

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.

- High-speed VSAT coverage as fast as 20/3 Mbps (down/up) via KVH's global, layered Ku-band HTS network, offering 276 million sq. km (106+ million sq. miles) of coverage
- 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
- 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

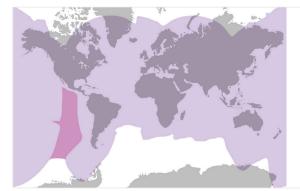
Service			
Network	KVH Ku-band global HTS network; regional cellular services in 150+ countries; available shore-based Wi-Fi networks		
Antenna Type	Ku-band		
Service Coverage Area	Seamless Worldwide Regions		
Maximum Speed Download/Upload ¹	20 Mbps/3 Mbps		
Abovedecks Equipment			
Antenna Dish Diameter	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 <u>kvh.com/tracnetcables</u> 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; rack- mountable with optional mounting provisions ²		
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 <u>kvh.com/link</u> for details		
KVH OneCare [™] Support Program	Available; see kvh.com/onecare for details		
Iridium Certus [®] Optional Backup	Available; see "Optional Backup" on <u>kvh.com/H90</u> for details		

Band Support Global, except China SG Standards 3GPP Release 15 NSA/SA operation, Sub-6 GHz MIMO DL: Up to 4 x 4 MIMO UL: Up to 2 x 2 MIMO LTE (4G) Standards DL Cat 20; UL Cat 18 LTE-LAA MIMO DL: Up to 4 x 4 MIMO ULTS (3G) WDCMA Data Rates (max) ³ 5G NR SA Sub-6Ghz DL 4.2 Gbps; UL 450 Mbps 5G 5G NR SA Sub-6Ghz DL 5.0 Gbps; UL 600 Mbps LTE LTE-A DL 2.0 Gbps; UL 200 Mbps UMTS WCDMA DL 4.2 Mbps; UL 5.76 Mbps SG NR NSA Sub-6Ghz DL 4.2 Mbps; UL 5.76 Mbps UMTS WCDMA DL 4.2 Mbps; UL 5.76 Mbps UMTS WCDMA DL 4.2 Mbps; UL 5.76 Mbps UMTS WCDMA DL 4.2 Mbps; UL 5.76 Mbps Standards IEEE 802.11ac/a/b/g/n Band Support 2.4 Ghz / 5 Ghz S02.11a/: 54Mbps S02.11a/: 54Mbps S02.11a/: 54Mbps S02.11a/: 667Mbps S02.11a/: 54Mbps MIMO Up to 2 x 2 MIMO S02.11a/: 54Mbps S02.11a/: 54Mbps Security WPA2, WPA3 Complete System Complete System Complete System	Terrestrial Communications Module – Cellular Specifications				
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$\begin{tabular}{ c c c } \hline Standards & operation, Sub-6 GHz \\ \hline MIMO & DL: Up to 4 x 4 MIMO \\ UL: Up to 2 x 2 MIMO \\ \hline UL: Up to 2 x 2 MIMO \\ \hline UL: Up to 2 x 2 MIMO \\ \hline UL: Up to 2 x 2 MIMO \\ \hline DL Cat 20; UL Cat 18 \\ LTE-FDD, LTE-TDD & LTE-LAA \\ \hline MIMO & DL: Up to 4 x 4 MIMO \\ \hline UMTS (3G) & WDCMA \\ \hline Data Rates (max)^3 \\ \hline SG NR SA Sub-6Ghz & DL 4.2 Gbps; UL 450 Mbps \\ 5G NR NSA Sub-6Ghz & DL 5.0 Gbps; UL 600 Mbps \\ \hline SG NR NSA Sub-6Ghz & DL 5.0 Gbps; UL 600 Mbps \\ \hline LTE & LTE-A & DL 2.0 Gbps; UL 200 Mbps \\ \hline UMTS & WCDMA & DL 42 Mbps; UL 5.76 Mbps \\ \hline Terrestrial Communications Module - Wi-Fi Specifications \\ \hline Wi-Fi Standards & IEEE 802.11ac/a/b/g/n \\ \hline Band Support & 2.4 Ghz / 5 Ghz \\ \hline Data Rate (max)^3 & & & & & \\ 802.11a: 300 Mbps \\ 802.11a: 687 Mbps \\ & & & & & \\ 802.11a: 687 Mbps \\ & & & & & \\ Security & WPA2, WPA3 \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Regions	Global, except China			
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	Certification	Equipment Directive 2014/53/EU, which includes the safety objectives set out in EN62368-1 and in EMC directive EN60945			
System Warranty ⁴ Comprehensive 2-year parts, 2-year labor warranty supported by KVH's worldwide Certified Support Networ (CSN); extended warranty up to 5 years available	System Warranty ⁴	supported by KVH's worldwide Certified Support Network			
Part Number 01-0441-11	Part Number	01-0441-11			

Meets FCC **(** 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

Anticipated 2023 Additional Coverage



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