

APPLICATION

The world's marine environments have been hubs of industry since people first ventured out onto the waters. However this source of prosperity is also host to some of the most dangerous conditions on earth, Marine radio systems provide an essential life-line for the coastal patrols, commercial fisherman, and off-shore oil refiners who must deal with the challenges of this adverse environment.

Marine FM communications equipment operates on select standard frequencies in the VHF band (between 156–162 MHz) and is used for summoning rescue services, monitoring weather, and communicating with other vessels and land based entities.

THE PROBLEM

Marine environments consist of very large, weather-intense areas that need coverage for general safety and weather reporting radio traffic. Hand-held equipment on vessels often provide poor range, and typical radio systems might not be suitable for operation in harsh sea-faring conditions where moisture, movement and power consumption are limiting factors. Marine radio equipment only functions on a very specific set of frequencies, limiting interconnectivity with other land or air based communication systems.

KEY FEATURES OF THE SOLUTION

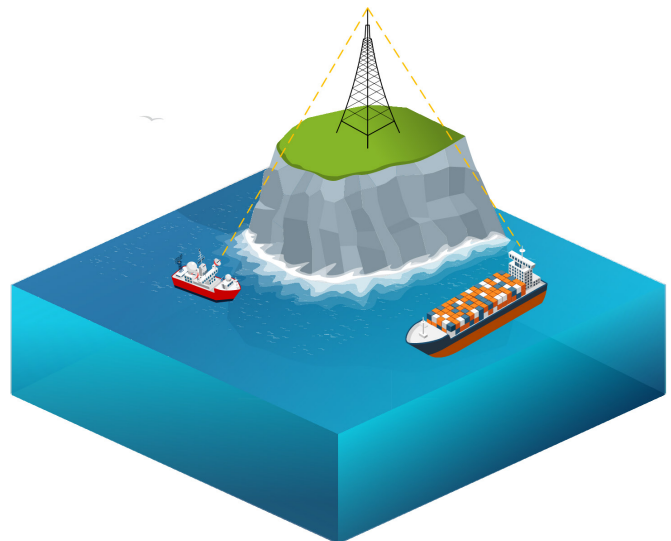
- 8W to 100W systems available
- VHF Band (156–162 MHz)
- Extreme temperature tolerance (–30°C to +60°C)
- Low power consumption
- Extended coverage area
- Crossband communication with FM equipment
- FCC and Industry Canada certified
- Proven with Digital Selective Calling (DSC) as part of Global Maritime Distress Safety System (GMDSS)

THE SOLUTION

New product innovations provide more ways than ever to expand your radio communications coverage on the water. Codan's VHF base stations can be implemented to establish new points of communications with sea craft from ports or other points on land. Alternately, repeaters can be used to extend the coverage area of existing land-to-sea communications systems or to crossband existing equipment to marine frequencies.

On the vessels themselves, robust Codan ET transportable repeaters can be deployed to greatly extend the range of hand-held radios, ensuring that crucial communication links with land and other ships are always available. Off-shore sites using intrinsically safe radio VHF hand-held equipment can extend effective coverage by implementing Codan's crossband repeaters to allow communication with users operating non-intrinsic FM equipment on different frequency bands.

Codan systems can be configured from 8 W to 100 W depending on how much coverage is needed. More extensive or complex networks can be created using chains of solar-powered repeaters or HF satellite links to connect multiple sites.



THE BENEFITS

Codan has decades of experience in the Marine Radio industry. Codan VHF products are FCC^[1] and Industry Canada^[2] certified for marine operations, and have been proven to work with Digital Selective Calling (DSC) equipment as part of the Global Maritime Distress Safety System (GMDSS).

Codan's VHF repeater and base station systems lead the communications industry in low current consumption and extreme temperature tolerance (-30°C to + 60°C). The systems are modular in design, and can be configured for a wide variety of audio, remote control and RF architecture configurations. The radio modules are robustly constructed and housed in standard 19" subracks.

The addition of an ET Transportable case allows a Codan repeater or base station to be portably deployed into extreme environmental conditions. The ET Transportable case is rugged, pressurized and waterproof, and houses one subrack with additional space for optional modules.

THE CUSTOMER

The Canadian Coast Guard Marine Communications and Traffic Service (CCG MCTS) provides first response to ships in distress, regulates marine traffic, and maintains a network of weather and navigation alerting. Using Codan's 30 W base stations deployed at key points along the Canadian coastline, land based Coast Guard operators keep constant communications with their patrol vessels on private channels. On public channels the CCG MCTS monitors distress channels, communicates with non-Coast Guard stations and vessels, and provides a Continuous Marine Broadcast Service which delivers vital alerts, warnings and weather information in English and in French.

[1] FCC Marine Radio Service equipment approval; 47 CFR, Part 80

[2] Industry Canada Marine Radio Transmitter and Receiver certification: RSS-182, Issue 5

Values noted are typical. Equipment descriptions and specifications subject to change without notice or obligation.