

Review of Satellite communications status ERVO fleet

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La Valetta , Malta

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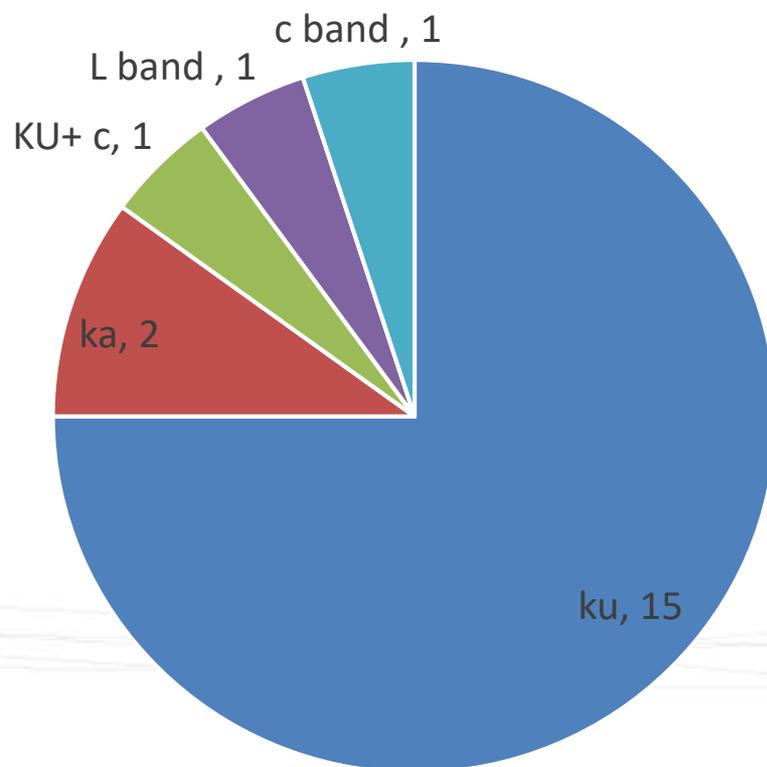


Survey

- EF+ proposal includes a work package on optimising the fleets broadband capability to facilitate new initiatives such as telepresence
- Whilst compiling the infrastructure details for partners data on broadband capability was included
- A short follow up survey was circulated also on costs and other areas and responses received from some ERVO members



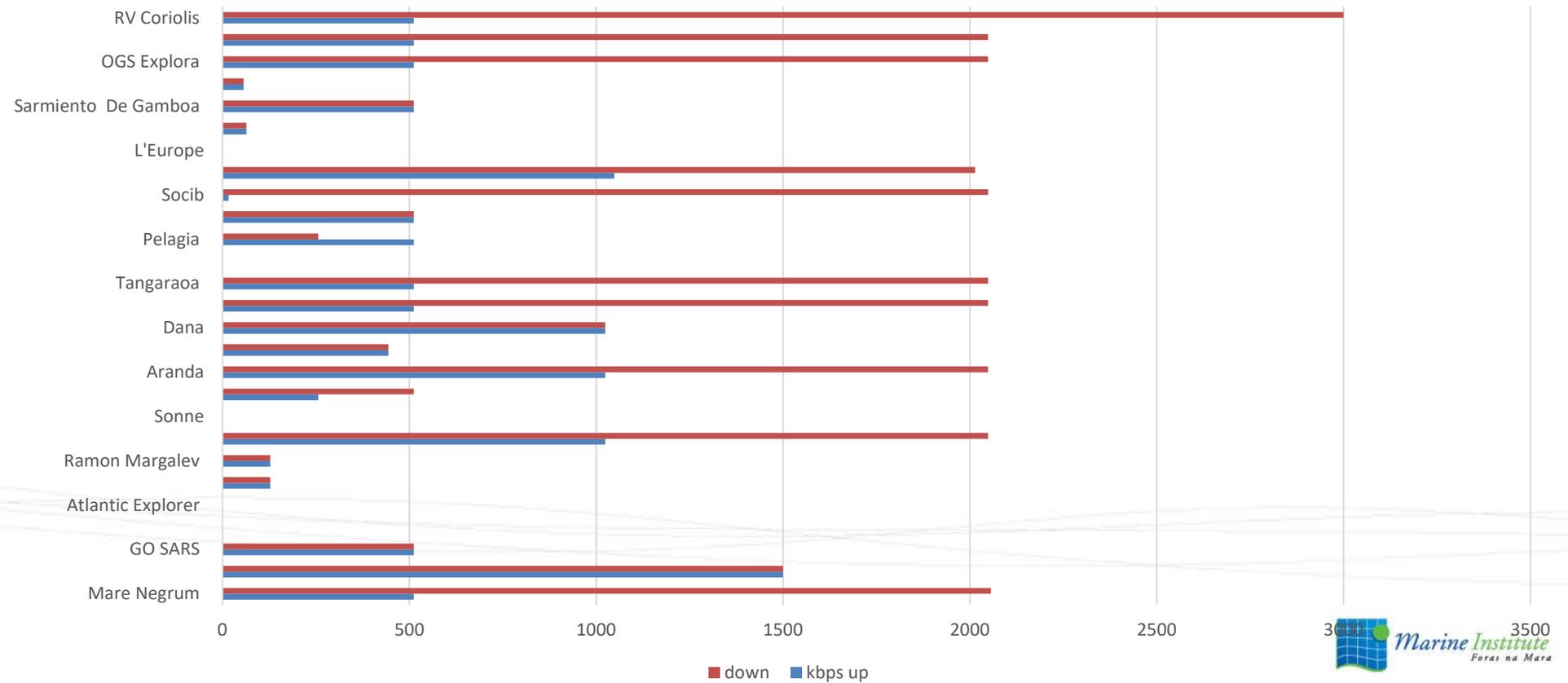
Current EF+ fleet status (system type)





•Bandwidth available

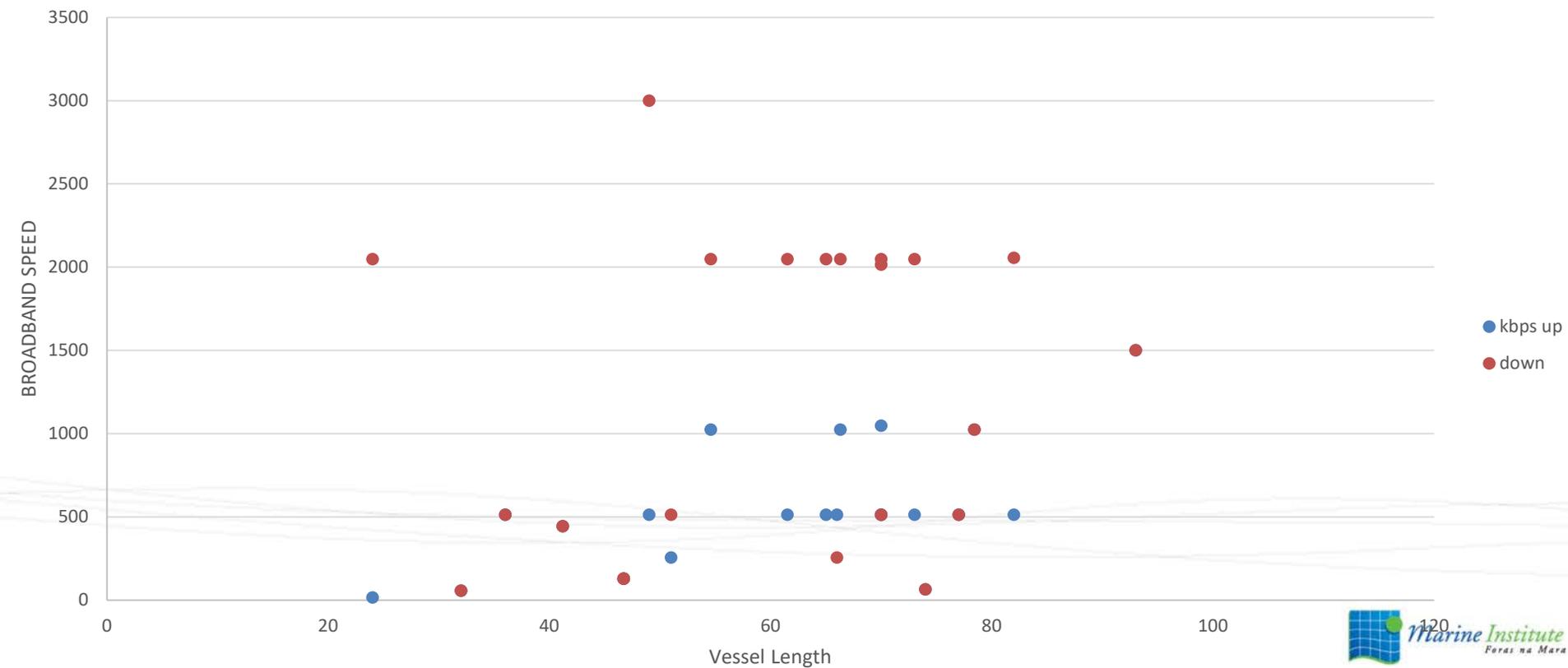
EF+ Fleet Broadband capability





Bandwidth by vessel length

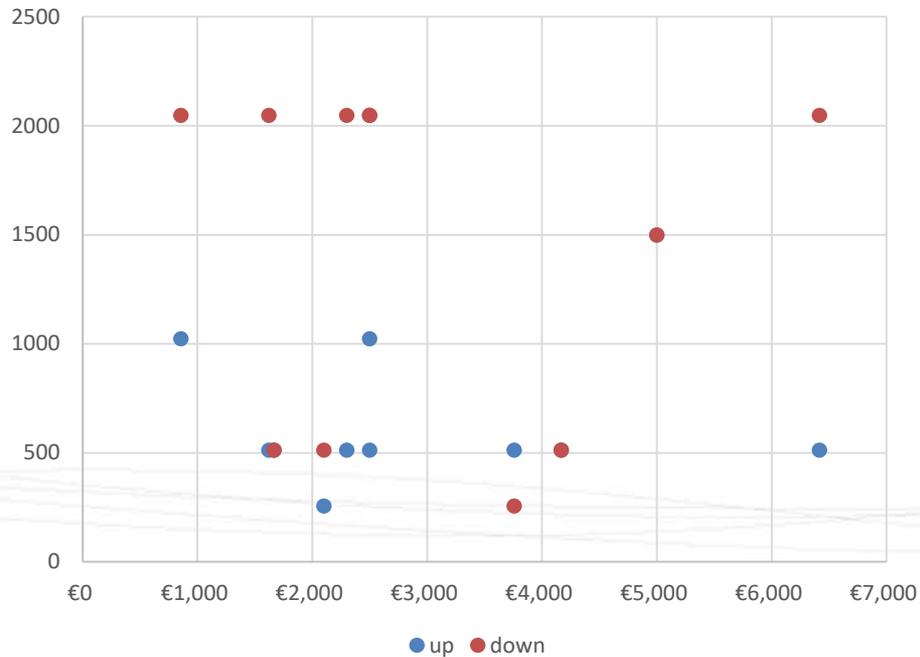
Vessel size vs broadband capability





Typical costs

monthly cost vs service speed



Average monthly cost

€2989

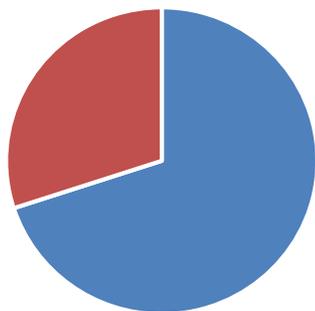
Average annual cost

€35,868



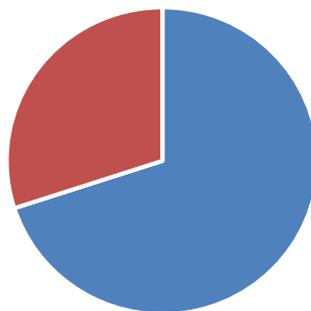
Survey outcome

Single service provider for all vessels in your fleet?



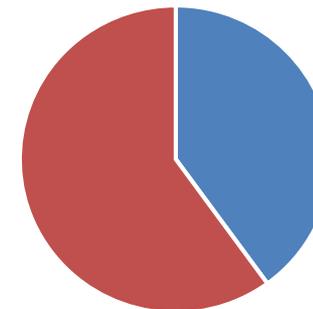
■ yes ■ no

Is your bandwidth upgradeable ?



■ yes ■ no

Satisfied with service?

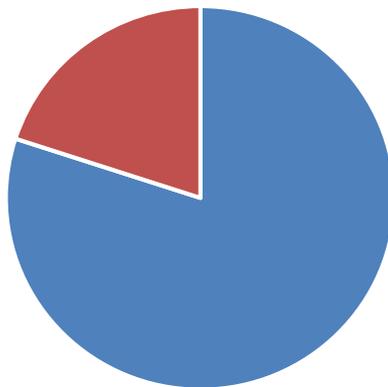


■ yes ■ no



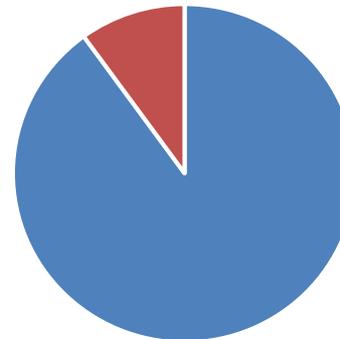
Survey outcome ctd..

Do you want a better /Faster service?



■ yes ■ no

Would you be interested in an ERVO group discounted bulk buy service/?



■ yes ■ no



Time for an EU High SeasNET???

Ships Served by HiSeasNet



R/V Atlantis



R/V Neil Armstrong



R/V Marcus G. Langseth



R/V Roger Revelle



R/V Sikuliaq



R/V Oceanus



R/V Thomas G. Thompson



R/V Sally Ride



R/V Walton Smith



R/V Kilo Moana



R/V Endeavor



New KA technology

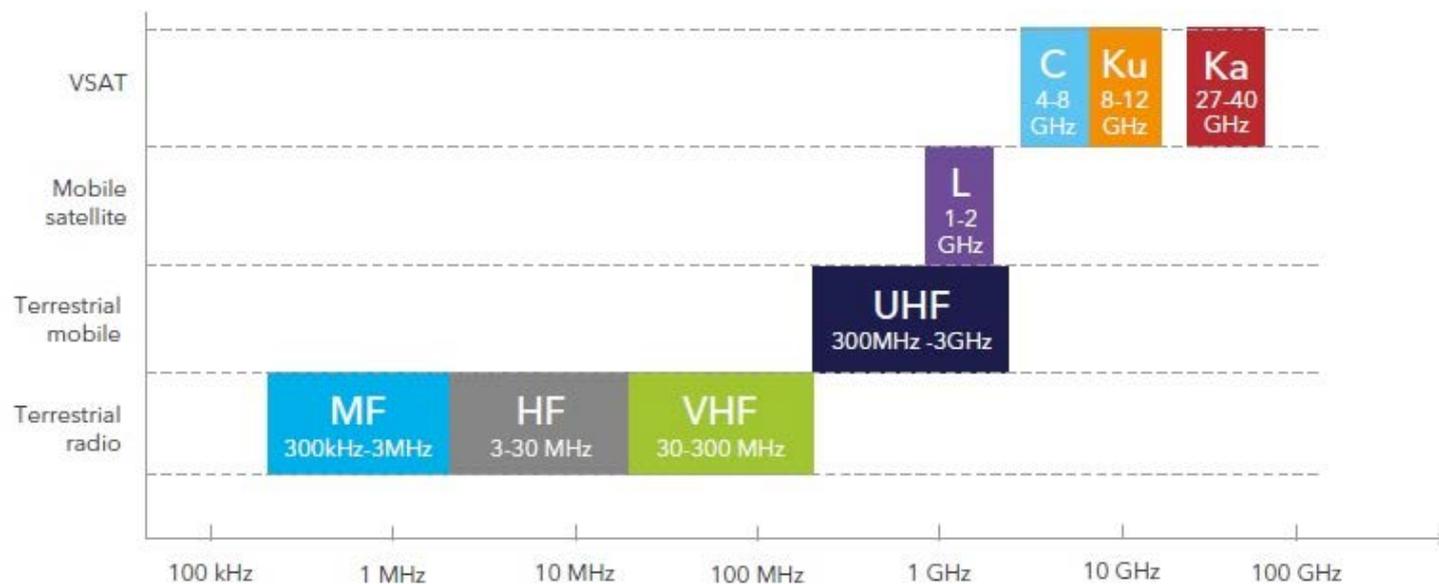
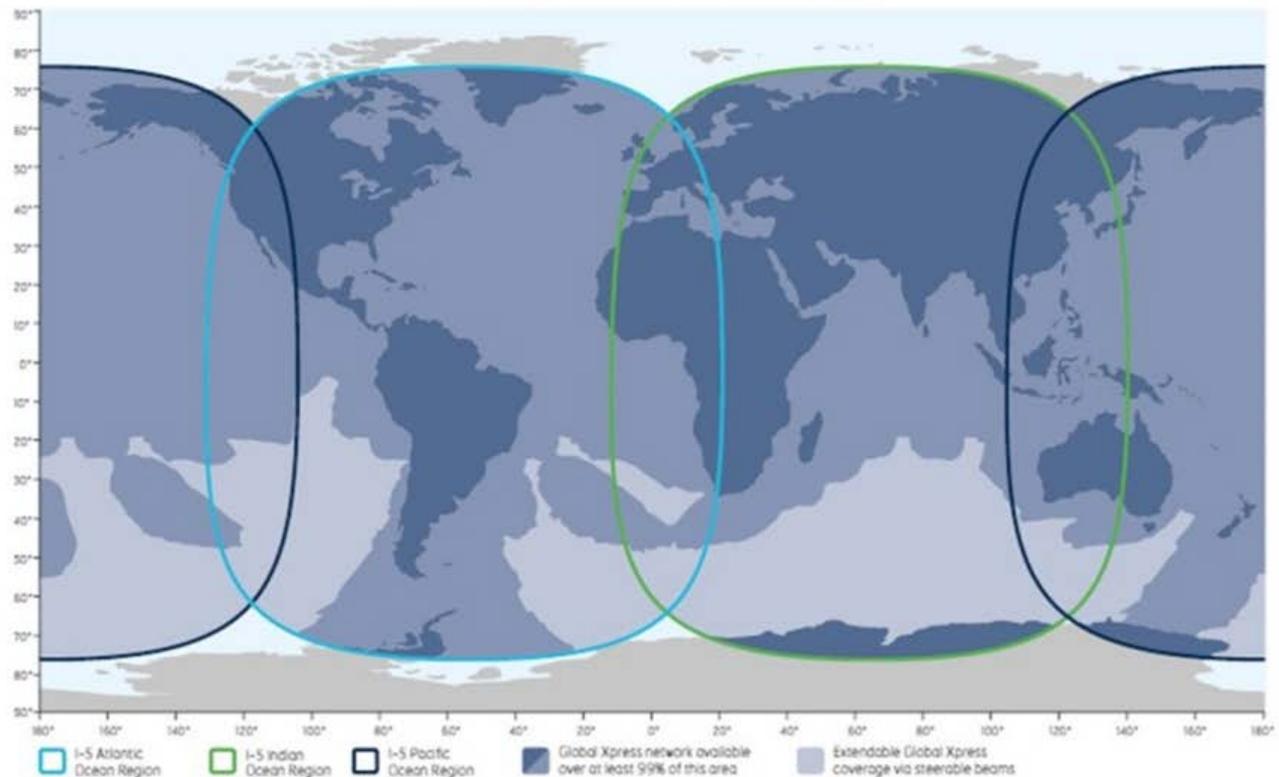


Figure 3. Frequency bands relevant for maritime communications

Global Xpress Coverage

Three geostationary Ka-band satellites will provide full coverage of all visible Earth (except for extreme polar regions) for the Global Xpress network. The three orbital locations are over the Indian Ocean, Atlantic Ocean and Pacific Ocean.



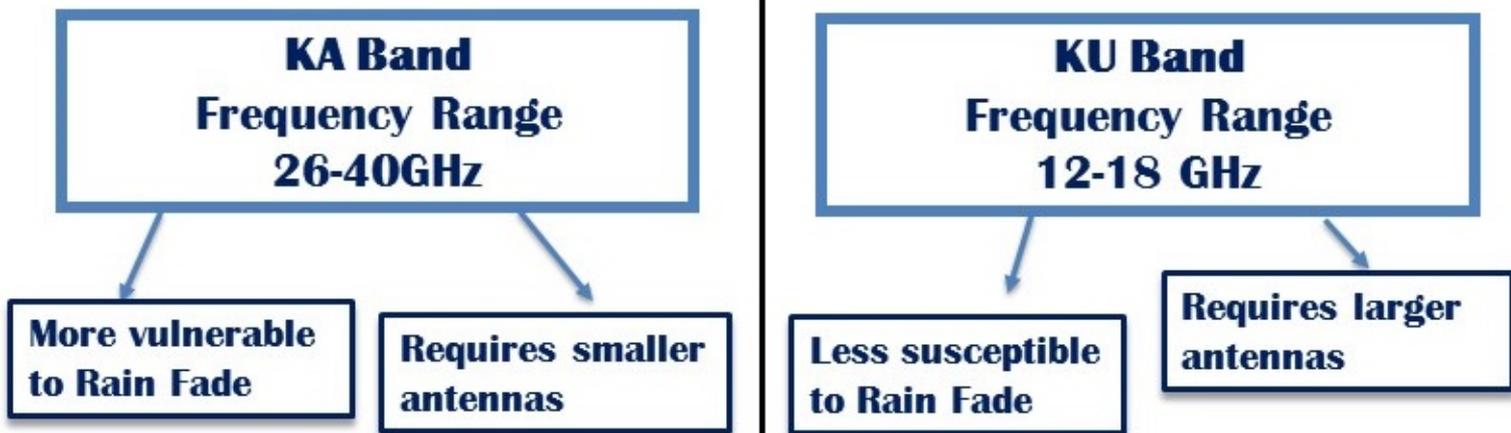
This map depicts Inmarsat's expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.



KA Band

KA Band VS KU Band

Finding a clear view on the differences of KA Band and KU Band is not easy. VSat providers offer a lot of content online about which is better. While KA has a bit of a buzz surrounding it, in some cases, it may not be the best solution for you! More than likely, vessel operators will need to rely upon multiple connectivity technologies.





**To Counter
Coverage Loss:**

**KA Band uses multiple
focused spot beams to
cover an area!**

**Higher
Bandwidth**

**Coverage Loss
Issues:**

**KU Band uses only one
single wide beam to cover
an entire continent!**

**Higher
Cost**

**KA and KU both have rather similar installation
requirements!**

There are pros and cons with both Ka and Ku band systems, the real question is, what is going to be best for you and your vessel?, Here are somethings that you need to consider:

KU BAND

Ku is one of the widely used VSat bands for marine use. Ku band offers multiple coverage options at sea, including trans-Atlantic, Pacific and the Indian Ocean. The services offered can be used on many of the systems in the market today, with speeds available of up to 10Mb/s down, (subject to hardware considerations). Ku Band VSat will be with us for some time as it covers many of the deep sea routes used by mariners today.

KA BAND

One of the newest maritime VSat commensurations bands, Ka band will offer internet via satellite users, a service with lower bandwidth costs than those of the Ku and C Band service currently offered. It will also be able to offer higher bandwidth rates, up to, and surpassing 100Mb/s using smaller antennas (typically 74cm). This technology differs from traditional Ku band Satellite internet in that instead of large foot prints it uses multiple spot beams to cover the main usage areas and provides overlapping coverage.

Intellian® v100PM

Ku-Band Marine Stabilized VSAT System
with 3-axis & 1m Reflector Diameter



Convert from KU to Ka

Simple Conversion From Ku to Ka

The v100PM can be easily and quickly converted from Ku-band system to a Ka-band system with the mounting hardware equipped with an integrated RF module consisting of the BUC and LNB. The BUC & LNB assembly is attached to the rear side of the reflector through a simple process, with no need to balance the system after conversion. The Ku-band feed can be easily and swiftly replaced with the Ka-band feed and is included in the Ku-to-Ka Conversion kit. Once the ACU is replaced, and power is supplied, the system is immediately ready for operation on a Ka-band service.

Ku- and Ka-Band Optimized Reflector

The v100PM is designed and engineered to operate on Ku and Ka-bands while maximizing the RF performance on both bands. The reflector of the v100PM is capable of handling either Ku or Ka-Bands, eliminating the need to replace the reflector when switching between bands. The system will be supplied with a Ku-band feed chain as standard.

Frequency Tuned Radome

To ensure efficient operations for both Ku-band and Ka-band systems, the signal loss of the radome itself was minimized and the performance maximized with an optimized radome design that enhances both the Ka-band and Ku-band system performance.

Patent Pending Intellian Global PLL LNB

The v100PM is equipped with Intellian's patent pending Global PLL LNB as standard. Intellian's new Global PLL LNB presents the world's first Ku-band LNB module capable of receiving a full range of operating frequencies from any VSAT satellite around the globe.

The PLL LNB incorporates user programmable support of an unlimited number of LO (Local Oscillator) frequencies. This uniquely innovative capability of remotely changing the frequencies of the LNB makes the v100PM by far the only system that is ready for Global Ku-band VSAT service to date.

Auto Beam Switching (ABS) Available

The v100PM supports ABS via OpenAMIP protocol of iDirect and the ROSS Open Antenna Management (ROAM) protocol of Comtech.

Industry-leading Standards Compliance

The v100PM is designed to meet or exceed FCC and ETSI specifications, as well as Res EN60945, EN60950, R&TT, DNV2.4 Class C and MIL-STD-167-1 specifications.

Intellian
Connect with the best



