MARITIME SECURITY COMMUNICATIONS SOLUTIONS

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SUMMARY

The maritime environment is complex and diverse. The very nature of open seas offers relative abundant freedom to seafarers, but this very openness leaves sea passage vulnerable to activities threatening the security of nations and free flow of global commerce. Terrorist movements, the illegal trafficking of arms, narcotics and humans and of course piracy are a few examples of illegal activities conducted on our seas.

A communications solution can assist personnel in swiftly and securely combating these illicit activities to ensure sovereign maritime borders are maintained.

MARITIME SECURITY REQUIREMENTS

Since time began, the safety of trading and passenger routes has been of importance to allow the flow of global commerce, and with the advancement of time the acts of piracy have continued, and although no longer vessels fly the skull and cross-bones of the "Jolly Roger" with their crews plundering gold doubloons, these modern day pirates are as ruthless as their predecessors.

It is estimated that on average $12bn per year is lost in international economies due to maritime piracy. This includes loss of revenue from seized and stolen goods and vessels, ransom fees and re-routing of vessels in areas of intense piracy activity.

To support the global Maritime Interdiction Operations (MIO's) in seizing, capturing and prosecuting the violators, Codan Communications has a suite of communications equipment designed to support these operations including both voice and data and real time situational awareness. These selected products provide the necessary Command, Control, Communications, Computers and Intelligence (C4I) allowing mission commanders to efficiently and securely direct and coordinate MIO's.

Typically, Offshore Patrol Vessels (OPV) are tasked with maintaining the security of a nations maritime borders, preventing prohibited activities including illegal fishing, illegal trafficking of goods and persons, and piracy. With these tasks and missions often conducted at the limits of the sovereign maritime border (200nm), a requirement for Over The Horizon (OTH) communications network back to the naval base is critical, but also critical to commanders is communications between the OPV and its landing craft and the boarding party personnel.

As mentioned the real-time passage of information is critical in these interdiction operations, with the ability to track movement, voice communications and images of seizures and crews vital to the swift responses and prosecution of offenders and safeguarding maritime transit routes.

CODAN COMMUNICATIONS SYSTEMS SOLUTION

Codan Communications cost-effective maritime security communications solution comprises of all the required equipment necessary to support the varied global MIO's, from the congested waters of the Malacca straights and Arabian Gulf to the Gulf of Guinea.

The maritime security communications solution includes the Codan Sentry-H 6120-BM providing reliable secure strategic High Frequency (HF) over the horizon communications between the onshore bases and the deployed OPV's.

Codan's Sentry-H 6120-BM

The Codan Sentry-H 6120-BM delivers a rugged Software Defined Radio (SDR) solution for organisations, which demand uncompromised, secure long-range voice and data communications. The Sentry-H 6120-BM delivers 150W RF power and having the smallest and lightest ruggedized form factor on the market, allows easy integration into base and, along with our maritime grade antenna solutions, naval platforms.

With the intuitive icon-based interface and the ability for language customisation, the Sentry-H radio allows the operator to concentrate on the mission and less on complex radio operations and training.

Codan's Sentry-H 6120-BM

Codan provides antenna systems designed to support maritime operations in the harshest of marine environments.

Codan's 9320 Automatic Tuning Whip

The Codan 9320 Automatic Tuning Whip is intended for installation on all type of smaller boats, such as the Rigid-Hulled Inflatable Boat's (RHIB) and OPV's where large HF antennas are not practical but full band coverage is required.

For larger vessels requiring higher RF power, Codan's 3240 Automatic Antenna Tuner can be used in conjunction with whip or long wire antennas, providing much greater operational range.

Codan's 3240 Automatic Antenna Tuner

For the shorter range communications between the OPV and the RHIB or launch deploying to the illegal trawler, skiff or raiding craft, the Codan Sentry-M 6170-HH provides a secure software defined VHF and UHF solution. With its advanced waveform capabilities allowing simultaneous voice and data and situational

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awareness, the OPV can receive real time information and positional reporting allowing the commander to manage and coordinate the situation.

Codan's Sentry-M 6170-HH

With Codan modular solution, the "Jerk and Run" ability allows the boarding party commander to (once alongside the designated craft) remove the radio from the amplifier housing and continue to coordinate the operation, without loss of transmission or reception. Thus, maintaining the vital communications to the command vessel.

Codan's Sentry-U 6160-PR

The boarding parties communications are supported by the Codan Sentry-U 6160-PR, a secure inter/intra team radio allowing full duplex voice, data and situational awareness. The Sentry-U 6160-PR radio also supports multiple networks via Voice Operated Keying (VOX) or wireless PTT connected to weapon stock.

The Sentry-U 6160-PR is designed for use at the forward edge of operations for those users who require robust real-time reporting. Tying all the technologies together to ensure a complete C4I solution is the Codan Radio Inter-Operability System (RIOS).
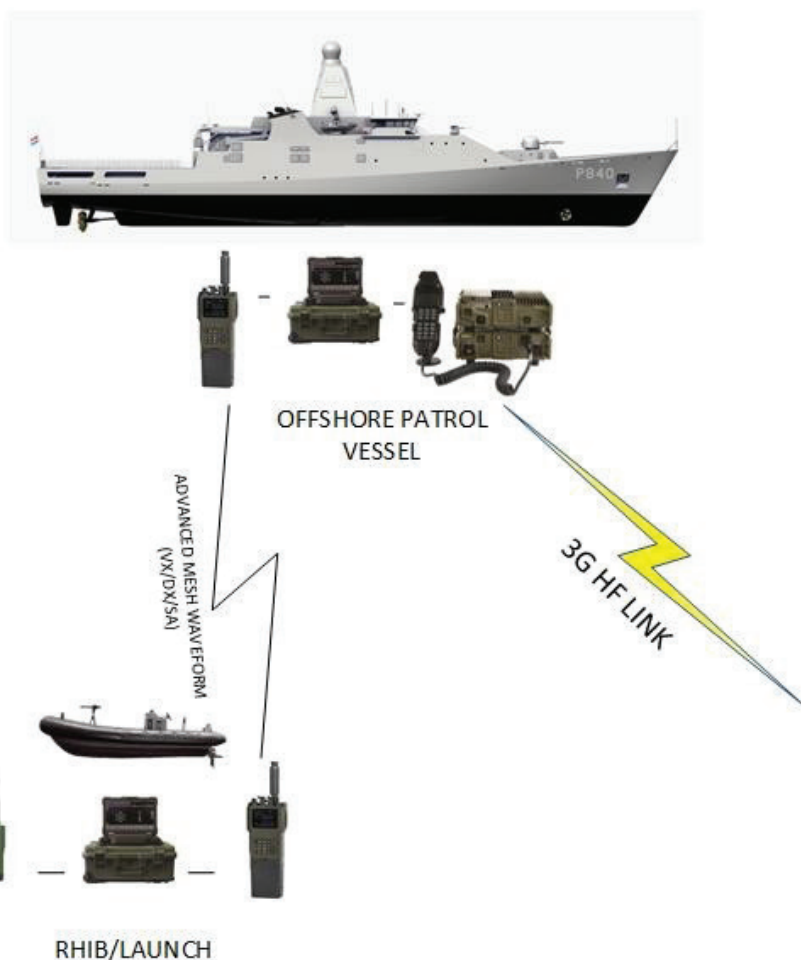
Codan RIOS

*.Control: Daylight readable Windows gateway controller

Network: Integrated router with LAN, Wi-Fi, and USB cellular data connection access.*

Enclosure: Pelican iM2500 roller case: Water resistant, pressure release valve, telescoping handle.

High-Density Radio Interface: Eight (8) D-Sub 26-pin connectors for standard and/or remote radio control interface for two-way radios.

Power: DC input or AC with power supply provided. DC output for auxiliary devices, 12 Volts at 1.5 amps. Integrated Lind for integrated laptop charging.

Items subject to change. Contact Codan for latest component specifications.

The Codan RIOS provides interoperability between a range of communications, including tactical radios, commercial radios, smartphones and computers, enabling a fully integrated communications network efficiently. The Codan RIOS is the solution for enabling users with different vendor devices to seamlessly communicate across any platform.

Along with standard user configurable radio ports, the Codan RIOS has an integrated router with LAN, Wi-Fi and USB cellular connection access.

The diagram below gives a graphical representation of a possible Codan maritime communications solution deployment, showing how the Sentry family of products along with the RIOS can support global MIO's.

OFFSHORE PATROL VESSEL

3G HF LINK

ADVANCED MESH WAVEFORM (VX/DX/SA)

INTER/INTER TEAM VX/DX/SA

BOARDING PARTY

RHIB/LAUNCH

ABOUT CODAN COMMUNICATIONS

Codan Communications is a leading international designer and manufacturer of premium communications solutions. We deliver our capability worldwide for the military, defence, humanitarian, peacekeeping, commercial, security and public safety markets.

Our mission is to provide communications solutions that enable our customers to **be heard** – to ultimately save lives, create security and support peacekeeping worldwide. With over 60 years in the business, Codan Communications has garnered a reputation for quality, reliability and customer satisfaction, producing innovative and industry-leading technology solutions.

We know that every deployment of a communications solution is different, having deployed our solutions in more than 150 countries. And when lives are on the line, it's critical that each deployment is right and that every stakeholder is heard. That's why it's important to truly understand your situation, your infrastructure, your environment and your stakeholders.

At Codan Communications, that's what we're best at. Not fitting your situation into our products, but really understanding what's at stake. So whenever you work with Codan, you know that right from the start you'll **be heard**.

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