KVH

eBook

Four Critical Considerations
for Global Service and Support

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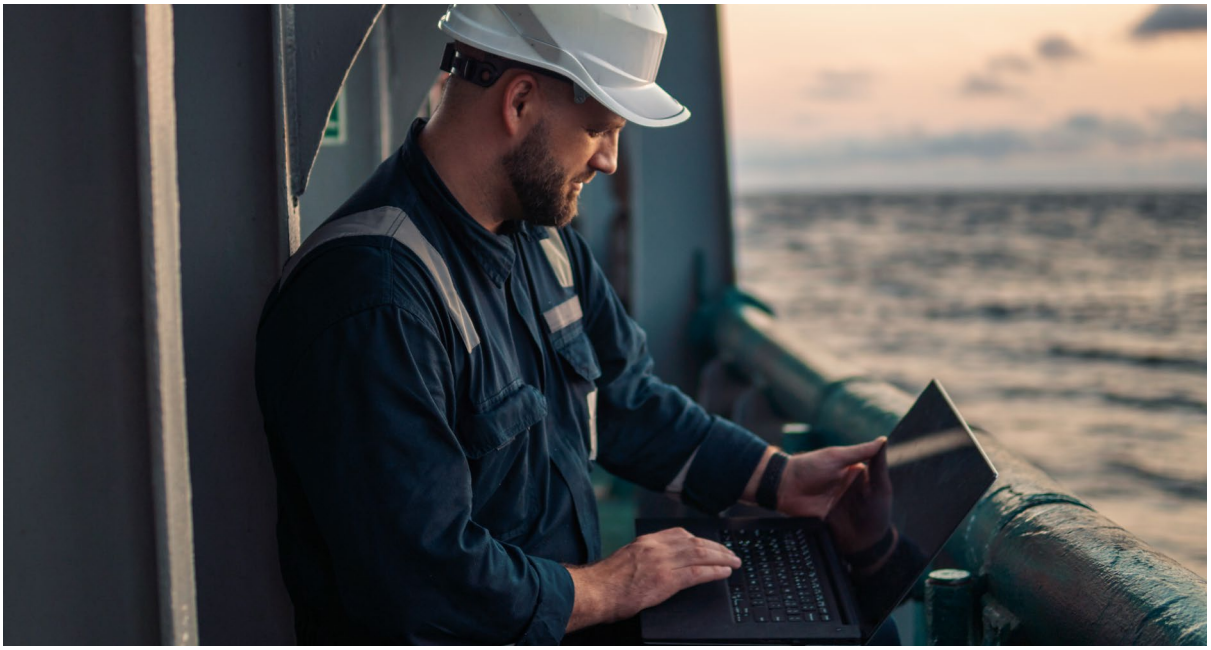


Commercial maritime vessels are among the most challenging industrial platforms on Earth. As they transit far-flung sea lanes, the planet's most unforgiving environment, owners and operators must take care to establish and maintain consistent onboard, business-critical communications.

With SATCOM technology constantly improving, what was once used only for vital vessel operations is now expected to do more and support more. This expanded scope encompasses everything from voyage optimization and the **Internet of Things** (**IoT**) to crew communications, entertainment, and training. Fortunately, modern SATCOM technology is affordable and fast enough to satisfy these and other emerging applications.

However, it takes more than merely ensuring that your vessel is connected. It's seeing to it that your vessel is connected intelligently. In other words, when selecting a communications system that best meets your fleet's unique connectivity needs, you'll want to explore the available options for:

- Hardware performance, size, and capabilities
- Satellite network coverage, speeds, and reliability
- Airtime plans
- Data speeds
- Crew wellbeing content and connectivity
- Installation
- Price

But price can be a tricky item to assess due to the many contributors to **Total Cost of Ownership** (TCO). Are you taking into account such elements as:

- The costs for all necessary hardware – antenna, LNB, BUC, cables, and modem
- Installation time and cost as crew can often assist with cable run and steel work while bigger, heavier antennas require more structural support, potentially cranes, and bigger pedestals
- The breadth of potential airtime costs and fees that might be missed in your first look, such as early termination fees, VoIP termination fee, data overage charges, and monthly invoicing fees
- And finally, what's it going to cost to provide service and support for the SATCOM system, including hardware warranties, the cost and availability of remote support, spare parts, travel costs, onboard labor hours, annual services checks, and extra insurances

This eBook examines the questions to ask when you begin to look "under the hood" at the options and what you should expect when it comes to service and support for your chosen SATCOM solution.

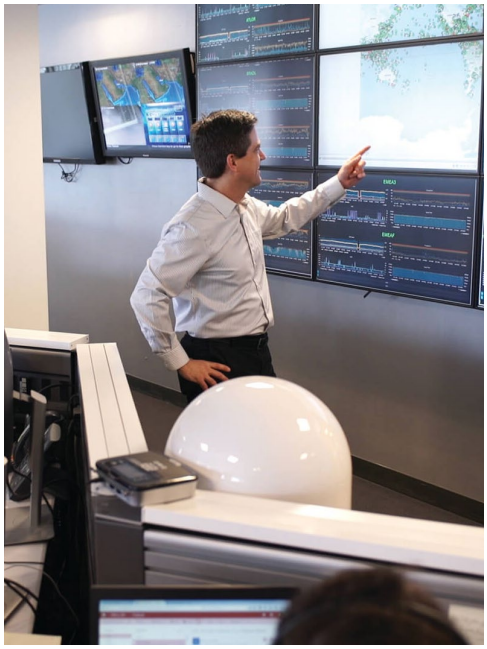
Is the company you choose equipped to help you succeed, seamlessly and end-to-end, in good times and bad? Is your SATCOM provider equipped to get your fleet connected and, equally important, keep it that way through effective, efficient, and timely service and support?

Identifying the right provider begins by asking the right questions, such as:

- Is support going to be available when and where my vessels might need it?
- Does my SATCOM provider have a track record of success for service and support?
- Does my SATCOM provider take advantage of service innovations to have an end-to-end holistic view of my SATCOM solution?
- How much value do I place on "peace of mind"?

1 CONSIDER: Is support going to be available when and where my vessels might need it?

Remarkably in an industry that is hard at work every day year-round, the handling of SATCOM support calls varies widely among communications providers. At the basic end of the spectrum, some companies' support teams operate only on weekdays in one region, which could translate to a long wait for a ship with onboard communications issues during off-hours, weekends, or holidays.



In contrast, the Global Technical Support team at KVH answers every call within forty seconds and offers 24/7/365 phone support with tiered incident response based on the severity of the problem. KVH's Technical Assistance Center includes trained VSAT technicians in addition to network and design engineers. KVH Tech Support procedures maximize effectiveness and efficiency on the vessel.

"First-time-fix rate (FTFR) is a metric used by our KVH Service Operations team to measure how often a technician resolves a customer's issue on the first visit to a vessel," explains Heather Godek, vice president of service. "The metric is important to us for three reasons. First, reducing the number of visits it takes to solve issues reduces downtime and leads to higher satisfaction for our customers. Second, given the highly mobile nature of our customers and their ships, fixing an issue on the first visit cuts out complex logistic planning to service vessels with tight schedules. Finally, FTFR saves both time and money, freeing up technicians to service other customers and reducing cost per repair."

Heather Godek
Vice President of Service

According to Jeff St. Pierre, KVH's senior manager, global technical support, "We have the biggest VSAT network, spanning the most miles and covering all major shipping lanes. Plus, we have the biggest support network, encompassing more than 1,900 factory-trained technicians and more than 600 service partners."

Many SATCOM providers rely on networks of third-party partners to extend their service reach. While the size of KVH's **Certified Support Network (CSN)** and the geographic scope of the service network are unmatched, KVH also sets itself apart with a commitment to training CSN members to deliver a user experience identical to that provided by KVH's employees.

"We bring people in for a week to work with our training managers as well as our field service and support teams. Our goal is to give them deeper knowledge into how to install and operate our products, so on every call, it's just like we're there," explains Joe Nocon, KVH's director, global field services.

"Service for our customers extends beyond just the hardware," adds Tim Tierney, senior manager of airtime service. "KVH is an end-to-end SATCOM solution provider, which means that we take responsibility for the quality of the network as well as the service plans that our customers select. We actively work with new and existing customers to ensure they are on the most suitable plan for their unique data and connectivity needs. Plus, our airtime service and support agents are available 24/7 to answer questions, activate new customers, and assist existing customers with changes to their airtime plans."

2 CONSIDER: Does my SATCOM provider have a track record of success for service and support?

KVH has a highly experienced workforce supporting more than 160 countries and providing installation and field service in more than 4,000 ports worldwide. Additionally, the company has 30 consignment locations around the world to keep materials at the ready. Materials include terminal and belowdecks units for rapid response to installation requests, plus kits that contain the most frequently used parts necessary to service KVH's award-winning TracPhone® terminals. An installation challenge during the height of the pandemic illustrated the value of the combination of 24/7 technical support, global field service, regional inventory consignments, and experienced in-country partners.

A fleet was assessing possibilities for SATCOM and requested that KVH and another SATCOM provider deploy their respective solutions on two different ships in the same country at the same time. KVH's local technicians installed and activated all of the TracPhone equipment before the competition's equipment arrived in country.

In addition, KVH remote experts can walk ship personnel through troubleshooting and fix it before the ship reaches land, saving ship management thousands of dollars.

"The best thing about us is that we sell the hardware, and we have our own network," says Jeff St. Pierre. "We're truly end-to-end. With KVH, if a boat has an issue, any issue at all, it just takes one call to Tech Support, and we'll figure it out and then coordinate every step necessary to restore that system to full operation."

Such attention to detail extends to preventive maintenance with goals to maximize uptime, ensure the highest levels of ongoing service availability and reliability, and help manage the total cost of ownership. KVH and its CSN partners perform **Preventative Maintenance Checks (PMCs)** that include:

- inspection of abovedeck and belowdeck equipment
- system configuration updates
- re-termination of cables as necessary
- software updates
- coordination of support for corrective repair as required
- inventory and confirmation of onboard assets

Following the maintenance check, customers receive a detailed report with any material findings for additional maintenance or corrective mechanical or electrical work.

3 CONSIDER: Does my SATCOM provider take advantage of service innovations to have an end-to-end holistic view of my SATCOM solution?

When a vessel is at sea or access to the vessel is restricted, as was frequently the case during the pandemic, remote support and the ability of a service provider to monitor day-to-day operations is critical.

Traditional "boots on the deck" maintenance is vital but also faces limitations in an industry that increasingly focuses on efficiency improvements to reduce costs. These limits include:

- no access to the vessel while it's at sea
- travel costs and coordination to reach ports at the same time as the vessel
- restricted access to ports and ships due to health or other issues
- delays in repair and repeat visits due to lack of pre-visit troubleshooting or incorrect parts on hand during the initial visit

Recent innovations in product and service visibility

along with performance monitoring help overcome these challenges, reduce costs, and minimize SATCOM downtime and port delays.
Case in point: KVH's proprietary IoT Proactive Monitoring, a value-added service provided at no cost to customers.

KVH IoT Proactive Monitoring tracks more than 150 TracPhone VSAT terminal and mini-VSAT Broadband℠ network health and performance parameters. The TracPhone terminal transmits the data daily in the background to KVH's global headquarters. Automated systems seek out, identify, and report on any anomalous results and report them to KVH's engineers and technical support specialists. This monitoring and reporting function permits KVH's experts to identify and troubleshoot performance issues, potentially before KVH's customers realize there is a problem. KVH also applies big data analytics that might reveal a performance pattern throughout the thousands of KVH VSAT terminals deployed worldwide.

IoT Proactive Monitoring enables KVH's technical and field support teams to overcome the limitations of simply sending a technician to the vessel when it arrives in port:

1. KVH technicians can often rectify the issue remotely from the company's Technical Support and Network Operations Center, eliminating the need for an in-person service call
2. Should the issue require hands-on adjustment or repair, KVH technical support specialists can identify the exact issue, detail a repair process, and coordinate necessary parts availability and the in-person technician visit at the next port of call, minimizing interruptions and avoiding any in-port delays for maintenance

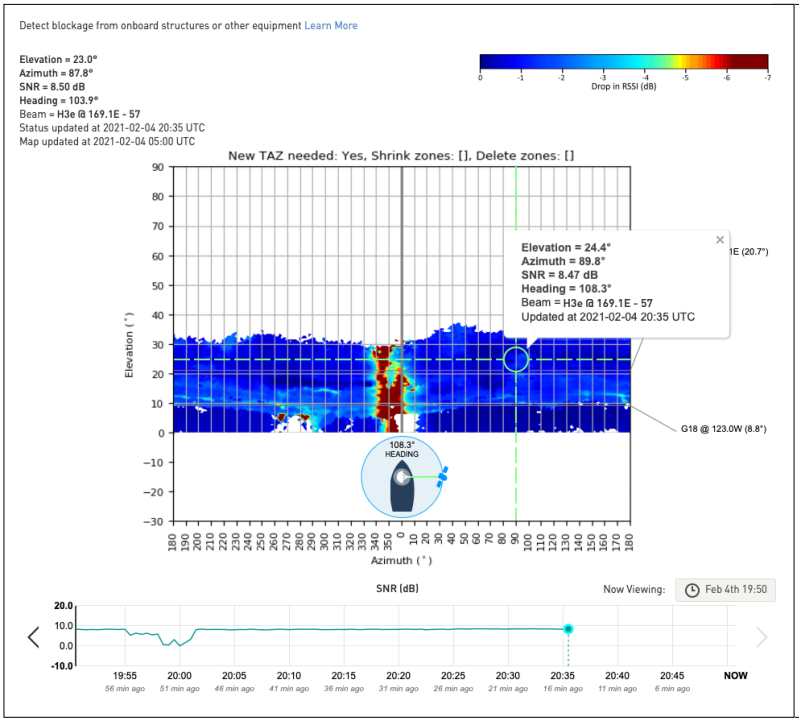
CASE STUDY:

KVH's IoT Proactive Monitoring reports alerted KVH engineers to an anomalous reading in one element of a TracPhone V7HTS system deployed in U.S. waters. While the anomaly was not affecting system performance, the report did bring to light a previously unknown system behavior that might be detrimental to onboard connectivity in the future. KVH Technical Support reached out to the vessel to swap out the system to ensure uninterrupted connectivity for the customer while enabling KVH Engineering to identify the cause of the anomaly, develop a fix, and then deploy that fix remotely to all fielded systems.

"As both a manufacturer and a network service provider, KVH can do a lot of things that other companies frankly can't," points out Joe Nocon. "By remotely accessing a vessel through our network into the hardware, we can trigger our support team to proactively come up with a solution rather than wait for something to go wrong."

CASE STUDY:

Even the best SATCOM terminal installations can experience some level of blockage from other structures on the vessel. KVH IoT Proactive Monitoring builds a real-time map of exactly where the terminal can and can't receive a signal based on signal strength. KVH technical support specialists use that actual performance data to create **Tracking Avoidance Zones** (TAZ) maps that program the system to recognize future blockage situations unique to that terminal's installation and rapidly switch to an alternative satellite. These maps are configured and then deployed remotely, without any customer action required, to ensure optimal connectivity.



Traffic Avoidance Zones (TAZ) mapping software automatically creates a 3-D polar representation of signal strength, showing where the vessel's superstructure is blocking the antenna.

4 CONSIDER: How much value do you place on "peace of mind"?

To realize the optimal return on investment from their SATCOM provider, more owners and ship management companies are actively considering those providers with an end-to-end solution. They have unlocked added value by entrusting communications for their fleet to a reliable single source, one that does not merely aggregate diverse products from multiple suppliers but instead develops and manages its entire offering from VSAT hardware to network to software and all related systems and services.

KVH's one-stop solution affords technical support specialists and engineers unique visibility into both terminal and network, enabling the team to identify, respond rapidly, and anticipate potential issues. As a practical matter, this approach eliminates expensive disputes and "finger-pointing" that can occur between suppliers of different components (e.g., antenna, modem, network, etc.) whenever a system requires troubleshooting.

KVH represents the industry's gold standard for service and is the No. 1 provider for maritime VSAT solutions.[1]

[1] Source: Euroconsult, Prospects for Maritime SATCOM, 2021, market share VSAT units

"It's simple," says Tim Tierney. "We're in business to help the boat run efficiently and effectively to reduce costs to ship management and the shipowner. And we do it better than anyone."

The route to enduring productivity benefits, competitive advantages, and superior customer satisfaction is achieved through an end-to-end SATCOM solution and an ingrained culture of service. That's at the heart of the global service and support ethos at KVH Industries.

"We continue to develop service standards to hold ourselves accountable to our customers. We constantly improve our process and tool efficiencies and refine our services employee training program. Our goal is to instill in our customers peace of mind through our sense of urgency to deliver service that is unmatched by our competitors," concludes Heather Godek.

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The KVH Advantage is The Power of One™

Combining hardware, software and services into seamless end-to-end solutions

Most advanced managed network
Global coverage and fastest speeds worldwide (as fast as 20/3) with airtime plans to meet every need

Premium Hardware
Highest performance, compact hardware with proactive monitoring for 99% uptime

Smart Data Tools
100% Visibility and control over vessel data usage for efficient operations

Global Service & Support
24/7/365 global support in 100+ languages and providing technical support in 4000+ ports worldwide

Multi-Level Cybersecurity
Multi-layer security protocol for maximum network protection

Industry-leading Content
Multicast digital news, entertainment, and sports content for crew wellbeing and leading operations data for vessel optimization

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About KVH Industries, Inc.

KVH is a global technology leader in mobile connectivity and inertial navigation systems, innovating to enable a mobile world. A market leading maritime VSAT hardware manufacturer and service provider, KVH provides connectivity and content services globally. KVH is also a premier manufacturer of high-performance sensors and integrated inertial systems for defense and commercial applications. Founded in 1982, the company is based in Middletown, RI, with research, development, and manufacturing operations in Middletown, RI, and Tinley Park, IL, and more than a dozen offices around the globe. **www.kvh.com**