

# AGC MARINE Telecom

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## Wired Ocean Satellite Broadband Server

The Satellite Broadband Server (SBS) enables your ship to receive high speed internet access via Wired Ocean's satellite broadband service. The SBS receives high speed internet data via a television receive only antenna (TVRO) and can send data via most commonly used maritime communications systems including Inmarsat, Globalstar, GSM and GPRS. Any computer system on the vessel can connect to the SBS using a standard Ethernet connection without the need for any specialist software being installed on the user's computers. Although small, it contains clever technology that connects your computers or network to the internet and seamlessly initiates, manages and terminates the data connections involved. With a robust Linux operating system and built-in firewall it can be relied upon to provide reliable and secure communications whilst staying updated with any future service add-ons by use of an automatic over-the air update system.

### SPECIFICATIONS

Power Supply: 110 or 220 Volts AC; 150W. External power supply.

Chassis: 1u rack mount. Connectors on rear.

Dimensions: 45mm x 425mm x 230mm.

Weight: 3.1 kgs including external power supply.

User Interface: Any web browser from a connected computer (no additional software required).

Physical Interfaces: RF input for connection to TVRO (F connector).

1 x RS232 for uplink (from ship) interface.

Up to 4 x USB for uplink (from ship) interfaces.

Ethernet 10/100 Mbps for LAN internet access.

Indicators: Power on/off, hard disk activity.

RF input specifications: 950-2150MHz.

RF level: -65 to -25 dBm.

LNB: Compatible with a Universal LNB (automatic switching between H/L and V/H) or any standard maritime TVRO (multiswitch may be required).

Uplink Compatibility: Inmarsat in MPDS and circuit switched modes

Globalstar.

Cellular GSM and GPRS.

PSTN (via external modem)

ADSL (or IP circuit).

Networking: All normal protocols including HTTP, HTTPS, NAT, DHCP, PPTP, FTP, e-mail, IPsec.

Upgradeability: Automatically over-the-air.

### Functionality and Benefits

#### Functionality:

- Digital satellite receiver (Ku band) with automatic tuning.
- Multiple uplink channel capable (for example Inmarsat when at sea and cellular GPRS when close to shore).
- Ethernet gateway.
- DHCP (switchable).
- Display of service status and continuous usage monitoring available to any connected computer.

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- Automatic disconnection if no traffic is being passed.
- Can be interfaced to Wi-Fi (802.11) and ADSL routers
- Over-the-air remote diagnostics for fast fault alerting and advanced customer care.

## Benefits:

- Minimises equipment costs by connecting to existing TVRO and communications equipment.
- No requirement for any specialist software on ship computers.
- Accessed by any connected computer using a standard web-browser.
- Simple to install – easy to use.
- Secure and reliable.



## System Overview

The system uses various Ku-band satellites to send shore-to-ship data economically and at high speed. Ship-to-shore data is sent via an alternative route using one or more of the existing maritime communications systems – Inmarsat, Globalstar, GSM, GPRS, or even landline when in port.

Even when combined with a low speed ship-to-shore channel, Wired Ocean's shore-to-ship data speeds enable significantly faster Internet access than existing mobile satellite systems. Our services also incorporate features such as HTTP prefetching, DNS and HTTP caching, TCP acceleration with negative acknowledgment and lossless compression to overcome the latency and low data rates inherent in mobile satellite uplinks.

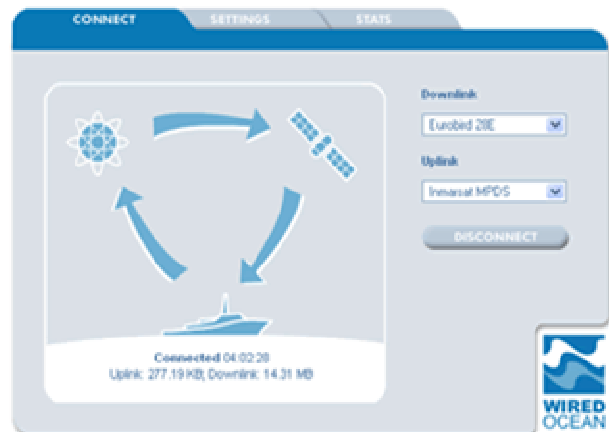
The Wired Ocean system also incorporates a remote monitoring and diagnostics capability backed up by high quality technical support. Together these provide excellent dealer support for installation and testing and fast fault alerting and advanced customer care for operational units.

## Using the SBS

The SBS is accessed from any connected computer so no software needs to be installed on the ship's computers. It is totally discrete from, and yet compatible with, the ship's IT infrastructure.

The user interface is simple to understand and easy to use. Uplinks and downlinks can be selected from drop-down menus and service connection or disconnection is available with a single click.

The system of arrows, representing the main elements of the service, also provide for first level diagnostic analysis. During connection, online time and volume data is displayed and continuously updated. Historical usage data is stored in the SBS and can be analysed for any time period via the user interface.



## Services

Wired Ocean's new maritime broadband services provide high speed data downlinks for Internet access, email and file downloads. They enable ships in European waters to receive data at speeds many times faster, and more economically, than mobile satellite services. The services use an onboard server designed to work with any DVB compatible satellite television antenna (TVRO) for receiving data; and mobile satellite communications terminals, cellular installations and fixed telephone lines for sending data.

Designed for flexibility, the Wired Ocean service can be tailored to fit in with your communications and entertainment needs and existing equipment. Service is provided through satellites in the two most widely viewed satellite television locations, 13° East and 28° East, enabling simultaneous internet access and television viewing using the same TVRO.

As well as providing a broadband downlink our services also incorporate features such as HTTP prefetching, DNS and HTTP caching, TCP acceleration with negative acknowledgment and lossless compression to improve efficiency and save you money.

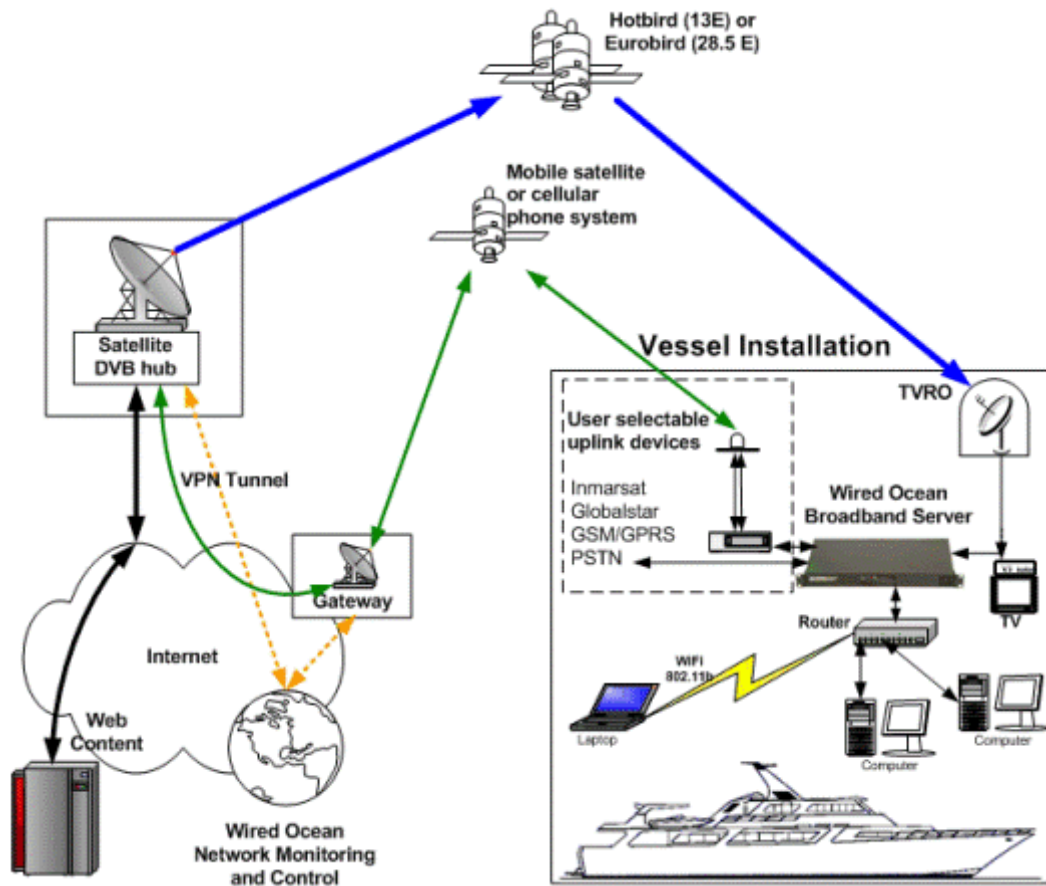
Prices for the Wired Ocean shore-to-ship service are volume based and much lower than mobile satellite systems. The cost benefits are amplified due to the asymmetrical profile of internet access – typically users receive several times as much data as they send.

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## System Diagram



## 13° East

<b>Satellite</b>	Hotbird 7a – colocated with Hotbirds 2.4.6 and 8
<b>Data speed</b>	Up to 512kbps
<b>Television available</b>	Variety of European and Middle East channels



## 28° East

<b>Satellite</b>	Eurobird – colocated with Astra
<b>Data speed</b>	Up to 512kbps
<b>Television available</b>	Variety of English language and Middle Eastern channels

