CYBERNETICA

Marine Radio Communication

Cybernetica

ESTABLISHED
Established in 1997 as a private limited company based on the applied R&D lab of the Institute of Cybernetics (est. 1960).

BUSINESS DOMAINS
Cybernetica is an R&D intensive ICT company that researches, develops and manufactures mission-critical systems for governments and corporations in more than 35 countries. Cybernetica has developed pioneering maritime surveillance and radio communications technologies and critical e-Government systems, such as the Estonian X-Road, i-Voting, e-Customs, digital identity and other core systems.

CUSTOMERS
Governmental authorities (border guard, tax & customs, maritime, police administrations, ICT-infrastructure institutions, security agencies etc), finacial institutions, telecom companies, port authorities, medical institutions and research labs, critical infrastructure operators etc in over 35 countries over the world (see above).

Cybernetica & Marine Radio Communication

Cybernetica has deployed over 60 installations since 2003 across the world, including in Europe, Asia and the Middle East.

KEY CHARACTERISTICS
Pioneers of VoiP for marine radio communication

Multi-level supervision capacity

Reliable with minimal support necessary

Remote maintenance

Rapid reconfiguration capability

Contact us for more information

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CYBERNETICA

| Innovators of VoIP for marine radio communication | Wide area systems with high scalability | Future prediction through analysing the present |

Safe Journeys

Cybernetica AS has been providing modern radio communication infrastructure solutions since 2003. With over 60 installations around the world, we are confident we can provide a reliable solution to every customer.

Our radio communication systems are based on VoIP with built-in encryption that uses custom public key infrastructure (PKI). Our existing systems cover frequency bands from 1.8 KHz to 3 GHz (MF to UHF).

Core components

Unmanned Site »
Contains remotely controlled radio transceivers and monitoring components

Control Center »
Contains main system server and redundant server, with any customer-relevant additional components

Operator Center »
Contains operator workstations, providing remote control of communications and functions
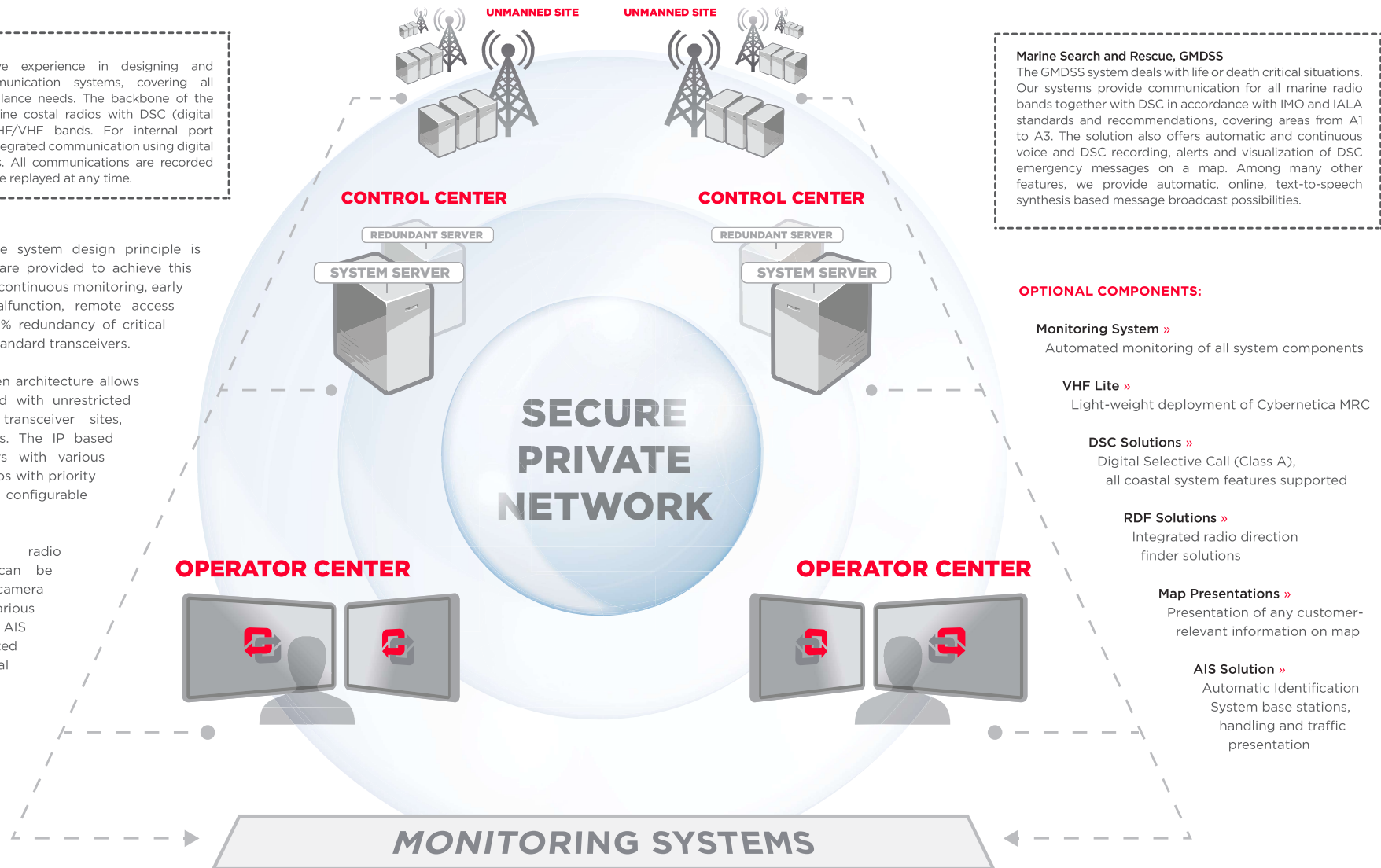

Port Systems
Cybernetica has extensive experience in designing and implementing port communication systems, covering all communication and surveillance needs. The backbone of the system is VoIP based marine costal radios with DSC (digital selective calling) in MF/HF/VHF bands. For internal port management we provide integrated communication using digital radios or UHF band radios. All communications are recorded with time stamps and can be replayed at any time.

✔ **RELIABILITY.** The core system design principle is reliability. Various features are provided to achieve this goal, like open architecture, continuous monitoring, early warnings for hardware malfunction, remote access for maintenance, up to 100% redundancy of critical components and usage of standard transceivers.

✔ **SCALABILITY.** The open architecture allows the system to be extended with unrestricted number of transceivers, transceiver sites, operators or operator sites. The IP based architecture supports users with various rights and multiuser scenarios with priority levels that are instantly configurable according to requirement.

✔ **FLEXIBILITY.** Our radio communication systems can be integrated to radar and camera surveillance systems or various independent systems, like AIS or NAVTEX, can be integrated to our system. The digital data communication can be realized with radio links, mobile network, cable or even via satellite.

Marine Search and Rescue, GMDSS
The GMDSS system deals with life or death critical situations. Our systems provide communication for all marine radio bands together with DSC in accordance with IMO and IALA standards and recommendations, covering areas from A1 to A3. The solution also offers automatic and continuous voice and DSC recording, alerts and visualization of DSC emergency messages on a map. Among many other features, we provide automatic, online, text-to-speech synthesis based message broadcast possibilities.

OPTIONAL COMPONENTS:

Monitoring System »
Automated monitoring of all system components

VHF Lite »
Light-weight deployment of Cybernetica MRC

DSC Solutions »
Digital Selective Call (Class A), all coastal system features supported

RDF Solutions »
Integrated radio direction finder solutions

Map Presentations »
Presentation of any customer-relevant information on map

AIS Solution »
Automatic Identification System base stations, handling and traffic presentation

UNMANNED SITE   UNMANNED SITE

CONTROL CENTER   CONTROL CENTER

REDUNDANT SERVER   REDUNDANT SERVER

SYSTEM SERVER   SYSTEM SERVER

SECURE PRIVATE NETWORK

OPERATOR CENTER   OPERATOR CENTER

MONITORING SYSTEMS