



Maltese Falcon

FleetBroadband case study



Quick facts

The vessel

Name: Maltese Falcon
Type of vessel: Luxury clipper
Length: 88 metres
Displacement: 1,240 tonnes
Sail area: 2,400m²
Route: America, Caribbean, Europe, Mediterranean
Owner: Maltese Falcon Enterprise Limited
Builder: Perini Navi
Existing satcoms: Inmarsat Fleet 77, VSAT

MFE partners

Manufacturer: Thrane & Thrane
Distribution partner: Vizada
Service provider: Marlink

When only the best will do

Luxury clipper trades up to FleetBroadband

➔ In 2007, Inmarsat launched FleetBroadband, the first maritime communications service to provide cost-effective broadband data and voice, simultaneously, through a compact antenna on a global basis. Fully compatible with internet protocol (IP), it also supports the core ISDN data and voice capabilities of our existing maritime services.

Meeting customer expectations

Inmarsat always works to high technical standards. Before launching FleetBroadband, we tested it under operational conditions around the world to ensure the service fully met market expectations.

Since launch, we have been collaborating with our global partners to run a series of Maritime Field Evaluations (MFEs) on numerous vessels from different regions, and in all the major maritime markets. These MFEs enable us to study how professional mariners use FleetBroadband in their everyday lives at sea and to gather detailed feedback from them. We also look at how the service performs with a variety of third-party applications. This case study is a summary of the MFE conducted on the luxury clipper Maltese Falcon.





Sailing in style

In the superyacht sector, the word 'luxury' is a relative term. Every major port or marina in the world, from Monte Carlo to Sydney, has its share of gleaming leisure craft worth tens of millions of dollars. However, a few iconic superyachts such as the Maltese Falcon, put the others in the shade. While her build costs of US\$100million and physical dimensions are dwarfed by some other well-known vessels, her striking appearance – a 21st Century take on the 19th Century 'clipper' sailboat – and unique design and rig concept have already secured her a place in the pantheon of superyachts.

The Maltese Falcon is owned by Maltese Falcon Enterprise Limited and was built by Italian yachting specialist Perini Navi, using the Falcon Rig, a revolutionary new sailing system. The three-deck interior is fitted to the highest standards of international luxury, including an atrium, a large dining room and six guest cabins.

Her passengers are usually wealthy travellers who expect the best of everything – from fixtures and fittings through to food, drink and entertainment – so it goes without saying that the latest communications systems are a must.

→ About FleetBroadband

Inmarsat's latest maritime service offers a genuine broadband internet protocol (IP) data capability, backed by the power of the Inmarsat-4 (I-4) satellites. For the first time with FleetBroadband, users can make voice calls while simultaneously maintaining one or more data connections.



📧 Standard IP

For email, internet and intranet access via a secure VPN connection, at speeds up to 432kbps over a shared channel.

256 Streaming IP

Guaranteed data rates on demand up to 256kbps. Choose the data rate on a case-by-case basis, depending on your application.

📞 Voice

Make voice calls at the same time as accessing your data applications. Voicemail is also available. Group 3 fax is supported via the voice channel.

📠 ISDN

Supports ISDN at 64kbps for your legacy applications.

✉️ SMS

Send and receive text messages – up to 160 characters.

Upgrading to FleetBroadband

The Maltese Falcon was equipped at launch with Inmarsat's premier maritime service, which at that time (2006) was Fleet 77. A Thrane & Thrane FB500 FleetBroadband terminal was installed onboard the Maltese Falcon, while she was docked in Antigua. Second engineer Tim Geering did the work with help from Inmarsat's partner Marlink and a technician from Thrane & Thrane. "It was really quick and easy to install," says Geering. "We'd already run cables and put up a stand ready for the new radome, so fitting the terminal and the below-deck unit took just two hours."



"Image is vital for a vessel like the Maltese Falcon, and the FleetBroadband radome and below-deck unit fit in perfectly."

Tim Geering,
Second Engineer

Fine-tuning FleetBroadband

With the installation complete, Geering began the task of connecting FleetBroadband to the vessel's PBX (onboard phone network system) and her IT and wireless networks. He tested the system by transferring large files, making phone calls and setting up videoconferences, and found that it worked perfectly. He then configured the system for different users.

Geering set up four independent IP connections over FleetBroadband for the MFE, all of which could operate simultaneously without impacting performance. These served:

1. The owner and passengers
2. The captain and crew
3. Himself and Inmarsat's onboard MFE personal computer
4. The Thrane & Thrane voice handset

Manoj Mohindra, Inmarsat Technical Manager says "Tim Geering did an excellent job of setting up a fairly sophisticated configuration. He tested it with a wide variety of applications and onboard systems, which helped us greatly in assessing the performance and flexibility of FleetBroadband. The connection to the onboard PBX was especially helpful, because it demonstrated that routing voice calls to and from FleetBroadband to a separate phone system is technically straightforward."

"The voice quality is fantastic and we didn't find a single fault with the system. It worked really well, even when we were using the voice channel and simultaneously running multiple data connections. Basically it is an invaluable asset for any superyacht."

Tim Geering,
Second Engineer

Geering allowed 23 computers to be connected at one time, without any limitations on how much passengers and crew could use FleetBroadband, and at first didn't tell the crew that they had changed systems. "I know that Skype and Slingbox were used without affecting the quality of this service," he says. "Slingbox was usable and the Skype calls were clear and quicker than over our normal connection."

The third IP connection allowed shore-based IT experts to use the FleetBroadband link to configure the onboard system using an UltraVNC (virtual network computing) remote control and support tool. The connection also supported Inmarsat's automatic test tool, which monitored system performance and constantly tracked the resulting data. Inmarsat used this IP connection to schedule regular videoconferences with Geering, who says: "They were simple to set up using Polycom PVX software, and the quality was consistently excellent."



FleetBroadband at work

As a service that inherently supports a multi-user environment, FleetBroadband can simultaneously meet the varied needs of all who sail on her. If the owner and passengers want to keep an eye on their commercial interests while at sea, they can use FleetBroadband to access the internet or virtual private networks (VPNs) as easily as they would while on shore. And, by connecting to the vessel's wireless network or PBX, they can send and receive emails and make phone calls without leaving their cabins.

Internet access is also essential for the Captain. "We have a pretty high-end clientele, so we always need to have contact with the outside world and to be able to deal with an emergency situation at any time," says Captain Gartner.

This also makes it ideal for operational communications. "We stay in touch by phone and email with our agents on shore," says Captain Gartner, "and with the customs and immigration people at the ports we're approaching. We also send ISPS (International Ship and Port Facility Security) forms ahead to destination ports. In the past we've used Fleet 77, which only sent and downloaded email twice a day. But with FleetBroadband you get real-time information, which is great."

Real-time weather reports via the web are another must-have. Captain Gartner needs to know where the wind is coming from, and when there is bad weather ahead, so he can plot a course to take advantage of the most favourable conditions. FleetBroadband provides quick and easy access to online forecasts from mid-ocean.



"Heavy rain can result in some mobile satellite systems losing connectivity, but that is not the case with FleetBroadband. It is excellent compared to the other companies communications systems we have onboard, because it is not affected by 'rain fade.' Also the footprint (the area within which the service is available) is excellent. With other systems we have to change components inside satellite domes when we sail to certain parts of the world, whereas FleetBroadband works everywhere. For us this is great."

Robert Bell,
First Officer

One terminal, many users

FleetBroadband can support up to 11 simultaneous IP connections per terminal. Each connection may be configured to have a unique public IP address, and each is capable of supporting multiple users or applications. This enables distinct user groups to operate separately, even though they are all sharing the same terminal, and provides a level of control and management not available before.

During the MFE, the crew took time to assess FleetBroadband with a third-party application that could prove useful in the future. The Frontline Communicator is a head-mounted video camera and microphone, which can be used to transmit live video and sound to shore over FleetBroadband. Crew members tested the unit as a tool for inspecting the masts and rigging, and to assist with depth soundings in shallow water. They also assessed it for use in a medical emergency, where it can be used to transmit live pictures of a patient to a doctor on shore, with an onboard first-aid providing live commentary.

FleetBroadband at play

On a superyacht like the Maltese Falcon, passengers want to access the same online entertainment and news they enjoy at home. FleetBroadband's speed and versatility, flexible IP environment and multiple data connections – including guaranteed data rates on demand – means it is well equipped to keep all users connected to their favourite online content at any time and from any location.

Typically, passengers use the service for web browsing (with average page-loading times that compare favourably with terrestrial broadband) webmail, downloading MP3s and podcasts, and to stay in touch with friends and family. Some listen to radio stations online.

On the other hand, FleetBroadband is important for helping crew members to enjoy their leisure time. Off duty, they access the internet from their personal laptops via WiFi hotspots around the vessel.

“Another priority for passengers is to keep up with the news, I download several newspapers every day using FleetBroadband and print them out for the guests. They also like to get the latest news from websites such as CNN and the BBC and to keep track of sports results.”

Robert Bell,
First Officer



Key benefits of FleetBroadband for the Maltese Falcon

An 'always-available' link to shore

FleetBroadband provides an always-available broadband link, so Captain Gartner and his crew can always contact the shore in an emergency, either by using data communications or voice.

Supporting the off-shore office

FleetBroadband provides the Maltese Falcon with simultaneous access to voice and high-speed data, along with email, fax and text messaging. The owner and his passengers can make calls and connect to the internet as easily as they would if they were on shore, accessing VPNs, sending emails or setting up videoconferences.

Supplementing passengers' luxury lifestyle

Passengers onboard the Maltese Falcon expect the best of everything, including the kind of online entertainment they are used to at home. FleetBroadband gives them quick and convenient access to the internet at a speed equivalent to terrestrial networks via onboard WiFi hotspots.

Maintaining crew morale

Crew members may be at sea for weeks at a time. To keep morale high, it is important they are able to stay in regular contact with family and friends. FleetBroadband allows them to access the internet while off duty and do all the things online that they would normally do at home, such as sending emails, accessing social networking sites and shopping. This has important implications for the running of the vessel because, as all Captains know, when crew members are happy, they work more efficiently and effectively.



A 'perfect fit' for the Maltese Falcon

FleetBroadband has proved itself tailor made for both operational and leisure use onboard a superyacht. The Captain and crew of the Maltese Falcon say it's reliable, highly flexible and easy to use and that they can't tell the difference in terms of performance when key operational tasks such as email are switched from VSAT to FleetBroadband. In a sector where only the best is good enough, Inmarsat's latest maritime service has already made its mark.

"Speaking on behalf of all application and technical specialists who would like to have access to onboard equipment for diagnostics, applying fixes and ultimately remedying the problem, FleetBroadband provided a speed, responsiveness and accessibility never available before."

Manoj Mohindra,
Inmarsat Technical Manager

"Marlink proposed the idea of a FleetBroadband trial on the Maltese Falcon, so we are delighted it went so well. We supplied the cables and connectors, the SIM, and the activation, and our customer service team were on-hand to give 24/7 support. This ensured that the Vizada network provided an excellent end-to-end quality of service, both for accessing the internet and for terminating voice calls from and to shore."

Dr Chris Henny,
Senior Project and Innovation Manager, Marlink



How to buy FleetBroadband

FleetBroadband is available through Inmarsat's worldwide network of partners. Contact your existing Inmarsat service provider or visit our website to find the right partner for your company.

[inmarsat.com/fleetbroadband](https://www.inmarsat.com/fleetbroadband)

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