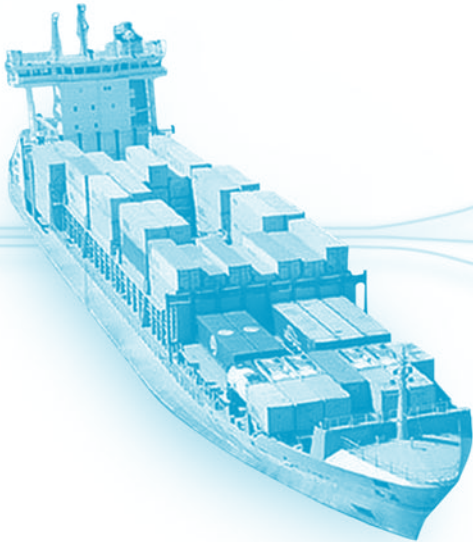


All you need to know for your mobile voice plus text messaging at sea



Blue Ocean
Wireless

Blue Ocean Wireless provides, for the first time, GSM connectivity for seafarers in deep sea ocean water. This allows users to make and receive voice calls, send and receive text messages plus, in time, emails as well as browse the internet using their existing handsets.

Personal mobile voice and text messaging at sea

The Blue Ocean Wireless system provides a constant GSM connection without using permanent satellite bandwidth and is now commercially available over both Inmarsat and VSAT network.

Benefits for ship managers and owners:

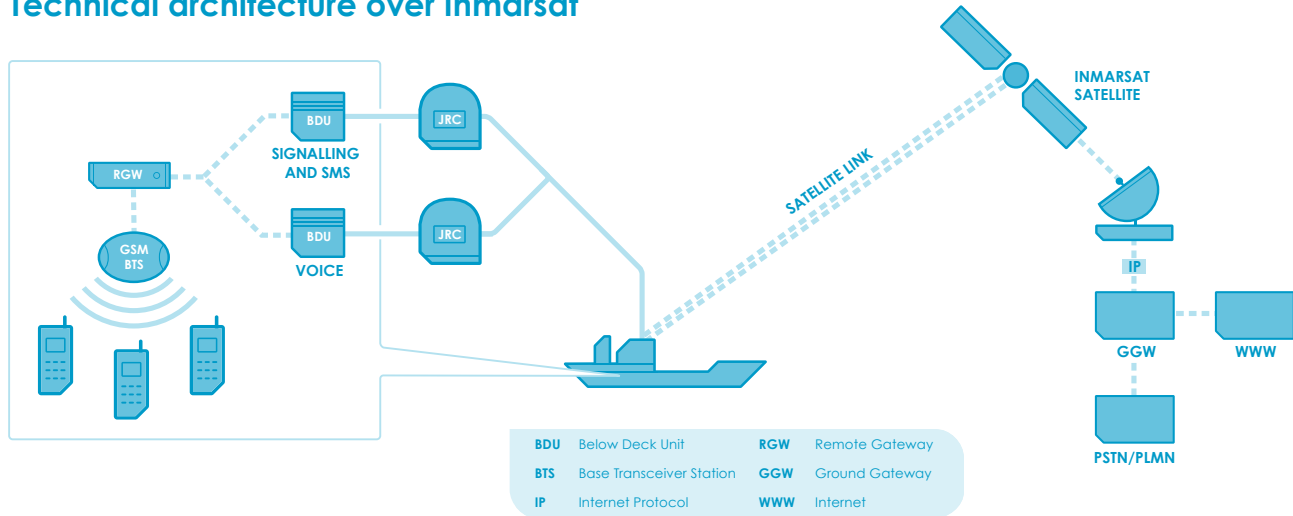
- > Enhanced quality of life for the crew
- > Savings on staff and training
- > Peace of mind on the reliability of the hardware and its maintenance
- > Leverage existing investment for future broadband application

Features

Satellite networks supported by Blue Ocean Wireless	Inmarsat (Fleet 33 & FleetBroadband*) VSAT (Ku and C band)
Voice	Yes
Text messaging	Yes
GPRS	Yes as of Q1 2008
Voice mail	Yes
Number of calls	One call at a time and concurrent text messaging over Inmarsat Fleet 33. Multiple calls and concurrent text messaging over VSAT and FleetBroadband*
Equipment	A remote gateway & GSM picocell as well as 2 JRC Fleet 33 terminals
Installation	Blue Ocean Wireless has partnered up with a specialist maritime company that have many years of experience in installing and maintaining electronic equipment on ships, to carry out all installation
Serviced ports	All major ports will be serviced
GSM frequency	1800
Warranty	All hardware comes with complete warranty and maintenance package
Roaming	Yes, this is possible however Blue Ocean Wireless is not offering such a service until further notice
Coverage	Global
Regulatory	The system is designed to only work outside of territorial waters, thereby not interfering with terrestrial based GSM services.

* only after the successful launch of third Inmarsat I-4 satellite and once Inmarsat FleetBroadband service is offered.

Technical architecture over Inmarsat



Equipment

The Blue Ocean Wireless system consists of a Remote Gateway (RGW) and a GSM Picocell. The Remote Gateway controls the GSM signalling and call set up as well as the SMS & GPRS functionality. This plug-and-play technology then connects via Ethernet to the satellite terminal (Inmarsat Fleet 33 or VSAT).

Remote Gateway specifications

Zero Satellite utilisation when no calls in progress

Interface	Ethernet (RJ45); USB Serial (RS232C)
Power voltage	110/240V AC and/or 24V DC

Over Inmarsat Fleet Service

When using the Inmarsat Fleet low bandwidth satellite network, 2 JRC Fleet 33 satellite modems are required to support the Blue Ocean Wireless system.

The JRC JUE-33 terminal is the only existing Fleet terminal with a confirmed upgrade path to Fleet Broadband without changing the ADU and is specifically configured to connect to the BOW Remote Gateway.

GSM BTS specifications

Base transceiver station	
Frequency range	GSM 1800
Transmit frequencies	1805-1880MHz
Max. output power	+23dBm
Receive frequencies	1710-1785MHz
Electrical interface	Single RJ45 auto-select Ethernet
Dimensions & weight	
Height	210mm
Width	280mm
Depth	77mm
Power consumption	13W
Power voltage	110/240V AC and /or 24V DC
Temperature	-5 to +45°C ambient
Humidity	5 to 90% non-condensing

How it works

The picocell (GSM BTS) is mounted on a wall or ceiling in the stairwell on your vessel, and connects back to the SMART GSM network via the remote gateway.

When inside the vessel, mobile phones automatically receive their signal from the picocell, so all seafarers get great GSM voice quality and data capacity for email devices.

JRC Fleet 33 specifications

Frequency range	TX 01626.5 to 166.5MHz RX 1525.0 to 1559.0MHz
MPDS	Mobile Packet Data Service (TX:28kbps, RX:64kbps:Best effort)
Interface	TEL/FAX (RJ11) Ethernet (RJ45) Serial (RS232C)
Power voltage	110/240V AC and /or 24V DC

The JRC terminals are specifically configured to only support connection to the Blue Ocean Wireless Remote Gateway

Peace of mind:

Provisioning of GSM service at sea entails no investment and all Blue Ocean Wireless hardware comes with complete maintenance/warranty for the duration of the contract.



About Blue Ocean Wireless

Blue Ocean Wireless is an Irish company focused on expanding communication capability in the merchant maritime sector. Blue Ocean Wireless provides, for the first time, GSM connectivity for seafarers in deep ocean water. This allows users to make and receive voice calls, send and receive SMS text messages and, in time, browse the internet using their existing handsets. This technology can also be used, to track and monitor shipping containers while they are in transit at sea. For more information, please visit www.blueoceanwireless.com or call +353 (0) 1630 7330