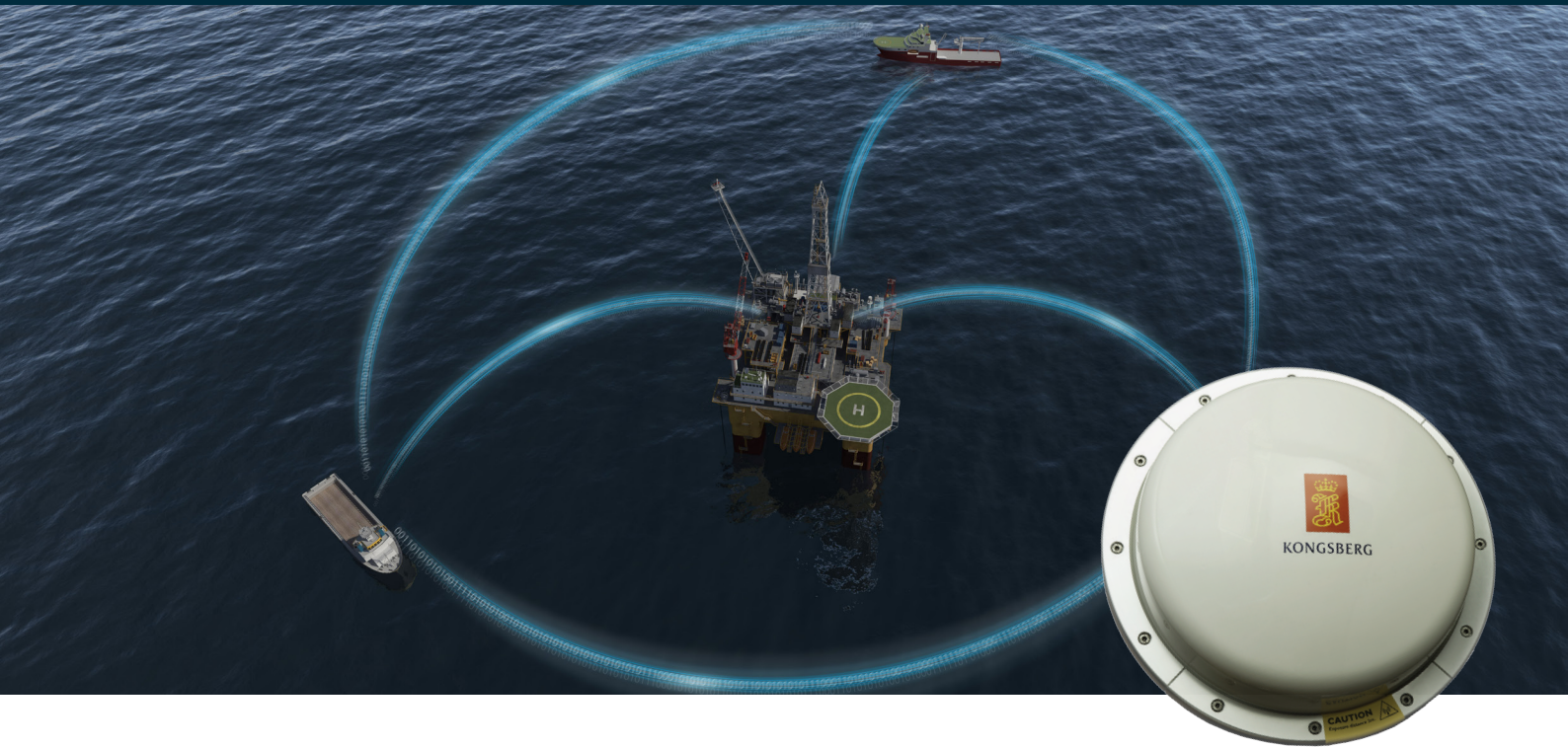


# MBR 189



KONGSBERG



## MARITIME BROADBAND RADIO

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The Maritime Broadband Radio is a smart antenna designed for use in maritime applications where digital high-speed reliable communication and data transfer are crucial for efficient and safe operations. The MBR 189 operates in the 5 GHz frequency band and has proven high capacity communication over distances in excess of 50 kilometres.

### Resilient communication

With its unique design the MBR enables high speed, high capacity and extremely resilient data, voice and video transfer between multiple vessels and other assets. The MBR units use highly dynamic beamforming and adaptive power control to secure stable communication in maritime operations with signal obstructions, fading and ranges in excess of 50 km.

### Connecting vessels

Operating as a maritime “information highway”, the MBR connects crews and their vessels with a high-speed and high capacity digital communication channel with “fast track” priority options. The system can securely carry a diverse array of operational information, from real-time video to system data, and remotely situated teams can work together seamlessly, co-ordinating systems and activities for optimal performance, safety and operational success.

### IP hotspot connectivity

With beamforming the MBR can direct datagrams to the destination as a multi-directional networked wireless system. Supporting IP transmission, the MBR provides a resilient, high-capacity data link for systems that communicate over IP. The use of end-to-end IP connectivity provides cost efficient integration and an interoperable solution for seamless data exchange.

### Enclosed housing

One MBR unit consists of a completely enclosed housing containing a phased array, up to 60 antennas and advanced signal processing hardware for real-time beamforming. With one enclosed part the MBR is easy to install with only power and Ethernet as connections. Unlike satellite, Wi-Fi or mobile network platforms, MBR requires no extra infrastructure or equipment beyond the units on the participating vessels. This makes it a simple-to-use, easy-to-maintain solution enhancing efficiency in maritime operations.

### Intuitive configuration and operation

An MBR unit is configured from a web interface designed for easy setup. The web interface also provides the status of the radio and the network. The network administrator can configure and operate units and adjust network resources from any vessel in the network.

### MBR product family

All MBR product types are fully compatible and interoperable. An MBR network can consist of vessels of all types of MBR units providing differentiation in coverage area, range and physical size.

### No maintenance

The MBR is designed with solid-state technology with no moving parts. No regular maintenance is needed.

## FEATURES MBR 189

- Ad-hoc network
- IP connectivity for user equipment
- High data throughput in difficult conditions
- Near/far capability for multiple vessels
- No moving parts
- No coaxial cables
- Easy to install and set up

MBR Radio Unit



MBR configuration web interface



Power cable to MBR power supply

Data cable to user equipment

## TECHNICAL SPECIFICATIONS

### PERFORMANCE

#### Range

Operational range	50 km <sup>1</sup>
User data	1 to 15 Mbps

#### Antenna coverage

High-range area	100 degrees azimuth 100 degrees elevation
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#### RF specifications

Frequency band	4900 MHz to 5900 MHz
Channel bandwidth	20 MHz
Tx power	4 W
Antenna gain	24 dBi
EIRP	60 dBm
Modulation	GMSK
Internal antenna elements	60

### INTERFACES

Data	1 x Ethernet, RJ-45
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### WEIGHTS AND DIMENSIONS

MBR Unit	16 kg, 500 x 500 x 318 mm
MBR Power Supply	6.4 kg, 88.1 x 485 x 334.75 mm

### POWER

#### MBR Unit

Max. power consumption	210 W
RX only	70 W

<sup>1</sup> Operational range is dependent on antenna placement and height above sea level.

Specifications subject to change without any further notice.

### MBR Power Supply

Supply voltage	110 to 240 V AC
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### ENVIRONMENTAL SPECIFICATIONS

#### Operating temperature range

MBR Unit	-30 °C to +55 °C
MBR Power Supply	-15 °C to +55 °C

#### Operating humidity

MBR Unit	20 to 100 % RH
MBR Power Supply	Max. 95 % non-condensing

#### Storage humidity

MBR Unit (recommended)	20 to 70 % RH
MBR Power Supply	Less than 55 %

#### Ingress protection

MBR Unit	IP66
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### STANDARDS AND REGULATIONS

#### Electromagnetic compatibility

Compliance to EMC, immunity/emission	IEC 60945/EN 60945
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#### Product safety

Compliance to LVD, standard used	IEC 60950/EN 60950
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