

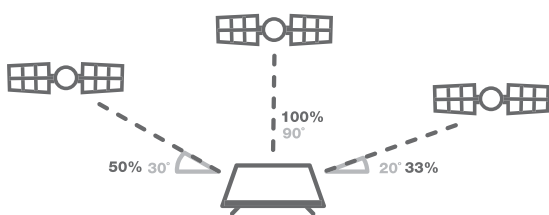


Overcome Flat Panel Signal Loss with Intelligent Hybrid Connectivity

The connectivity options available to commercial vessels and leisure yachts is expanding rapidly with new Low Earth Orbit (LEO) and Medium Earth Orbit (MEO) satellite constellations deployed around the globe. The availability of affordable, practical electronically steered (or flat panel) antenna arrays also offers new options for mariners.

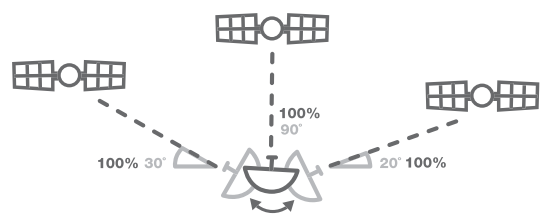
Flat panel arrays are sleek and stylish and, unlike parabolic tracking antennas, have no moving parts. However, flat panels also have weaknesses that can reduce the reliability and availability of service, especially on a moving vessel.

Flat Panels Lose Signal at Low Angles



The more signal that hits the surface of a flat panel antenna, the better the gain and the stronger the signal. When the satellite is directly overhead (90°), the antenna is at maximum gain. However, the gain is only 50% at 30° and 33% at 20°, raising the risk of intermittent or lost connections.

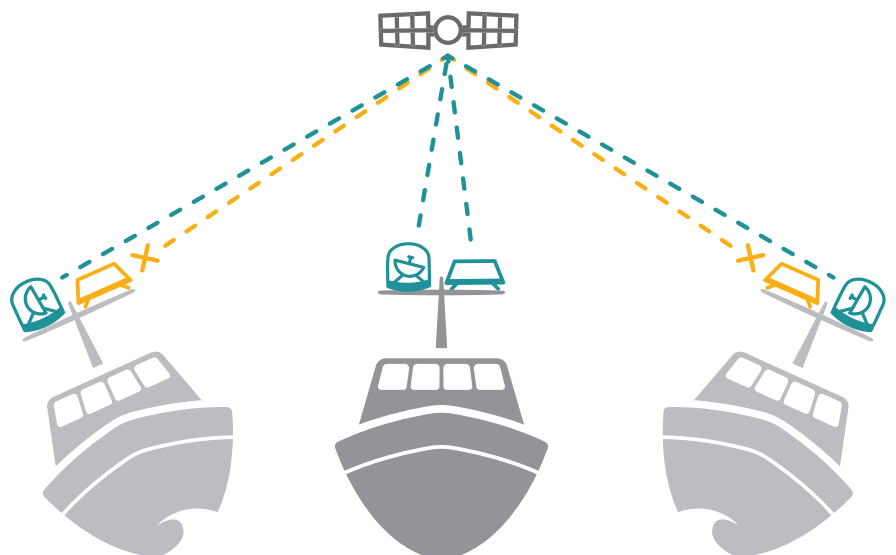
Parabolic Antennas Maintain High Gain



While a tracking parabolic antenna, such as a KVH TracNet™ terminal, has an equivalent footprint but a taller profile than a flat panel system, its design and tracking capabilities enable the antenna to enjoy maximum gain, even if the satellite drops below 0° as the vessel rolls away from the satellite.

Maximizing Connectivity with an Intelligent Hybrid Configuration

As a commercial fleet operator or leisure yacht owner, you don't need to be limited to a single solution. An intelligent hybrid solution, such as with a KVH TracNet and a companion flat panel terminal, delivers the best of both worlds. Enjoy the speed and affordability of a LEO solution when the flat panel has an optimal view and then seamlessly switch to a parabolic antenna when needed for uninterrupted communications.



Satellite at an angle.
KVH Connection: **Excellent**
Flat Panel Connection: **Interrupted**

Satellite overhead.
KVH Connection: **Excellent**
Flat Panel Connection: **Excellent**

Satellite at an angle.
KVH Connection: **Excellent**
Flat Panel Connection: **Interrupted**

And if you really want to get the best solution, KVH TracNet terminals also include integrated 5G and Wi-Fi so you can enjoy the fastest shore-based connections available plus satellite communications.

Visit kvh.com/TracNet to learn more.