KVH H90 Trac Net Instructions

Contents

KVH ONE®
SYSTEM SPECIFICATIONS

TracNet™ H90

Powerful, 1 m Hybrid VSAT, Cellular, & Wi-Fi Connectivity

Enjoy a premium maritime communications experience with KVH's 1 m commercial-grade TracNet H90 hybrid connectivity system. Equipped with satellite, cellular, and Wi-Fi connectivity and intelligent, automatic switching, the TracNet H90 terminal also includes easy single-cable installation, a commercial-grade rotary joint for continuous azimuth rotation and tracking, and a design as much as 24% lighter than leading competing systems. Its three-axis pedestal design, stabilized skew, digital IMUs, and advanced motor controllers deliver high-performance tracking in all sea states.

1. High-speed VSAT coverage as fast as 20/3 Mbps (down/up) via KVH's global, layered Ku-band HTS network, offering 294 million sq. km (113+ million sq. miles) of coverage
2. Highly tuned carbon fiber dish paired with KVH's exclusive RingFire™ technology ensures superior reception
3. Three-axis pedestal design with a fourth axis of automatic skew adjustment seeks the optimal satellite in KVH's HTS network and tracks satellites directly overhead at the equator and low on the horizon at polar latitudes
4. Terrestrial Communications Module supporting integrated high-power cellular antennas with service in 150+ countries plus built-in high-gain Wi-Fi antennas for seamless switching to shore-based Wi-Fi networks
5. Commercial-grade rotary joint and single cable design for easy installation and uninterrupted azimuth rotation and tracking

TracNet Hub+

The powerful 1U, AC-powered, rack-mountable TracNet Hub+ is packed with powerful features, including a versatile touchscreen user interface, intelligent hybrid network switching (satellite, cellular, Shore Wi-Fi), user-supplied SIM slot, built-in Wi-Fi router, ethernet ports, and two VoIP lines. In addition, it provides content storage and access for the commercial maritime KVH Link content service.

TracNet H90 Hybrid Connectivity System

System Specifications

Service

Network	KVH Ku-band global HTS network; regional cellular services in 150+ countries; available shore-based Wi-Fi networks
Antenna Type	Ku-band
Service Coverage Area	Seamless Worldwide Regions
Maximum Speed Download/Upload[1]	20 Mbps/3 Mbps

Abovedecks Equipment

Antenna Dish Diameter	1.1 m (42.5″)
Antenna Unit Dimensions/ Weight	1.2 m D x 1.4 m h (48.8″ D x 57.3″ h)/ 86 kg (189 lbs)
Elevation/Azimuth Range	-23° to 119°/commercial-grade rotary joint for unlimited azimuth rotation
Temperature	Operating: -30°C to 55°C (-22°F to 131°F) Survival: -30°C to 70°C (-22°F to 158°F)
Humidity	IEC 60945; 40°C (104°F), 95% Humidity (non-condensing)
Rain	Precipitation rate of 1.7mm/min, w/wind speeds up to 100 knots
Antenna Unit Power	DC, provided by the TracNet Hub+
Antenna Cable	100' coax cable provided; supports cable runs up to 500'; see **kvh.com/tracnetcables** or contact KVH Technical Support for specifications
Remote Support	Integrated cellular radio for access by KVH Technical Support (requires SIM activation)

Belowdecks Equipment – TracNet Hub+

Dimensions	48.3 cm l x 30.7 cm w x 4.5 cm h (19" x 12.1" x 1.75"); will fit in 1U slot; rackmountable with optional mounting provisions²
Weight	3.7 kg (8.3 lbs)
Temperature	Operating: -25°C to 55°C (5°F to 131°F); Survival: -15°C to 70°C (5°F to 158°F)
Heading Input	NMEA 2000, NMEA 0183 magnetic or true heading
Input Power	100-240 VAC, 50-60 Hz auto switching, 300W max
Data Interfaces	4 Ethernet: IEEE 1000BASET-T 2 USB 3.0 Ports
Voice Interfaces	2 RJ11 ports for VoIP services

System Options

KVH Link	Available for commercial applications. See **kvh.com/link** for details
KVH OneCare™ Support Program	Available; see **kvh.com/onecare** for details
Iridium Certus® Optional Backup	Available; see "Optional Backup" on **kvh.com/H90** for details

Terrestrial Communications Module – Cellular Specifications

Band Support		
Regions	Global, except China	
5G	Standards	3GPP Release 15 NSA/SA operation, Sub-6 GHz
	MIMO	DL: Up to 4 x 4 MIMO UL: Up to 2 × 2 MIMO
LTE (4G)	Standards	DL Cat 20; UL Cat 18 LTE-FDD, LTE-TDD & LTE-LAA
	MIMO	DL: Up to 4 ×4 MIMO
UMTS (3G)	WDCMA	
Data Rates (max)³		
5G	5G NR SA Sub-6Ghz	DL 4.2 Gbps; UL 450 Mbps
	5G NR NSA Sub-6Ghz	DL 5.0 Gbps; UL 600 Mbps
LTE	LTE-A	DL 2.0 Gbps; UL 200 Mbps
UMTS	WCDMA	DL 42 Mbps; UL 5.76 Mbps

Terrestrial Communications Module – Wi-Fi Specifications

Wi-Fi Standards	IEEE 802.11ac/a/b/g/n
Band Support	2.4 Ghz / 5 Ghz
Data Rate (max)[3]	802.11b: 11Mbps 802.11a/g: 54Mbps 802.11n: 300Mbps 802.11ac: 867Mbps
MIMO	Up to 2 x 2 MIMO
Security	WPA2, WPA3

Complete System

Certification	Complies with the essential requirements of Radio Equipment Directive 2014/53/EU, which includes the safety objectives set out in EN62368-1 and in EMC directive EN60945 NMEA 2000 Certified RoHS & REACH
System Warranty [4]	Comprehensive 2-year parts, 2-year labor warranty supported by KVH's worldwide Certified Support Network (CSN); extended warranty up to 5 years available
Part Number	01-0441-11

Meets FCC C€ requirements. Exceeds Inmarsat operational, survival, and shock specifications.

[1] Published data speeds are maximum speeds and may vary in different regions and under different conditions.

[2] Optional Belowdecks Mounting Case (Part Number 72-0368) available for vessels without a rack.

[3] Data rates theoretical only and actual value depends on network conditions. Data rates limited by 1 Gbps Ethernet LAN interface.

[4] Unless subject to in-country regulations. Restrictions apply. Visit **kvh.com/warranty** for details.
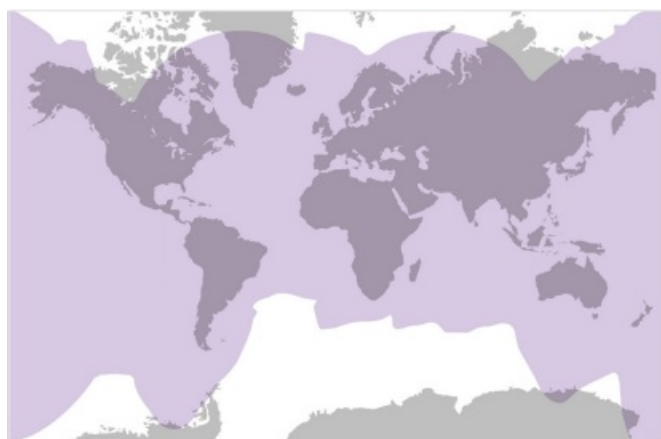
KVH Global, Layered Ku-band HTS Network Coverage

TracNet 60 cm and 1 m System Coverage Map
Coverage maps are representative and may change at any time. Data rates may also vary in different regions. For complete details, choose "TracNet" at **kvh.com/tracnetmaps** and click on the KVH ONE coverage map. KVH provides no guarantees of satellite coverage or availability.

■ **60 cm and 1 m**

Documents / Resources

KVH KVH H90 Trac Net [pdf] Instructions
KVH H90 Trac Net, KVH H90, Trac Net, Net

References

- **Home - KVH Innovative Solutions for Maritime Connectivity**
- **TracNet H90 - KVH Rugged Hybrid Solution**
- **KVH Link - KVH Crew Wellbeing**
- **Welcome**
- **Satellite Coverage: 37cm Systems - KVH**
- **Warranty - KVH Support**
- **User Manual**