acquisition	●	●	●	●
Dynamic Beam Tilting (DBT) technology signal tracking in extreme weather and sea conditions	●	●	●	●
High Definition (HD) compatible	●	●	●	●
Enhanced signal reception and improved antenna gain for better performance				●
NMEA 0183 GPS position input capability for reduced acquisition time	●	●	●	●
Conical scanning detects strongest satellite signal for enhanced stabilisation	●	●	●	●
Enhanced elevation angles to maintain satellite fix				●
Automatic LNB skew control (not USA)			Optional	●
Rotating sub-reflector redirects signal for reduced dish movement and quieter operation	●	●	●	●
Suggested vessel size	20–25ft (6–7.6m)	25–35ft (7.6–10.7m)	35–50ft (10.7–15.2m)	over 50ft (over 15.2m)
Built in GPS		●	●	●
Tracks DUB-S2 or HD Transponders	●	●	●	●



## AUDIO

### AUDIO ENTERTAINMENT POWERED BY ROCKFORD FOSGATE

Raymarine Audio Entertainment powered by Rockford Fosgate provides boaters a full-featured audio command center with audiophile-quality sound and limitless flexibility. The Rockford Fosgate source units can be fully remote controlled from any Raymarine LightHouse II Multifunction display onboard the vessel using NMEA2000 CAN bus networking. Raymarine's custom audio application is designed for ease of use and contains all of the same controls as found on the source unit, including control of all of the individually sourced controls.

Complete the system with marine-grade components from Rockford's full line of Prime™, Punch™, and Power™ speakers, subwoofers and amplifiers. With so many options its easy to tailor the soundscape in each space onboard your boat. You'll enjoy the Rockford Fosgate signature sound everywhere onboard!



The Raymarine audio system powered by Rockford Fosgate is a high-performance, multi-zone audio system designed for premium sound and maximum flexibility.

- Remote controllable from both Raymarine MFDs and Rockford Fosgate remotes both above and below decks
- Multi-zone systems allow independent music source selection, playback and control from anywhere onboard
- Element Ready™ components engineered for extreme duty in the marine environment while providing Rockford Fosgate's signature sound

**EFFORTLESS CONTROL**

- Control the system from Raymarine's audio application on LightHouse MFDs
- Wireless control from Smartphone or Tablet with Raymarine's RayControl app
- Rockford Fosgate wired remote displays are also available in a range of sizes and configurations

**SCALABLE SYSTEMS**

- Supports up to 3 input sources and 4 independently controlled output zones (PMX-8BB)
- Choose from Rockford Fosgate's wide array of speakers and amplifiers to tailor the sound to each space
- Android, iPhone, Bluetooth, and USB
- Source selection plus AM, FM, TM and Auxiliary input

**SOURCE UNITS**

Element Ready source units provides you a solution no matter how large or small of a system you want to design.



**SPEAKERS**

Built to withstand the marine environment, our speakers deliver high-quality sounds for you to enjoy.



**WAKE CAN SPEAKERS**

When you want to enjoy the music even at the end of the tow rope, mount a set of Rockford Fosgate speaker enclosures and turn up the volume.



**AMPLIFIERS**

Packed with power, Rockford Fosgate amplifiers are specifically engineered to perform out in the elements.



**SUBWOOFERS**

Rockford engineers its woofers to produce high output bass without crumbling when exposed to the elements.



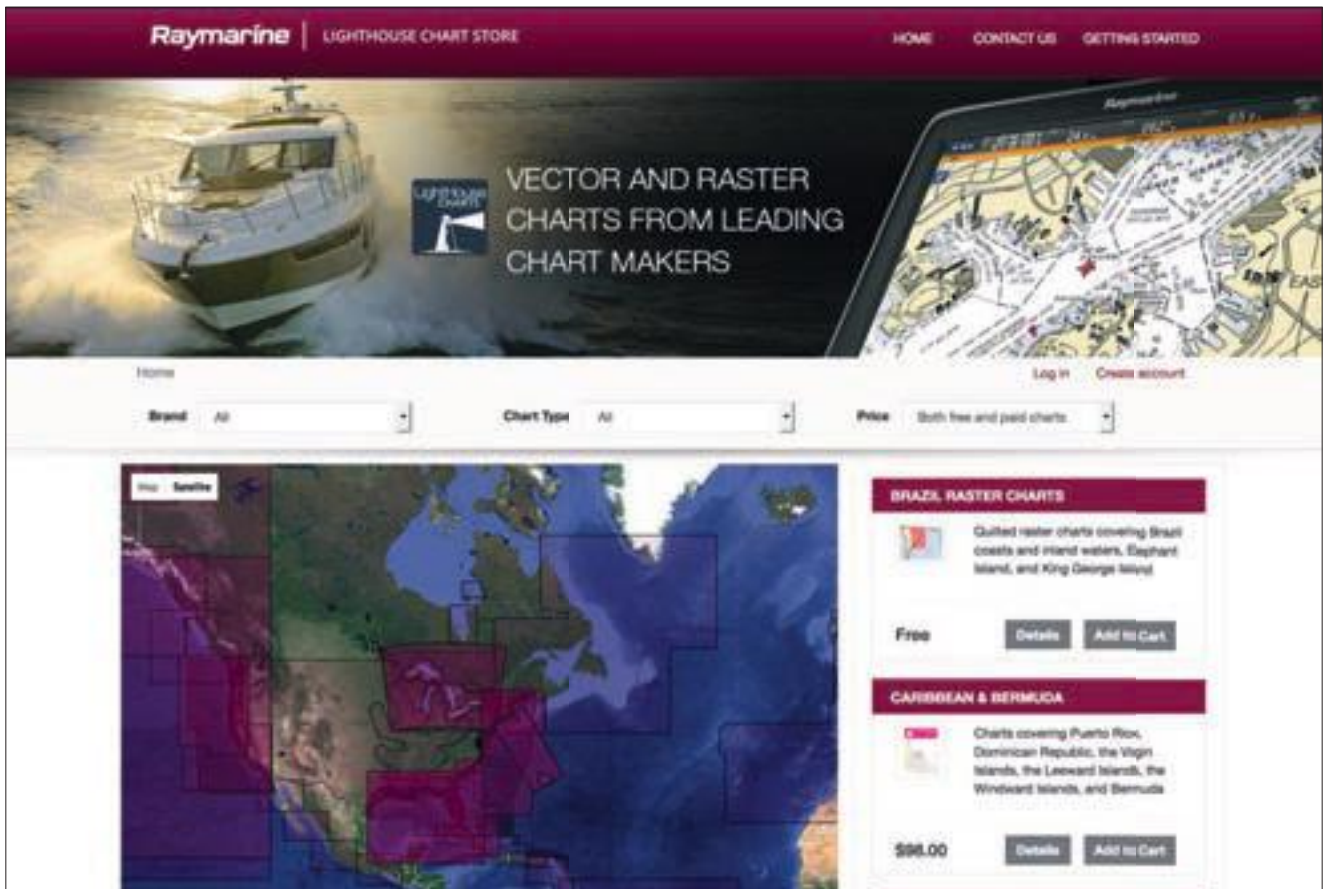


<b>NOTES</b>



# CHART STORE

## VECTOR AND RASTER CHARTS FROM LEADING CHART MAKERS



Charts.raymarine.com allows you to select and download LightHouse Edition charts for use in your LightHouse compatible chartplotter.

1

### BUY CHARTS (SKIP THIS STEP IF YOU ONLY NEED TO UPDATE CHARTS WITH VALID SUBSCRIPTIONS)

- Go to <https://charts.raymarine.com/>
- Browse for charts, add to your cart, create an account and purchase using your credit card.

2

### INITIALISE A MICRO SD CARD

- Plug in a blank microSD into any (powered up) LightHouse II (v11 or later or for Dragonfly, v9 or later) compatible Raymarine chartplotter and remove it.

3

### DOWNLOAD YOUR CHARTS USING LIGHTHOUSE MANAGER (OR DOWNLOAD UPDATES OF EXISTING CHARTS)

- Download and install the LightHouse Manager software
- Launch it and follow the prompts to download your chart to your initialised microSD card.

4

### USE YOUR CHARTS!

- Insert the card with the downloaded charts into your compatible Raymarine chartplotter.
- In the chart screen, select Menu > Presentation > Chart Selection. This will show the list of available charts.
- Select your downloaded chart to open it.



### SAFETY NOTICES

Raymarine products are intended to be used as aids to navigation and must never be used in preference to sound navigational 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.

Some images in this brochure have been used for illustration purposes only.

### PHOTOGRAPHY

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