VIRTEK COMMUNICATION
A KVH Company

CommBox

The need for data transfer is constantly increasing on all types of vessels, and all the applications on shore are needed at sea. This increasing demand for data puts a heavy load on the communication budget, as well as the lines.

CommBox is the perfect companion with any connection because you will get a robust and flexible system for backup, and least cost routing. Not only will you have a backup system, but a full communication solution for traffic shaping and control.

The CommBox system is a total solution for ship to shore data communication, functioning as an email server, file server and web server. If you already have these servers available on the vessel, CommBox will be the relay server. But, you will still get all the benefits regarding security, optimization and compression.

Least cost routing – automatic switching

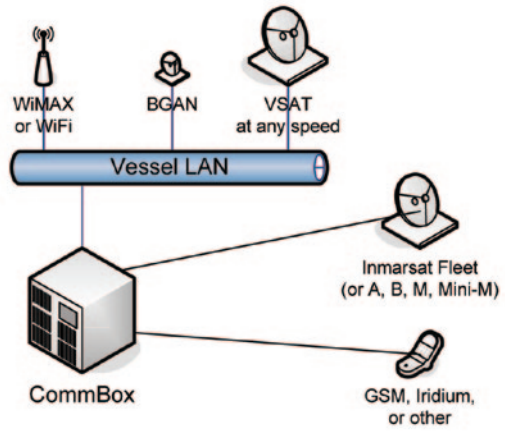
CommBox does automatic switching between the carriers you choose for your vessel. You can for instance use WiFi in ports, Fleet BroadBand in open sea and Fleet77 as backup. You define the priority you want on every carrier, and the CommBox will do automatic switching between them, based on your configuration.
CommBox will support your choice of carriers, and the system is compatible with all known carriers from any supplier of terminals and air-time.

Support and maintenance – remote control

If your main carrier is down or out of range, and someone needs to do diagnostics on the terminal, the CommBox will accept a secure IP connection over any of the back-up carriers. This way the IT department can fix a problem on the spot without involving the crew, and eliminating the need for travelling to the vessel. You will get maximum uptime for a minimal cost.
Vessels that travel between fixed locations will benefit greatly by utilizing the wireless LAN connections when they are in port, or close to port. CommBox will automatically switch over to the high speed, low priced networks and automatically switch back to dial-up when the wireless connection is out of reach.

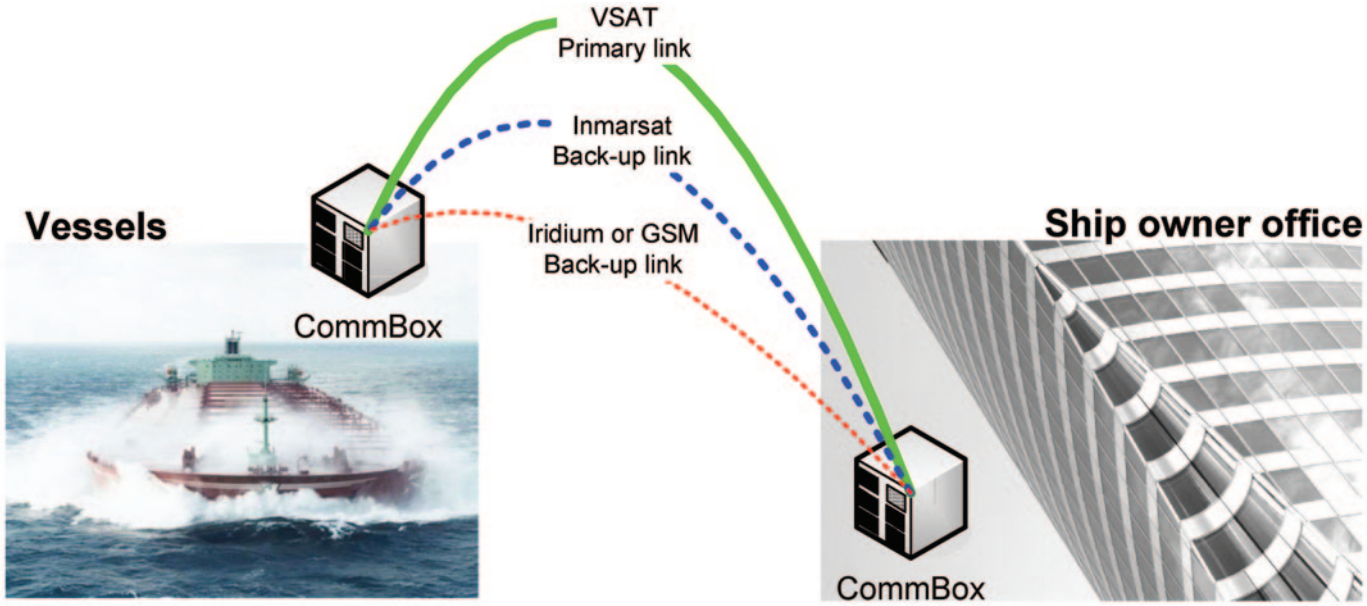
Unify and integrate all carriers on the vessel

With CommBox you can connect all the communication equipment you have on the vessel, and they will be fully utilized when needed. This way you don't need to switch over from one type of equipment to another, and more importantly, you don't have to buy extra communication equipment to give access to other systems. Also remember that the CommBox does full IP routing over any connected carrier, and makes full use of the firewall and VPN to maintain the highest level of security.



Real time compression of data traffic

When CommBox is transmitting and receiving data it automatically compresses the data to minimize the traffic on the link. This is very important also on VSAT links, because the link will not be saturated so quickly. We have seen on several vessels that VSAT links without optimization and restrictions are constantly fully utilized. So it is clear that you will need QoS, but equally important optimization like compression.



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QuickWeb

The key functions of QuickWeb is to reduce costs for "pay per byte" transmissions, and to reduce the bandwidth requirements during web surfing. Web traffic is compressed in real time, advertisement is removed and content is checked against a previous copy (local cache on vessel CommBox).
The savings you gain by using the QuickWeb is remarkable, and the web traffic over the link is minimized to an absolute minimum. Combined with the built in filtering system, only allowed websites (configured by the customer) are transferred over the links.

QuickFile

The key functions of QuickFile is to safely and cost efficiently transfer files from anywhere to anywhere. On a daily basis many files in the office are needed on the vessels, and vice versa.
This automated file transfer functionality seamlessly transfers files to and from the vessels, as if they were a part of the office network.
You can set up directories or specific files to be synchronized ship-to-shore and shore-to-ship. The files are automatically compressed and transferred at the next scheduled transfer.
CommBox also have a differential file synchronization algorithm (DiffSync), further reducing the amount of data transferred over the links.

Differential synchronization on file transfer

Many files transferred to the vessels are almost identical to the ones transferred earlier. With the bit-level synchronization procedures we make sure that only the new changes are transferred over the links. This further reduces the amount of data transfer and makes sure the links are more available. This way you can have files or even folders fully synchronized. There are a lot of files that has small changes, like charts, virus definition files, databases, templates, training material and so on.

Mail server

With CommBox you will have a built in email server, giving your crew access to email directly from the communication unit. CommBox supports both POP3/SMTP and IMAP as well as giving the crew access to use web mail via IMAP. Use the built in webmail client, or any other client of your choice.
The CommBox email server is both a full email server and an email relay server. We strongly suggest the relay server is used when you have a separate email server on board, because of the compression algorithms CommBox use. This will reduce the air time costs considerably.

Split billing

With increased demand for crew retention and welfare, as well as a service to visitors on the vessels, split billing allows people to communicate and pay for their actual usage. Billing information is used to generate bills for both email and web surfing, and the bills can be printed on the vessel as well as in the company office.

Firewall and VPN

Over a VSAT connection your data will be sent over the internet, which makes the data vulnerable. CommBox has a built in, fully configurable, firewall and the connections over internet like a VSAT or any packet based connection are encrypted in a VPN tunnel. This ensures the highest level of security, protecting the data being sent as well as the networks in both ends.

Thin clients

With an integrated Thin Client server in the CommBox, you will have the possibility to setup thin clients onboard which further reduces the maintenance of your communication solution. A thin client will give your crew access to email, web and the applications you decide. Every time the user restarts the thin client, it's back to the original configuration. Also, the crew will not be able to install any of their own software like games, and there will be no accidental installation of malicious software like viruses. So, giving the crew access to software for business and personal use, you will at the same time minimize the cost of maintenance.

Fleet management

With CommBox you will have a management software giving you access to see what is happening with the communication on your vessels at all times. All data transfer is logged and the logs are transferred to the office CommBox. Here the data is organized in a database and presented in a web browser. The database will also have a tool running continuously analyzing the data and report errors, alarms, taps and look at communication trends. This way you will always be up to date on all your fleet's status, and you can be pro-active instead of re-active. By analyzing the trends you will also easily capture any abnormal operation and you can tune the networks by utilizing the CommBox feature sets.

Choice of operation

Private Hub or public Hub? The CommBox system is in most installations fully integrated into the customer's network, giving all the available functions with the best usage of resources. This solution is the private hub where all the vessels are calling the CommBox in the customer's office. The customer can of course choose to select the public hub version, where the vessels are calling the Virtek hub instead.

VR_Commbox_Solution

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