MarTRX™ MCS 3020 IP

GMDSS-compliant communication

The next-generation Maritime Communication System (MCS 3020 IP) serves maritime command center information and communication needs. With a layered, decentralized system architecture that runs on standard COTS equipment and supports a large range of interfaces. The Frequentis MCS 3020 IP brings together voice and data from numerous sources. Sharing technology with its air traffic management (ATM) and Defense solutions, Frequentis MCS 3020 IP provides a robust, fail-safe, high-performance point of integration for maritime safety and mission-critical communication.

## Key features

Highly scalable networking

MCS 3020 IP offers a flexible, modular, service-oriented, all-IP architecture with a decentralized topology. Each implementation can be fully customized to precise requirements, with easy integration of new modules and/or third-party applications. MCS 3020 IP scales from a single harbor up to national radio systems covering hundreds of radios and numerous distributed centers and operator positions.

Comprehensive service coverage

MCS 3020 IP covers the full spectrum of maritime command center information and communication needs. It integrates voice radios (MF/HF/VHF), TETRA and telephony with text-based messages – including GMDSS services such as DCS and NAVTEX, AIS, SafetyNET and more – enabling fast recognition and intelligent distribution from a single point of control.
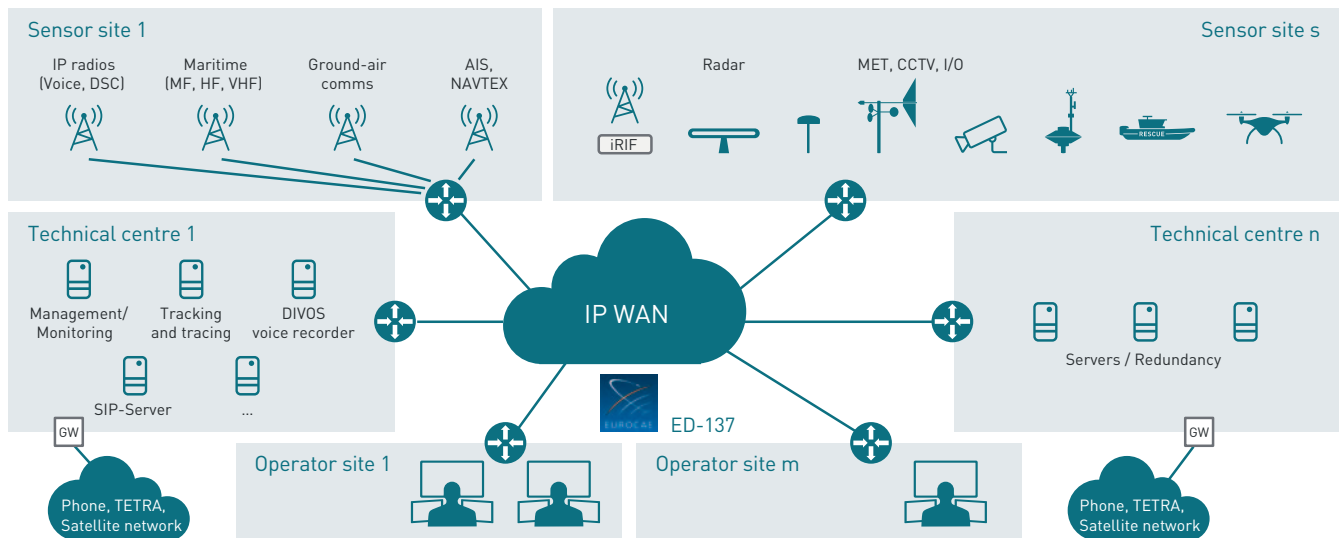
Intuitive operations

MCS 3020 IP helps operators work quickly and efficiently by bringing together relevant voice and data communication in a user-focused interface, with time-saving automation features that reduce stress and increase standardization. By providing a comprehensive shared operational overview spanning centers and missions, MCS 3020 IP helps maritime organizations make faster, higher quality decisions to improve safety.
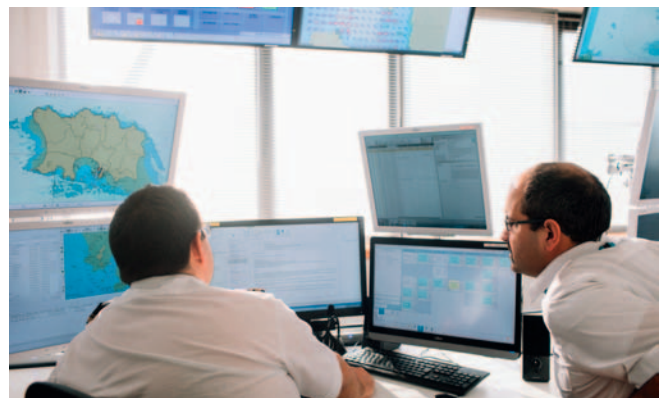
MCS at a glance

- Scales to support national solutions and cost-driven center-consolidation projects

- End-to-end IP architecture; radio gateways for legacy connections

- Modular, open architecture offering a wide scalability and integration

- Fail-safe design ready for multiple requirements, including GMDSS operations

- Human-centric interface delivers information, not just data

- Save time with automated scheduling for maritime safety messages and text-to-speech functionality

FREQUENTIS

FOR A SAFER WORLD

Sensor site 1

IP radios (Voice, DSC) | Maritime (MF, HF, VHF) | Ground-air comms | AIS, NAVTEX

Sensor site s

Radar | MET, CCTV, I/O

iRIF

Technical centre 1

Management/ Monitoring | Tracking and tracing | DIVOS voice recorder

SIP-Server | ...

GW

Phone, TETRA, Satellite network

IP WAN

ED-137

Technical centre n

Servers / Redundancy

GW

Phone, TETRA, Satellite network

Operator site 1

Operator site m

Benefits

Future-ready architecture

Supports past, present and future standards, and scales to nationwide demands out of the box. The same system supports multi-site, multi-mission operations for easy, cost-effective vertical and horizontal integration.

Safety-critical communication

Built on core technology from the ATM world, MCS 3020 IP brings exceptional reliability and real-time capabilities to maritime, with full support for GMDSS services.

High productivity

Context-aware interfaces, automation and integration increase productivity by decreasing task saturation and administrative overhead, enhances user satisfaction even in complex scenarios.

Sensor reuse

The integration of already existing hardware (radio, radar, etc.) and installations allows for a smooth and cost-effective rollout and operation.

Technical specifications

Standards- and regulations-compliant (examples)	DSC / AIS; ITU-R M.493; ITU-R M.1080; ITU-R M. 1371; ... NAVTEX / SafetyNET; ITU-R M.540; IMO IA908E International SafetyNET Manual; INMARSAT SafetyNET Users Handbook
Communication flexibility: NMEA gateway and provider	Multifunctional IP data gateways enable information exchange with AIS, GMDSS-DSC and other data networks
High-quality, fail-safe VoIP audio	Audio transported via SIP/RTP according to specifications of EUROCAE Working Group 67 (ED-137 radio)
Radio remote control (RRC)	Control and monitor remote radios across VHF, HF, MF, TETRA via Ethernet, serial interface or I/Os
Recording	Easy integration with Frequentis DIVOS or third-party recorders
Radio and telephony gateways	Enables connection of radios and telephone systems via IP or through numerous supported gateways, including TETRA, E&M, E1 and FXO