GARMIN

THE GARMIN MARINE NETWORK™

THE ULTIMATE IN ONBOARD NAVIGATION SOLUTIONS

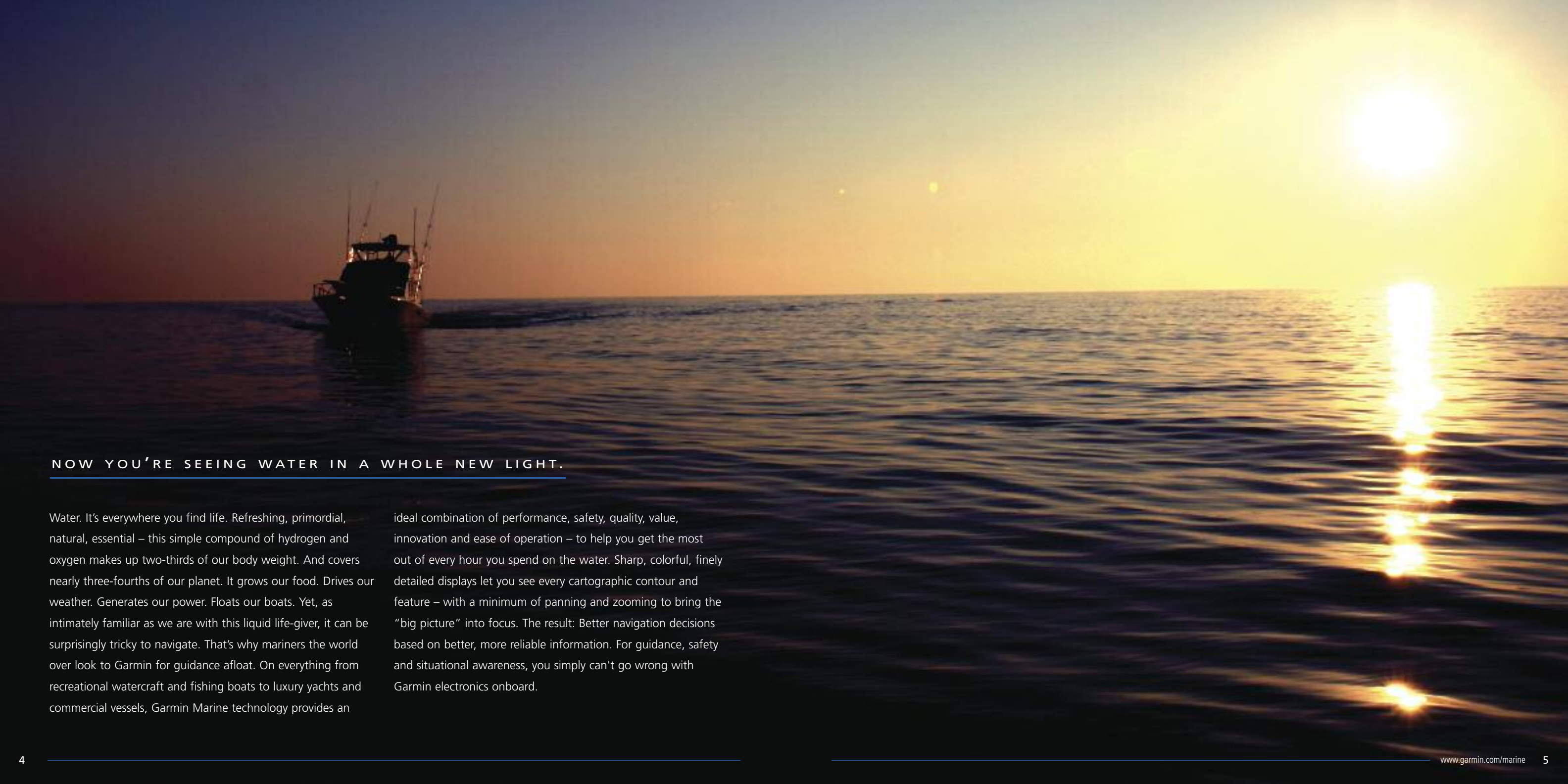www.garmin.com/marine

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NOW YOU'RE SEEING WATER IN A WHOLE NEW LIGHT.

Water. It's everywhere you find life. Refreshing, primordial, natural, essential – this simple compound of hydrogen and oxygen makes up two-thirds of our body weight. And covers nearly three-fourths of our planet. It grows our food. Drives our weather. Generates our power. Floats our boats. Yet, as intimately familiar as we are with this liquid life-giver, it can be surprisingly tricky to navigate. That's why mariners the world over look to Garmin for guidance afloat. On everything from recreational watercraft and fishing boats to luxury yachts and commercial vessels, Garmin Marine technology provides an

ideal combination of performance, safety, quality, value, innovation and ease of operation – to help you get the most out of every hour you spend on the water. Sharp, colorful, finely detailed displays let you see every cartographic contour and feature – with a minimum of panning and zooming to bring the "big picture" into focus. The result: Better navigation decisions based on better, more reliable information. For guidance, safety and situational awareness, you simply can't go wrong with Garmin electronics onboard.

PLUG-AND-PLAY TECHNOLOGY MAKES NETWORKING SIMPLE

It's so easy to connect with the future of nautical navigation: Just plug into the Garmin Marine Network™.

Reliable. Waterproof. Simple to install. This proprietary high-speed data system seamlessly connects multiple "plug-and-play" components – allowing you to access GPS position reference, detailed 3D-view charts, radar, sonar, XM™ WX Satellite Weather (subscription required) and/or other selected inputs, right from your chartplotter screen.

You don't need high-tech expertise. Or advanced programming skills. Fact is, if you can plug in a cable connector, you can build a shipwide Garmin network – or expand the one you've started.

The Ethernet-fast (100-megabit) Garmin data system is anchored by compatible GPSMAP® chartplotters with built-in network links. These multifunction displays (MFDs)

automatically detect any and all peripherals once they're connected. And the same network cabling is used for both unit-to-unit and unit-to-network connections. So it's easy to connect any combination of sensors and displays – using the optional Garmin GMS™ 10 Port Expander as the "nerve center" for your network. By utilizing the network port expander, you can avoid "daisy-chaining" of connections – thereby enhancing redundancy and reliability system-wide. Each networked MFD can be configured independently, with customizable page fields for "big picture" navigation. What's more, by installing multiple MFDs, you can easily access the network from anywhere on your boat.

That's the power of the Garmin Marine Network. It's all about making great connections. So you'll have all the data at your fingertips to make faster/safer/smarter navigation decisions.
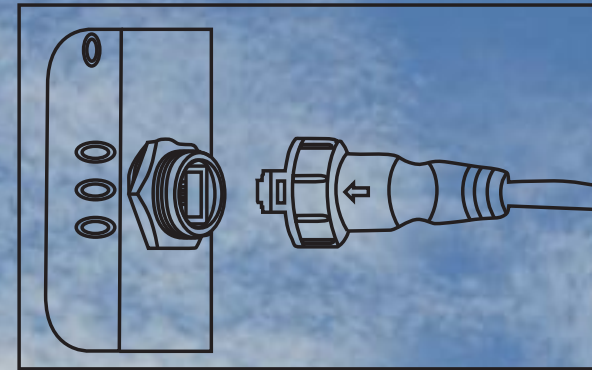
PLUG

PLAY

Total systems integration: That's the focus of Garmin's newest generation of network-capable chartplotters. Upgraded with new Series 5.0 software, these high-speed, high-resolution multifunction displays (MFDs) offer expanded access to onboard sensors with NMEA 2000 compatibility – as well as full Garmin Marine Network™ connectivity. Thus, it's easy to select and control a whole array of remote sensors and data inputs from any compatible plotter on your boat. Simple menu-driven operation makes for fast, intuitive control/display of all your network options: Everything from autopilot and engine sensors to VHF radios, satellite weather, onboard radar, digital sonar, AIS traffic monitoring, and more. To pinpoint your position anywhere in the world, these robust units feature extra-precise WAAS/EGNOS-enabled GPS receivers. And their built-in worldwide basemap provides useful visual reference – which can be enhanced with optional BlueChart® g2 cards (sold separately) for basic digital cartography that matches the look of paper charts; or with premium BlueChart® g2 Vision™ cards (also sold separately) for vividly detailed 3D MarinerEye or underwater FishEye graphical displays. BlueChart® g2 Vision™ is clearly some of the most realistic marine mapping you've ever seen on a chartplotter screen. And that's just the beginning. Other BlueChart g2 Vision features include "real picture" aerial photos of harbors, marinas and other visual landmarks – plus Auto Guidance technology that scans and evaluates relevant chart data to suggest the best passageways. For innovation to keep you solidly on course, Garmin has the waterfront covered.

Series 5.0 Software Update: Adding new features and functionality to your Garmin network chartplotter, this upgrade provides faster redraws of the chart display and a more intuitive user experience. It also adds a compass rose overlay option, plus a "flat 3D" perspective display for users who do not have BlueChart® g2 Vision card enhancement.

GPSMAP® 7215/7212

Garmin's top-of-the-line chartplotter technology has moved even further upscale with the introduction of the GPSMAP® 7000 series. Featuring XGA-resolution touchscreen displays and new high-speed processors, these multifunction network systems take onscreen maneuverability to a whole new level. The enhanced digital design with super-fast Garmin G Motion™ technology nearly doubles the map-drawing performance of earlier GPSMAP plotters – yielding ultra-smooth panning and zooming with virtually seamless graphical updating in all dimensions. An external high-sensitivity GPS receiver improves signal acquisition and tracking. Plus, there's expanded "plug-and-play" access to onboard sensors, via both NMEA 2000 and Garmin Marine Network connectivity. So, everything from autopilot and engine sensors to VHF radios, onboard radar, digital sonar, XM WX™ satellite weather (subscription required), live-cam video, and more can be accessed directly from your chartplotter screen. Sleek 12.1 or 15-inch diagonal formats are available. And each is compatible with an optional wireless remote and/or wireless mouse (both sold separately). In addition, the big 15-inch unit even has PC monitor input, so you can use it for display of digital programs, internet browsers, or applications from a separate computer input. All GPSMAP 7000 series plotters feature a built-in worldwide basemap, which is augmented on the 7212 and 7215 models with preloaded marine charts for U.S. coastal waters, including Alaska and Hawaii plus the Bahamas. What's more, an optional BlueChart® g2 Vision® card (sold separately), lets you access such premium features as true 3D MarinerEye and FishEye map perspective, plus Auto Guidance and "real picture" aerial photo reference with marine points-of-interest (POI) location data.

7000 Series Network Chartplotters feature:
- Menu-driven touchscreen interface for fast, easy network operation
- Exclusive Garmin G Motion™ for liquid-smooth screen graphics
- NMEA 2000 support for engine monitoring and more
- Auto Guidance searches chart data to suggest best passage when using BlueChart g2 Vision SD cards*
- MarinerEye 3D view for topside 3 dimensional mapping*
- FishEye 3D view for underwater 3 dimensional mapping*
- PC monitor input on GPSMAP® 7215 model
- Includes NMEA 2000 high-sensitivity GPS antenna

*Requires optional Bluechart g2 Vision cards

Exclusive Garmin G Motion™: Bringing faster and smoother maneuverability to your onscreen chartplotter graphics, this advanced technology nearly doubles the map-drawing performance of earlier GPSMAP® plotters for virtually seamless updating in all dimensions.

For boat owners who prefer traditional pushbutton and thumbwheel mechanical controls, the Garmin GPSMAP® 6000 series offers a premium combination of mapping, sensor and data options for your onboard network. Featuring high-speed digital processors that nearly double the map-drawing speed of their predecessors, these new multifunction displays with enhanced Garmin G Motion™ technology offer a significant increase in onscreen maneuverability – for ultra-smooth panning and zooming with virtually seamless graphical updating of all moving-map graphics. A high-sensitivity GPS receiver provides faster signal acquisition and improved satellite tracking. Plus, easy "plug-and-play" connectivity via both NMEA 2000 and Garmin Marine Network protocols lets you access everything from autopilot and engine sensors to VHF radios, onboard radar, digital sonar, XM WX™ satellite weather*, video cameras, and more – right from your chartplotter screen. The GPSMAP 6000

6000 Series Network Chartplotters feature:
• Traditional softkey interface for menu-driven network operation
• Exclusive Garmin G Motion™ for liquid-smooth screen graphics
• NMEA 2000 support for engine monitoring and more
• Auto Guidance searches chart data to suggest best
   passage when using BlueChart g2 Vision SD cards**
• MarinerEye 3D view for topside 3 dimensional mapping**
• FishEye 3D view for underwater 3 dimensional mapping**
• Includes NMEA 2000 high-sensitivity GPS antenna

*Subscription required
**Requires optional Bluechart g2 Vision cards

series displays are available in two sizes: (1) an XGA-resolution 12.1-inch diagonal screen configuration (1024 x 768 pixels), or (2) a more compact 8.4-inch model with VGA screen resolution (640 x 480 pixels). Both sizes are compatible with an optional wireless remote (sold separately). And detailed U.S. coastal charts, with coverage for Alaska and Hawaii plus the Bahamas, come preloaded on the GPSMAP 6212 and 6208. You can add additional map regions with optional BlueChart® g2 cards (sold separately) that provide basic 2D digital cartography. Or, for added capability, optional BlueChart® g2 Vision cards make it easy to access high-level features such as true 3D perspective map display (both above and below the waterline), plus Auto Guidance to suggest the best passages, and "real picture" aerial photos for visual reference with marine points-of-interest (POI) location data.

Garmin G Motion™ Technology: Bringing liquid-smooth maneuverability and virtually seamless updating to your chartplotter graphics, this exclusive Garmin technology nearly doubles the map-drawing performance of earlier GPSMAP® plotters. It's the ultimate in onscreen speed and mobility.

Satellite imagery: Garmin's built-in worldwide basemap is augmented with preloaded mapping coverage on the GPSMAP® 6212 and 6208. Optional plug-in BlueChart® g2 Vision® card (sold seperately) technology supports high-resolution satellite imagery with 3D perspective for even more realistic views of land and water.

GPSMAP® 6212/6208

Bringing touchscreen control to shipwide connectivity, Garmin's GPSMAP® 5000 series is where value and technology converge. With hi-res displays sized from 8 to 15 inches, these versatile multifunction displays (MFDs) are the ideal "command centers" for your Garmin Marine Network. Each is available with preloaded U.S. marine charts incorporating the latest BlueChart® g2 data: tides and currents, coastal roads, marine services, and more. Plus, the plotters' revolutionary menu-driven interface has been upgraded with new Series 5.0 software for faster chart redraws, silky smooth panning and zooming, and more responsive control inputs. So now, operating your entire network as simple as pointing with your finger. The larger-format GPSMAP® 5215 features a sleek 15-inch XGA display with 1024 x 768 pixels of resolution. Or you can opt for the

same XGA resolution in the 12.1-inch GPSMAP® 5212 – or go with the slightly smaller GPSMAP® 5208, which comes with an 8.4-inch diagonal VGA screen. Each of the three models comes preloaded with detailed U.S. coastal charts, providing offshore coverage for Alaska and Hawaii plus the Bahamas. You can add additional map regions with optional BlueChart® g2 cards (sold separately) that provide basic 2D digital cartography. Or you can upgrade to higher-capability BlueChart® g2 Vision™ cards (also sold separately) that let you access such premium features as true 3D MarinerEye or underwater FishEye map perspective – plus "real picture" aerial photo reference and Auto Guidance technology to suggest the best passageways on your charts.

5000 Series Network Chartplotters feature:
- Menu-driven touchscreen interface for fast, easy network operation
- NMEA 2000 support for engine monitoring and more
- New Series 5.0 software update
- Auto Guidance searches chart data to suggest best passage when using BlueChart g2 Vision cards*
- MarinerEye 3D view for topside 3 dimensional mapping*
- FishEye 3D view for underwater 3 dimensional mapping*
- Includes NMEA 2000 high sensitivity GPS antenna

*Requires optional Bluechart g2 Vision cards

Aerial reference photos: "Real picture" aerial photos, available with BlueChart® g2 Vision™ software options, give mariners a visual overview of harbors, marinas, waterways and other navigation features – while a built-in POI (points-of-interest) database offers more information.

Menu-driven interface: With fewer operational steps to navigate, Garmin's simplified menu format makes it easy for users to see and select the data they want to access onscreen.

More choices. More sizes. More value and capability for the money. That's the beauty of Garmin's GPSMAP® 4000 series. Combining brilliant video-quality screens with conventional pushbutton interface and the latest in mapping, sensor and data options – these versatile displays are the perfect fit for your Garmin Marine Network. Each features the new Series 5.0 software upgrade for faster chart redraws, ultra-smooth panning and zooming between range levels, and other enhancements. The big GPSMAP® 4212 offers a 12.1-inch XGA display and alphanumeric keypad. It's available with optional remote control for easy access to menus and functions. A 10-inch midsize addition to the lineup, the GPSMAP® 4210 gives you the alphanumeric keypad and most other 4212 features in a slightly more compact unit. And then, for the smaller nav station, there's the GPSMAP® 4208. It's designed with an 8.4-inch diagonal VGA screen and does not have the alphanumeric keypad. All of these units come fully preloaded with detailed BlueChart® g2 marine maps with U.S. coastal coverage that includes Alaska, Hawaii and the Bahamas. You can add additional map regions with optional BlueChart® g2 cards (sold separately) that provide basic 2D digital cartography. Or, for maximum graphical sophistication, optional BlueChart® g2 Vision™ SD cards (sold separately) offer access to such premium features as true 3D MarinerEye and underwater FishEye views, plus Auto Guidance technology and "real picture" aerial photo reference with marine points-of-interest (POI) data.

4000 Series Network Chartplotters feature:

- Traditional softkey interface for menu-driven network operation
- NMEA 2000 support for engine monitoring and more
- New Series 5.0 software update
- Auto Guidance searches chart data to suggest best passage when using BlueChart g2 Vision cards*
- MarinerEye 3D view for topside 3 dimensional mapping*
- FishEye 3D view for underwater 3 dimensional mapping*
- Includes NMEA 2000 high sensitivity GPS antenna

*Requires optional Bluechart g2 Vision cards

Network versatility: Compatible with both NMEA 2000 and Garmin Marine Network data formats, the Garmin 4000 series can readily serve as your central "nerve center" for onboard radar, sonar, satellite weather, and a variety of other safety and sensor inputs.

GPSMAP® 4212/4210/4208

VHF 100/200/300 MARINE RADIOS

When you're counting on a VHF radio to be your communications lifeline offshore, trust is priority #1. That's why Garmin's VHF 100, 200 and 300 are worth every cent. Reliable? No question. Plus, these rugged, submersible (IPX7) marine transceivers pack a surprising array of high-end features and capabilities into their compact designs. The remotely mounted VHF 300 series radios are the flagship products of Garmin's marine communications line. These network-capable "black box" transceivers offer multi-station support, plus NMEA 2000 network connection for easy integration with compatible Garmin chartplotters. A handy voicemail feature, unique to Garmin, lets you record a message for continuous re-broadcast until another marine radio responds. Similarly, the VHF 100 and 200 come loaded with safety features in a more traditional fixed-mount radio. Removable front caps allow the units to be easily flush-mounted in cockpit consoles or cabin bulkheads.

And the extra-large 3.2-inch diagonal displays make for great visibility, with crisp oversized channel numbers and easy-to-read screen graphics. All three Garmin radios offer excellent noise suppression and selectable transmit power (1-watt and 25-watt output), so you can count on clear, far-reaching communications on the water. And full Class D digital select calling with built-in dual DSC receivers will enable you to instantly send distress calls at the push of a button – with mayday signaling and digital broadcast of your boat's position (when interfaced with a compatible GPS chartplotter). You can even send MMSI call numbers directly to the radio from your compatible Garmin chartplotter via NMEA 2000. In addition, a unique Position Tracking feature lets you use DSC polling capability to keep tabs on up to three other fellow mariners – with their boats' locations indicated on your chartplotter display.

	VHF 100	VHF 200	VHF 300
• Class D DSC capable	•	•	•
• Position polling	•	•	•
• 25 watts transmit power	•	•	•
• 16/9 distress calling	•	•	•
• NOAA Weather Alert (1050 Hz tone)	•	•	•
• Supports ATIS identification	•	•	•
• Supports wired/wireless remote mic		•	•
• Loud hailer/fog function		20W	30W
• NMEA 2000 connectivity		•	•
• Mic relocation capability		•	•
• Multi-lingual user interface		•	•
• Audio playback feature (last 90 sec. received)			•
• Voicemail feature – continuous re-broadcast			•

AIS TRAFFIC MONITORING

Using the Universal Shipborne Automatic Identification System (AIS), Garmin has developed an innovative system of "black box" modules that aid in collision avoidance – by enabling mariners to identify and monitor other AIS-equipped vessels in their vicinity. Users can display these nearby targets on compatible Garmin chartplotters, while relying on their own AIS transponder signals to keep other AIS-equipped boats apprised of their relative location. Operating in the VHF maritime band, Garmin AIS systems offer monitoring of both Class A and Class B system transmissions. And digital select calling (DSC) capability can even be used to provide AIS target calling directly from your chartplotter screen. Thus, in crowded channels or under low-visibility conditions, it's easy to call and verify any potential traffic conflict. Garmin AIS units are NMEA 2000 certified, so network connection with your chartplotter is easy and fast. Plus, a built-in VHF "splitter" lets you utilize the existing radio antenna on your boat – so there's no need to add a separate AIS antenna.

AIS 600

Enabling ships to transmit and receive target signals for ID, position, direction, and other vital data, the Garmin AIS 600 is a full "see and be seen" maritime traffic avoidance system. Its built-in GPS receiver provides exceptional positioning accuracy. And with NMEA 2000 connectivity, it easily interfaces with compatible chartplotters – allowing AIS data to be graphically overlaid on the navigation display. By connecting a Garmin VHF radio, automatic AIS target calling (using discrete MMSI numbers) can be accessed directly from the chartplotter screen. And since the AIS 600 includes a unique built-in active splitter with ClearTrak™ technology that combines radio and AIS in a single VHF antenna, installation is quick and easy. The active splitter ensures that all VHF and AIS communications are sent and received without signal loss or interruption – while ClearTrak™ maintains uninterrupted AIS traffic position transmission, even when the VHF radio is in use. Featuring a 2-watt Class B transmitter and dual channel receiver, the "black box" AIS 600 offers boaters a significant advance in nautical traffic management and safety.

AIS 300

A lower-cost traffic alerting option, the AIS 300 is a "listen only" receiver that enables wireless monitoring of other nearby AIS-equipped vessels that may pose a collision risk. Reception of both Class A and Class B transmissions is provided. And position data can be overlaid on compatible chartplotter displays via NMEA 2000 network interface.

In the past, most standard marine instruments were single-function units – with each remote sensor having a dedicated display. Now, with the new multifunction Garmin GMI™ 10 displays, mariners can do and see more with less. Our digital design gives installers the flexibility to customize and streamline cockpit configurations – using fewer instruments to display sensor data from multiple inputs. The GMI 10 makes it easy to monitor navigation, heading and certain environmental data – everything from basic depth, speed, winds and water temperatures to detailed GPS readouts, fuel flows, engine data, RPMs, trip odometer, user alarms and more. Featuring big, bright 3.5-inch QVGA screens in a sleek 4-inch flush-mount bezel, the system connects via any of Garmin's new line of intelligent transducers or others that use the NMEA 2000 or NMEA 0183 formats.

Garmin Intelligent Transducers

These versatile transom-mount or thru-hull sensors provide depth and water temperature data for Garmin's digital marine instrument displays and chartplotters. Available in both NMEA 2000 and NMEA 0183 configurations, the units can track bottom depths to 600 feet. Two thru-hull sensor models are offered to accommodate a full range of hull deadrise angles.

GWS™ 10 Wind Sensor

For sailors who want more power, speed and control on the water, Garmin's GWS™ 10 is the answer. Easily installed, the mast-top integrated sensing unit provides wind speed and direction measurements to your cockpit display via NMEA 2000 cable and bus (which also powers the unit). It's designed to interface with Garmin's GMI™ 10 universal marine instrument display or any manufacturer's NMEA 2000-enabled chartplotter/display. And unlike traditional wind sensors, this "smart" transducer also provides barometric pressure and air temperature data – to give you a virtual mini weather station.

GFS™ 10 Fuel Sensor

Providing fuel flow and fuel used measurements to your Garmin chartplotter or GMI 10 instrument display, the GFS 10 sensor helps optimize performance while taking the worry out fuel management. Works with most gasoline-powered inboard, I/O and outboard engines via your NMEA 2000® network.

NMEA 2000 analog adapters

The perfect upgrade solution to bring any helm into the digital age: These affordable, easy-to-install Garmin adapters take signals generated by your traditional gauges* and sensors – and then convert that data into NMEA 2000 output. This enables the data to be channeled through your vessel's NMEA 2000 network for digital display on Garmin's all-purpose GMI™10 multifunction instrument.

*Intended for use with most single or dual coil analog gauges.

DIGITAL MARINE INSTRUMENTS

Nasty weather. Tricky shoals. Fog-shrouded boats in your vicinity. There are all kinds of costly, unpleasant surprises awaiting mariners who can't see what's out there. That's why Garmin has created a whole new GMR family of high-performance digital marine radars. Combining power, range and high-definition targeting with easy-to-use navigation features, these X-band radars come with your choice of compact sealed radomes or open array antennas. They'll fit any boat. With easy "plug-and-play" installation. And since all radar signal processing is contained in the remote antenna/scanner, any chartplotter on the Garmin Marine Network can double as your radar screen.

GMR™ 18 Radar

This low-cost radar offers a great value for boaters who want dependable performance and weather penetration from an 18-inch digital radome. It features a robust 4-kilowatt transmitter, dual rotation speeds, and "echo augmentation" technology to give you surprising picture quality and target definition. MARPA target tracking is optionally available for hazard avoidance (Garmin heading sensor required). And radar data can be displayed on any Garmin network-compatible chartplotter/MFD.

GMR™ 18 HD Radar

New echo pulse optimizing technology brings extra-high definition to your radar picture with Garmin's compact GMR™ 18HD. Advanced all-digital signal processing yields up to eight times the sampling data per pulse of earlier transmitters – for significantly sharper imagery and improved target separation in all directions. Automatic pulse-rate design optimizes pulse width and repetition rates for each range selected. So, radar energy transmissions are balanced to assure excellent penetration at longer ranges and noticeably higher-resolution scans at closer ranges. The space-saving 18-inch radome delivers 4 kilowatts of power and up to 36 nm of scanning range – far surpassing most other radars in its size and price bracket. You can view the radar display on any Garmin network-compatible chartplotter/MFD (no software update required). And to aid in hazard avoidance, MARPA target tracking is supported when combined with an optional Garmin high-performance heading sensor.

GMR™ 24 HD Radar

Offering extra-high definition imagery and target separation, this new 24-inch, dual-speed digital radar is the ideal "plug-and-play" addition to your Garmin Marine Network™. Plus, the new automatic pulse optimization technology matches pulse widths and repetition rates with the range selected, so you get excellent radar penetration and unbelievably clear echo definition at all ranges – near or far. Maximum range is up to 48 nm. And you can access the radar data from any Garmin network-compatible chartplotter/MFD (no software update required). For added situational awareness, optional MARPA target tracking is also available with installation of an optional Garmin high-performance heading sensor.

GMR™ 404/406 Open-Array Radar Scanners

Ships. Shores. Birds. Weather. Whatever you're scanning on radar, you'll see it sooner – and in sharper detail – when you scan with Garmin's GMR 404 or 406 open array antennas. Both are powerful 4 kW X-band digital radars that combine 72 nm maximum range with high-definition targeting and selectable 24 or 48 RPM antenna rotation speeds. The GMR 404 is a 4-foot scanner with 1.8° beamwidth for superior target separation. The GMR 406's 6-foot antenna takes beamwidth down to 1.1° for even better resolution. Any network-compatible Garmin chartplotter can double as your radar screen. And six pulse length/PRF settings help optimize target returns at all range scales. For radar plotting and collision avoidance, MARPA target tracking is optionally available (Garmin heading sensor required).

GMR™ 604/606 xHD Open-Array Radar

It's a revolution in radar resolution: Garmin's powerfully precise GMR 604/606 series xHD open-array scanners. They take High-Definition radar imagery to a whole new level of clarity – providing up to 8 times more data per pulse than some earlier-generation designs. Available in 4- or 6-foot antenna lengths, with selectable 24/48 RPM rotation speeds, these versatile units deliver 6 kilowatts of scanning power and up to 72 nm maximum range, with superior target separation and radar penetration at all ranges, near or far. Both units will support MARPA hazard avoidance (with Garmin heading sensor, sold separately). Plus, a handy Dual Range feature enables your Garmin network-compatible 4000/5000 series chartplotter/MFD to display two range scans at once, so you can view close and distant targets simultaneously.

GMR™ 1204/1206 xHD Open-Array Radar

These are Garmin's most powerful marine scanners. Transmitting at 12 kilowatts, these 4- and 6-ft. open arrays combine 72 nm maximum range with xHD high-pulse-rate technology yielding up to 8 times more echo sampling data than earlier-generation radars. The result: Incredible performance that sets the standard for target detection and image definition in this class of marine radar. The GMR 1204 is a 4-ft. scanner with 1.8° beamwidth and selectable 24/48 RPM rotation speeds. The GMR 1206 is also dual-speed and features a 6-ft. antenna that takes beamwidth down to 1.1° for even better resolution. Both units offer support for MARPA hazard avoidance (with Garmin heading sensor, sold separately). And both incorporate Garmin's Dual Range capability, enabling your network-compatible GPSMAP® 4000/5000 series chartplotter/MFD to display two scanning ranges simultaneously, so you can see close and distant targets on one display.
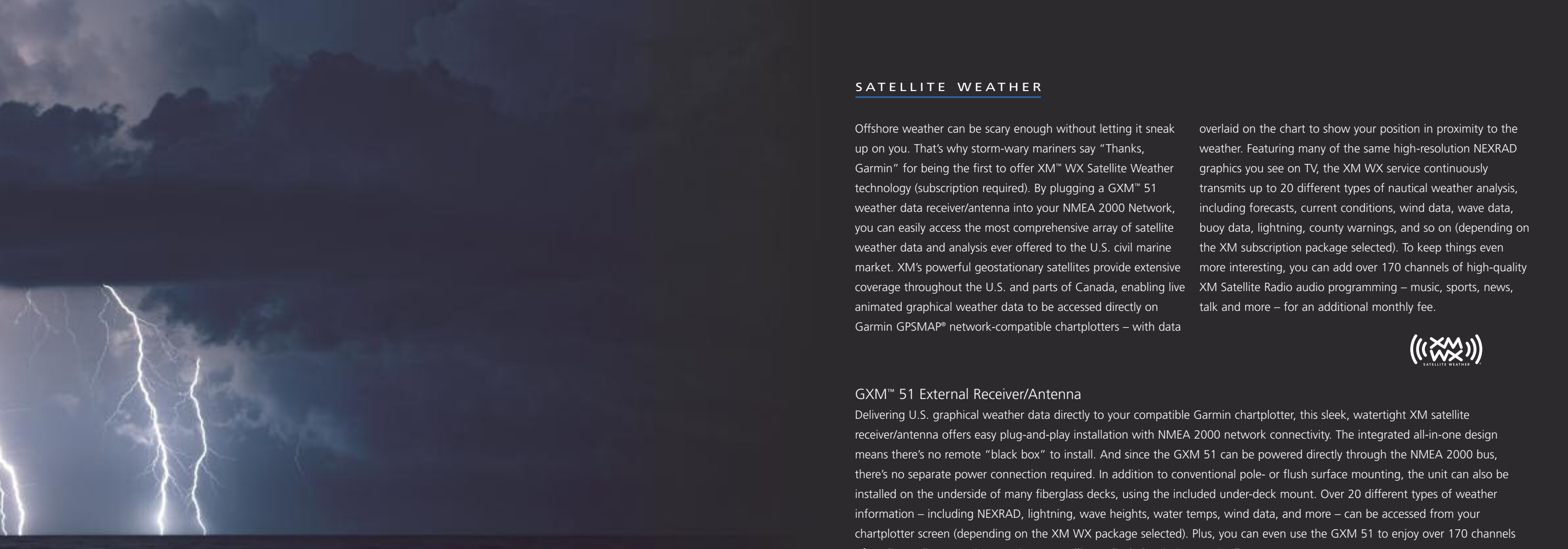
SATELLITE WEATHER

Offshore weather can be scary enough without letting it sneak up on you. That's why storm-wary mariners say "Thanks, Garmin" for being the first to offer XM™ WX Satellite Weather technology (subscription required). By plugging a GXM™ 51 weather data receiver/antenna into your NMEA 2000 Network, you can easily access the most comprehensive array of satellite weather data and analysis ever offered to the U.S. civil marine market. XM's powerful geostationary satellites provide extensive coverage throughout the U.S. and parts of Canada, enabling live animated graphical weather data to be accessed directly on Garmin GPSMAP® network-compatible chartplotters – with data overlaid on the chart to show your position in proximity to the weather. Featuring many of the same high-resolution NEXRAD graphics you see on TV, the XM WX service continuously transmits up to 20 different types of nautical weather analysis, including forecasts, current conditions, wind data, wave data, buoy data, lightning, county warnings, and so on (depending on the XM subscription package selected). To keep things even more interesting, you can add over 170 channels of high-quality XM Satellite Radio audio programming – music, sports, news, talk and more – for an additional monthly fee.

GXM™ 51 External Receiver/Antenna

Delivering U.S. graphical weather data directly to your compatible Garmin chartplotter, this sleek, watertight XM satellite receiver/antenna offers easy plug-and-play installation with NMEA 2000 network connectivity. The integrated all-in-one design means there's no remote "black box" to install. And since the GXM 51 can be powered directly through the NMEA 2000 bus, there's no separate power connection required. In addition to conventional pole- or flush surface mounting, the unit can also be installed on the underside of many fiberglass decks, using the included under-deck mount. Over 20 different types of weather information – including NEXRAD, lightning, wave heights, water temps, wind data, and more – can be accessed from your chartplotter screen (depending on the XM WX package selected). Plus, you can even use the GXM 51 to enjoy over 170 channels of quality audio entertainment via XM Satellite Radio (subscription required).

GXM™ 51 highlights:
• Waterproof to IPX7 standards
• Easy plug-and-play installation
• Powered through NMEA 2000 bus
• Integrated design; no "black box" to connect
• Pole-mount, flush-mount, or under-deck installation

Available XM WX Satellite Weather delivers location-specific, animated weather data directly to your network-compatible chartplotter display. Over 20 different types of weather information can be overlaid (depending on XM WX package selected.)

Keep listening: In addition to satellite weather, XM subscribers also have the option of adding over 170 channels of audio news, sports, music and entertainment via XM Satellite Radio. Audio interface is provided for the boater's onboard stereo system.

Whether you're scouting for fish or simply want to keep an eye on potentially hazardous terrain or reef structures beneath your boat, a Garmin remote sonar unit can add the depth and detail you need. This "black box" remote unit combines powerful sonar outputs with Ultrascroll® high-speed update technology – so you can see what's under your boat now, instead of looking at history in the form of targets or terrain that you've long since passed over. With a Garmin remote sonar, faster screen updates and better target resolution yield better, more timely interpretation for safer navigation.

GSD™ 22 Digital Remote Sonar

With all-digial signal technology and the power to vividly scope out whatever's down there, this remote sounder unit is a real breakthrough. It plugs directly into the Garmin Marine Network™ for use with Garmin's network chartplotters. Ultrascroll™ technology keeps the display scrolling at live-action speeds, while the unit's digital design and up to 2 kW of transmit power (depending on the type of transducer used) provide extraordinary target definition and deep-water performance. The digital receiver design automatically adjusts to water and bottom conditions to provide excellent shallow water performance as well. Digital signal technology offers superior sonar picture sharpness – think of it as "High Def" quality for your underwater viewing. A dual-frequency (50/200 kHz) system, the GSD 22 works with everything from a standard 500-watt transom-mount transducer to heavy-duty 2 kW in-hull transducers. Reaches depths to 5,000 feet.

Split-screen scene: This useful split-view feature lets you track your progress in relation to surface waypoints, buoys, navaids, shorelines and other topside features – while simultaneously monitoring depth contours, obstructions and other potential underwater hazards beneath your boat.

For powerboat captains who want the ultimate in control, Garmin's GHP™ 10 helm pilot system is a real breakthrough. Known for its aerospace-derived control surface technology and intuitive, no-nonsense operation, the GHP 10 system brings an amazing new level of performance, reliability and hands-free control to all types of hydraulically steered boats – inboards, outboards, stern drives, or diesels. The GHP 10 can interface with your Garmin GPS or NMEA 0183 compatible chartplotter for auto-guided navigation to selected waypoints or routes. And, better still, NMEA 2000 connectivity now allows the autopilot to be engaged directly from your Garmin network chartplotter. Patented Shadow Drive™ technology lets you take the wheel, at any time, to make manual course changes on the fly, without disengaging or "wrestling" the system for control. The advanced Shadow Drive sensor will automatically send a command to the course computer when it senses your hand-steering inputs. (This is one autopilot that knows when to let go!) Then, once you've steered the boat onto its new course, just release the helm and the autopilot will automatically resume navigation. A high-speed digital

microprocessor calculates rudder rate commands – so you get none of the installation and maintenance worries that go with remote rudder-angle transducers. Also, a wide array of pre-programmed steering patterns makes for easy automation of holding, trolling and search procedures. G-limited turn control offer smooth response at virtually any speed. What's more, you can easily set the unit to hold position against wind, waves and currents – or even steer in reverse.

Freedom at your fingertips: Optional GHC 10 Wireless Remote offers on-the-move steering and mode control at distances up to 45 feet from the primary helm unit – giving you total freedom to move about the boat without being tethered to a cord.
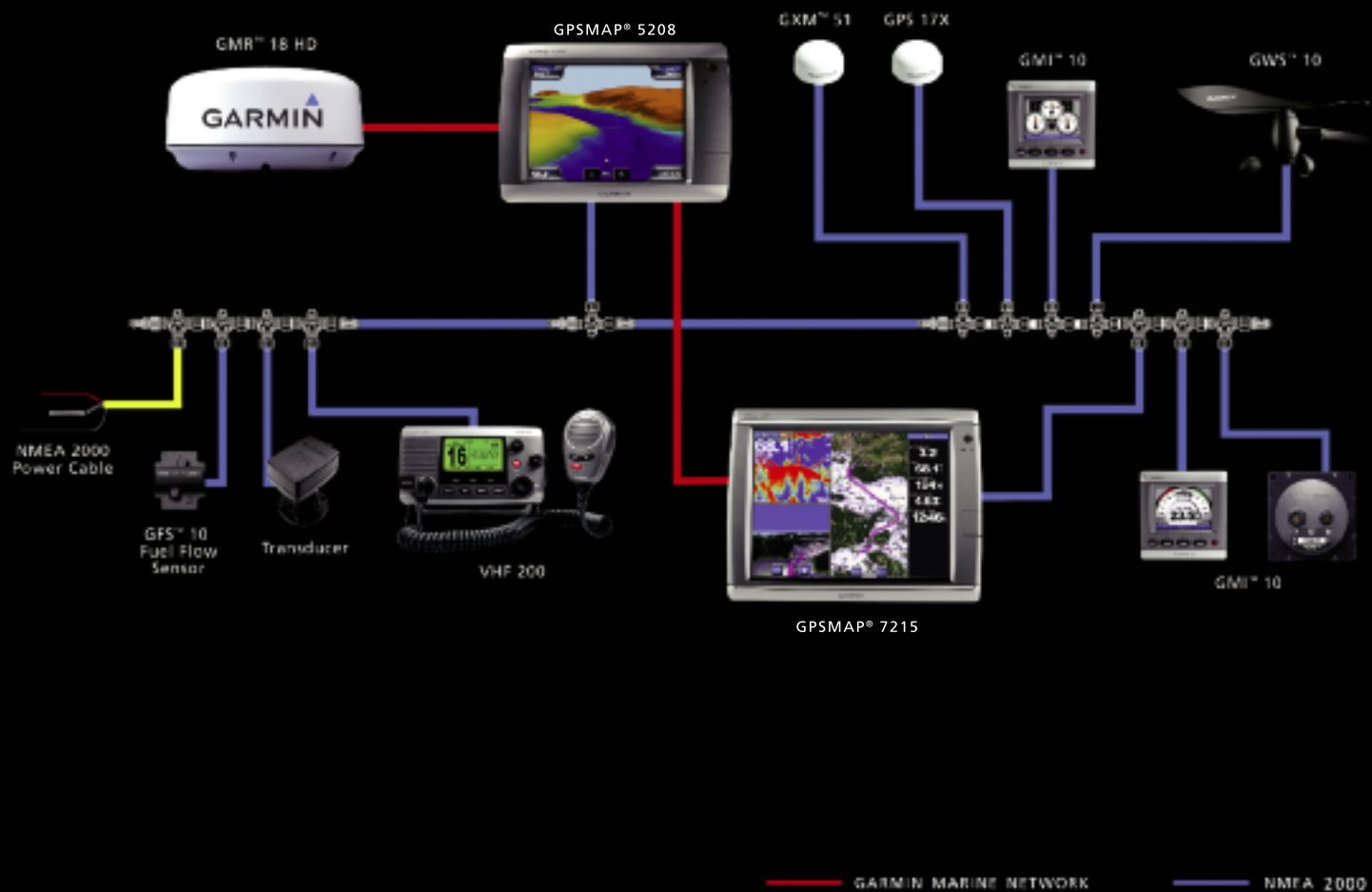
From cabling to connectors to plug-in port expanders, everything to tie your Garmin Marine Network together has been made easy to access – and virtually foolproof to install. What's more, the whole process of keeping your network software up-to-date has been made equally "flub-proof" as well. You simply go online to the Garmin website to download all the latest software updates. Then, just copy this data from your PC onto a standard SD card or Garmin data card and insert it into the MFD. Follow the screen cues, and – Voila! – you're quickly updated and good to go.

GMS™ 10 Network Port Expander

This is the "nerve center" of the Garmin Marine Network: A robust 100-megabit switch that allows users to connect multiple sensors and MFDs to their onboard network and gain the benefit of Ethernet-like data transfer speeds up to 10 times faster than some competitive systems. By eliminating the need for "daisy-chain" connections from one unit through another, the GMS 10 provides a higher level of system redundancy and reliability. It's ruggedized for operation in corrosive marine environments. All connections are totally waterproof, and sealed covers keep harmful moisture away from unused data ports. Individual line status is annunciated by LED indicators. And the system's plug-and-play design means that all peripherals are automatically detected and readily accessible once they're connected to the network. Likewise, owners can easily expand their systems by using the same standard data cable to plug additional units and displays into the GMS 10 network ports.
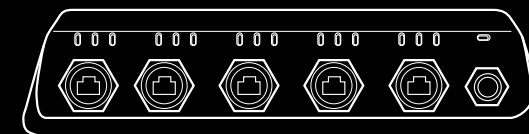
Garmin GPS 17x High Sensitivity Receiver/Antenna

Offering high-sensitivity reception and pinpoint GPS accuracy to Garmin's newest marine instruments, autopilots and multifunction displays (MFDs), the GPS 17x is a robust, easy-to-mount sensor that's built to perform under harsh conditions. Packaged in a low-profile waterproof housing, this versatile receiver/antenna combination allows for continuous tracking of all visible GPS satellites and delivers position accuracy within 3 meters on average. In addition to conventional pole- or flush surface mounting, the GPS 17x can also be attached to the underside of many fiberglass decks, thanks to its high sensitivity. (An under-deck mount kit is included.) Two versions of the GPS 17x – NMEA 2000 only and NMEA 0183/serial – make system configuration simple. And with both versions, a connector right on the bottom housing of the unit takes the hassle out of setup and installation.

GC™ 10 Marine Camera

Whether you're backing out of a busy marina or simply keeping tabs on the engine room or other watch-worthy areas, the Garmin GC 10 can provide the added security of an "extra set of eyes" on your vessel. Video feeds from the GC 10 can be viewed on standard flat-screen monitors or on any compatible network chartplotter/MFD. Durable and waterproof, the unobtrusive GC 10 camera works inside or outside – and it's easy to mount virtually anywhere on your boat.

Marine Heading Sensor

Designed to complement Garmin's marine network lineup of chartplotter/MFDs and radars, this three-axis heading sensor uses high-precision rate gyros, accelerometer and compass sensors to maintain an exceptional 2° heading accuracy under a full range of dynamic conditions, with up to 30° of pitch and roll. The unit will support either NMEA 2000 or NMEA 0183 data output to fit any installation – providing mariners with unparalleled radar overlay accuracy, as well as extra-precise MARPA target tracking..
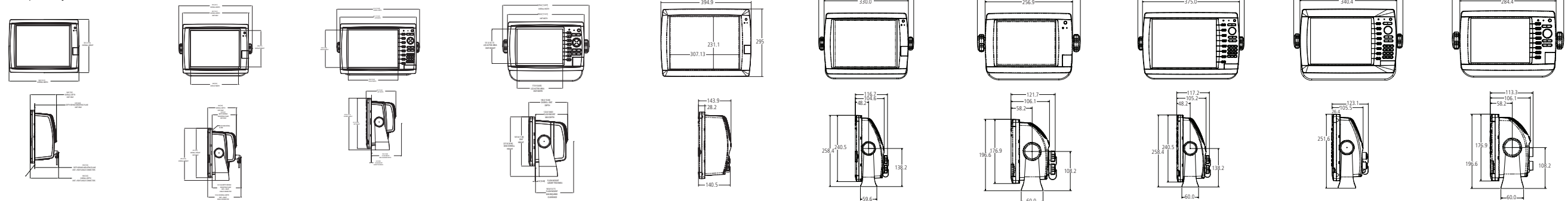
HomePort™ marine planning software

A great voyage starts with a smart plan. And now, with the introduction of HomePort™ planning software, Garmin gives you the tools to more easily plan and review all of your offshore adventures. This PC desktop application works with the existing BlueChart® cartography data from your preloaded chartplotter or preprogrammed data card to help you plan and manage trips, routes, tracks and waypoints – and then transfer them between your computer and your chartplotter. In addition, the HomePort application can help you predict fuel usage, tides, depth profiles, and more. Once your chart data is uploaded to HomePort, you can use it to plot a course that avoids hidden underwater hazards and keeps your vessel at a safe distance from shallow or rocky shorelines. HomePort also enables you to measure distance and bearing between waypoints, and it will even help calculate your estimated travel time for each leg of the voyage. You can save your PC planning files and trip profiles for future use. And once you've planned your route, it's easy to transfer the data from the computer back to your chartplotter via plug-in micro SD™/SD™ data card. For mariners who make trip planning a real priority, there's nothing like having the HomePort advantage.

	GPSMAP® 7215	GPSMAP® 7212	GPSMAP® 6212	GPSMAP® 6208	GPSMAP® 5215	GPSMAP® 5212	GPSMAP® 5208	GPSMAP® 4212	GPSMAP® 4210	GPSMAP® 4208
Display Type:	XGA Touchscreen display	XGA Touchscreen display	XGA display	VGA display	XGA Touchscreen display	XGA Touchscreen display	VGA Touchscreen display	XGA display	SVGA display	VGA display
Screen Size:	15.0" diag. (38.1 cm)	12.1" diag. (30.7 cm)	12.1" diag. (30.7 cm)	8.4" diag. (21.3 cm)	15.0" diag. (38.1 cm)	12.1" diag. (30.7 cm)	8.4" diag. (21.3 cm)	12.1" diag. (30.7 cm)	10.4" diag. (26.4 cm)	8.4" diag. (21.3 cm)
Resolution:	1024 x 768	1024 x 768	1024 x 768	640 x 480	1024 x 768	1024 x 768	640 x 480	1024 x 768	800 x 600	640 x 480
Marine charts:	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®	`BlueChart® g2 Vision®
Cartography:	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas	Preloaded U.S. coastal marine charts including Explorer charts for the Bahamas
Interface Inputs/Outputs:	4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 4 video inputs for onboard cameras, 1 XGA resolution PC monitor video output; 1 PC monitor input	4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output	3 built-in network ports, 4 NMEA input (for NMEA 0183, NMEA 2000), 2 NMEA output, 2 video inputs for onboard cameras, 1 XGA resolution PC monitor video output
Receiver:	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS	NMEA 2000; High sensitivity 12 channel with WAAS
Dimensions:	15.5" W x 11.8" H x 5.9" D	13.3" W x 9.9" H x 5.8" D	15.0" W x 9.9" H x 5.9" D	11.5" W x 7.4" H x 5.9" D	15.5" W x 11.7" H x 5.7" D	13" W x 9.5" H x 4.7" D	10.1" W x 6.8" H x 4.2" D	14.8" W x 9.5" H x 4.6" D	13.4" W x 8.9" H x 4.2" D	11.2" W x 7.0" H x 4.6" D
Waterproof:	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible	IPX7—submersible
Mount:	flush	flush or tilt bail mount	flush or tilt bail mount	flush or tilt bail mount	flush	flush or tilt bail mount	flush or tilt bail mount	flush or tilt bail mount	flush or tilt bail mount	flush or tilt bail mount

*Bluechart g2 Vision card sold seperately

GMR™ 18 / HD	GMR™ 24 / HD	GMR™ 404 / 406	GMR™ 604 / 606 xHD	GMR™ 1204 / 1206 XHD
Radome diameter: 18"	Radome diameter: 24"	Antenna size: 4-ft. or 6-ft. open arrays	Antenna size: 4-ft. or 6-ft. open arrays	Antenna size: 4-ft. or 6-ft. open arrays
Transmit power: 4 kW	Transmit power: 4 kW	Transmit power: 4 kW	Transmit power: 6 kW	Transmit power: 12 kW
Horizontal beamwidth: 5°	Horizontal beamwidth: 3.6°	Horizontal beamwidth: 1.8° (404); 1.1° (406)	Horizontal beamwidth: 1.8° (404); 1.1° (406)	Horizontal beamwidth: 1.8° (404); 1.1° (406)
Max. Range: 36 nm	Max. Range: 48 nm	Max. Range: 72 nm	Max. Range: 72 nm	Max. Range: 72 nm
Power input: 10.5-35 Vdc, 33.5W	Power input: 10.5-35 Vdc, 33.5W	Power input: 10.5-38 Vdc, 45W typical	Power input: 10.5-38 Vdc, 45W typical	Power input: 10.5-38 Vdc, 45W typical
Zoom Mode*: 2x, 4x	Zoom Mode*: 2x, 4x	Zoom Mode*: 2x, 4x	Zoom Mode*: 2x, 4x	Zoom Mode*: 2x, 4x
Presentation Modes: North up, Course up, Heading up	Presentation Modes: North up, Course up, Heading up	Presentation Modes: North up, Course up, Heading up	Presentation Modes: North up, Course up, Heading up	Presentation Modes: North up, Course up, Heading up
Waterproof: IPX7—submersible	Waterproof: IPX7—submersible	Waterproof: IPX7—submersible	Waterproof: IPX7—submersible	Waterproof: IPX7—submersible
Features: Dual rotation speed; Garmin Marine Network™ compatible; radar/chart overlay mode; supports MARPA (with optional heading sensor)	Features: Dual rotation speed; Garmin Marine Network™ compatible; radar/chart overlay mode; supports MARPA (with optional heading sensor)	Features: Dual rotation speed; Garmin Marine Network™ compatible; radar/chart overlay mode; supports MARPA (with optional heading sensor)	Features: Dual rotation speed; Garmin Marine Network™ compatible; radar/chart overlay mode; supports MARPA (with optional heading sensor); dual range	Features: Dual rotation speed; Garmin Marine Network™ compatible; radar/chart overlay mode; supports MARPA (with optional heading sensor); dual range
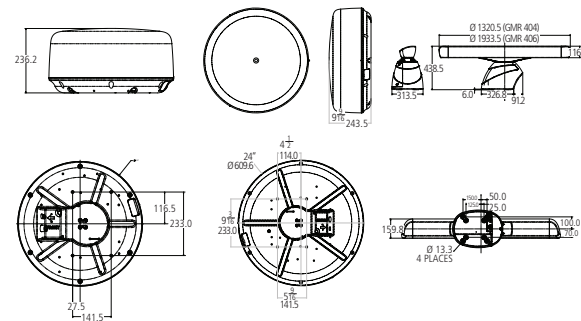
* May depend on MFD capabilities.   Dimensions are shown in millimeters.

A WORLD OF SUPPORT FOR YOUR GARMIN MARINE NETWORK™

You've found the ideal way to integrate your weather and navigation information. But even so, you know your system is not complete without one more important feature: Support. Whether you need operational assistance as you work through those new-owner jitters, installation help from one of our worldwide authorized dealers, or maybe there's an interface question you want to bounce off our technical support pros – whatever the need, you can count on Garmin to back you up and keep you on track.

After all, standing behind our products and our customers is what continues to keep us out in front.

Because our goal is to make you the most worry-free link in the whole Garmin Marine Network.