



# Intelligent hybrid connectivity

## TRACNET<sup>\*\*</sup> H30 / H60 / H90

Commercial Maritime

One unified network. One smart terminal. One exceptional experience.



# Don't think about how to connect, just feel confident that captains and crew can connect to whatever they need at any time.

Enjoy the fastest, most reliable connectivity at sea and in port with the KVH ONE<sup>™</sup> hybrid network and groundbreaking TracNet terminals. Each system includes integrated satellite, cellular, and Wi-Fi technology with intelligent, automatic network switching that will keep you connected to the best communication option at all times, in all sea states, and at any speed. It's like having three antennas in one!

Captains can share proprietary files with the office on shore. Crew members can stream their favorite movies, and enjoy crystal-clear voice calls with family. Everyone on board can enjoy entertainment, news, sports, and social media. KVH ONE and TracNet delivers connectivity that takes your business to the next level with:

- KVH's global Ku-band satellite network
- SG/LTE cellular service in 150+ countries¹
- Compatibility with shore-based Wi-Fi
- Intelligent, automatic network switching based on service availability, costs, and the quality of data transfer
- Optional manual switching and use of user-supplied SIMs
- Selexible month-to-month contract terms with unlimited plan changes and suspensions

<sup>1</sup>Where available and compatible with the KVH- or user-supplied SIM cards and service

НЗО

TRACNET

H60

H 9 D

TRACNET

KVH



Access complete product specifications, airtime rates, coverage maps, and more at kvh.com/one

# KVH Connectivity Solution Comparison

Versatile and affordable connectivity options, from a VSAT-only solution to hybrid terminals with integrated VSAT, cellular, and Wi-Fi.

	TracPhone V30	TracNet H30 <i>new</i>	TracNet H60 <i>new</i>	TracNet H90 <i>new</i>
Automatic hybrid switching	N/A	$\bigcirc$		
Connectivity options	VSAT	Hybrid (VSAT, Cellular, Wi-Fi)		
Antenna diameter/ weight	37 cm (14.6") 10.6 kg (23.4 lbs)	37 cm (14.6") 11.2 kg (24.6 lbs)	60 cm (23.6") 24.3 kg (53.6 lbs)	1 m (39.4") 86 kg (189 lbs)
BDU (belowdeck unit)	VSAT Hub (DC)	TracNet Hub (DC) or TracNet Hub+ (AC) TracNet H		TracNet Hub+ (AC)
Max VSAT speed Mbps <sup>2</sup> (down/up)	6/2 Mbps	6/2 Mbps	10/3 Mbps	20/3 Mbps
Satellite channels	Single (High-speed)		Dual (High-speed & Unlimited Use)	
Stabilization	Two axis, sta	abilized skew	Three axis, stabilized skew	
Supports user-supplied SIM card	N/A	$\bigcirc$		
Easy installation	Single cable install with DC power (AC-DC converter available)	Single cable install with DC and AC power belowdeck units (TracNet H90 available with AC power only)		
High-performance tracking	Digital IMUs and commercial-grade rotary joint for uninterrupted reception			
Service & support	From system selection and design to installation, and support in commercial ports worldwide, KVH OneCare™ provides peace of mind for the life of your product			
Available as AgilePlans® subscription	AgilePlans Regional	AgilePlans ONE		
Cybersecurity	Integrated terminal and network security	Integrated terminal and network security; optional enterprise-level upgrade		
KVH Link-compatible	N/A		$\bigcirc$	
Cloud-based email upgrade	N/A	$\bigcirc$		
Detailed technical specifications	kvh.com/v30specs	kvh.com/h30specs	kvh.com/h60specs	kvh.com/h90specs

<sup>2</sup>Data rates are Ku-band service speeds only and rate plan maximums and may vary in different regions and under different conditions.

#### **Belowdeck Units**

KVH's streamlined belowdeck units are at the heart of every TracNet terminal. These tools create confidence through all-in-one system control and network management.



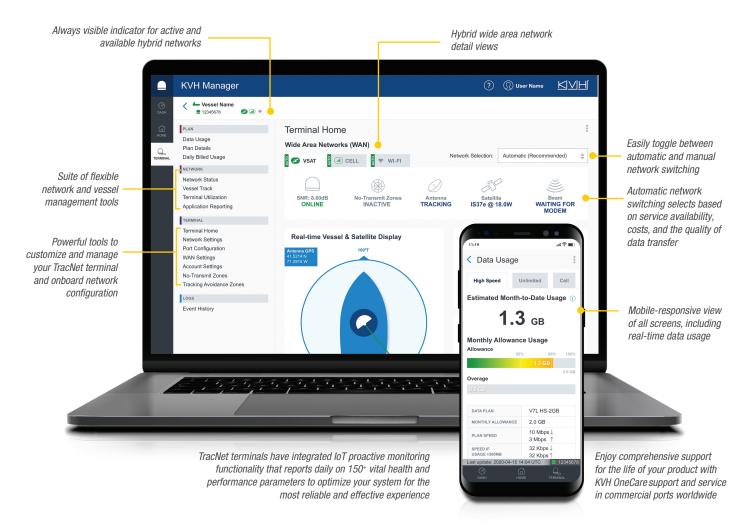
TracNet Hub 12V DC-powered with built-in Wi-Fi router, ethernet ports and VolP line. Shelf or bulkhead-mount.



**TracNet Hub**<sup>+</sup> *AC-powered with touchscreen interface, dual user-supplied SIM slots, built-in Wi-Fi router, ethernet ports, storage for KVH Link content and two VoIP lines. Rack-mount.* 

## Hybrid Connectivity Without Complication

KVH Manager delivers a powerful suite of mobile-responsive tools that provides valuable analytics, data usage control, and customizable interfaces. Monitor your usage in real time; choose to allow, restrict or block data usage in eleven different categories; and set up alerts to stay aware of your data usage.



#### KVH ONE Hybrid Network Coverage\*

View up-to-date and terminal-specific coverage maps at kvh.com/tracnetmaps



#### **Global HTS Coverage**



**Cellular Coverage** 

- Global HTS Ku-band satellite network, with 276 million sq km (106 million sq miles) of coverage, powered by Intelsat
- Cellular support in 150<sup>+</sup> countries as far as 32<sup>+</sup> km (20<sup>+</sup> miles) offshore
- Compatible with shore-based Wi-Fi networks

\*Actual coverage and availability may vary. Data rates may also vary in different regions. KVH provides no guarantees of coverage or availability. For the most up-to-date coverage maps, visit kvh.com/tracnetmaps.

#### KVHI NASDAQ LISTED GRATIFICO SUSTRI

World Headquarters KVH Industries, Inc. · Middletown, RI U.S.A. +1.401.847.3327 · info@kvh.com

#### EMEA Headquarters

KVH Industries A/S · Kokkedal, Denmark +45.45.160.180 · info@emea.kvh.com Asia-Pacific Headquarters KVH Industries Pte Ltd. · Singapore +65.6513.0290 · info@apac.kvh.com

kvh.com/one

©2022 KVH Industries, Inc. KVH, KVH ONE, TracNet, AgilePlans, KVH OneCare, and the unique light-colored dome with dark contrasting baseplate are trademarks of KVH Industries, Inc. All other trademarks are the property of their respective companies. BR\_KVHONE\_TracNet\_Commercial\_0622





# TracNet<sup>™</sup> H30

# Ultra-compact & affordable 37 cm Hybrid VSAT, Cellular, and Wi-Fi Connectivity

The ultra-compact TracNet H30 brings the versatility and affordability of hybrid connectivity to the smallest vessels while serving as a powerful backup on larger vessels. The 37 cm commercial-grade TracNet H30 is more than 50% lighter than competing 45 cm terminals and offers unmatched communications using the KVH ONE hybrid satellite, cellular, and Wi-Fi network with intelligent, automatic switching. The terminal also includes easy single-cable installation, a commercial-grade rotary joint for continuous azimuth rotation, and digital IMUs and advanced motor controllers for outstanding tracking even in rough seas or at high speeds.

- High-speed VSAT service (as fast as 6/2 Mbps down/up)
   via KVH's global, layered Ku-band HTS network, offering
   276 million sq. km (106+ million sq. miles) of coverage
- 2 Ultra-high efficiency antenna using KVH's RingFire<sup>™</sup> design and groundbreaking dielectric rod feed for excellent reception even in bad weather
- 3 High-performance tracking with 2-axis pedestal design, stabilized skew, dual digital IMUs, and advanced motor controllers
- 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



#### **Belowdeck Units**

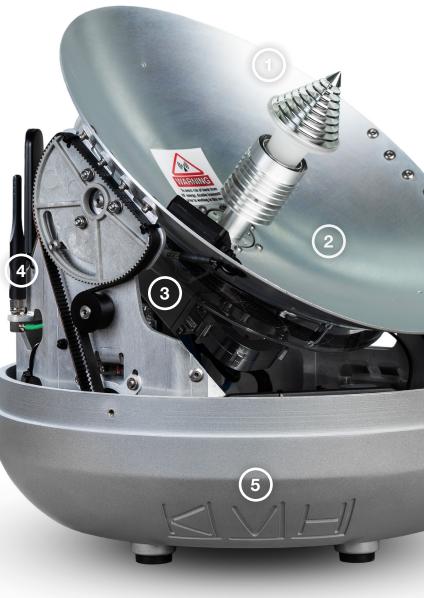
KVH's streamlined belowdeck units are at the heart of every TracNet terminal. These tools create confidence through all-in-one system control and network management.



TracNet Hub 10-30V DC-powered with built-in Wi-Fi router, user-supplied SIM slot, ethernet ports and VoIP line. Shelf or bulkhead-mount.



**TracNet Hub**<sup>+</sup> AC-powered with touchscreen interface, user-supplied SIM slot, built-in Wi-Fi router, ethernet ports and two VoIP lines. Rack-mount.



# TracNet H30 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 <sup>1</sup>	as fast as 6 Mbps/2 Mbps (down/up)		
Abovedecks Equipmer	nt		
Antenna Dish Diameter	36.8 cm (14.5")		
Antenna Unit Dimensions/ Weight	39.4 cm D x 44.7 cm H (15.5" D x 17.6" H)/ 11.1 kg (24.6 lbs)		
Elevation/Azimuth Range	7.7° to 75°/Unlimited rotation		
Temperature	Operating: -30°C to 55°C (-22°F to 131°F); Survival: -35°C to 70°C (-31°F to 158°F)		
Humidity/Salt Fog	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 or Hub*		
Hub to Antenna Unit Connection	Single coaxial cable, see <u>kvh.com/tracnetcables</u> or contact KVH Technical Support for detailed specifications		
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		
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, 250W max		
Data Interfaces	4 Ethernet: IEEE 1000BASET-T 2 USB 3.0 Ports		
Voice Interfaces	2 RJ11 ports supporting single line VoIP service		
Belowdecks Equipment – TracNet Hub			
Dimensions	23.6 cm x 20.5 cm x 4.4 cm (9.34" x 8.05" x 1.73")		
Dimensions Weight	1.4 kg (3 lbs)		
Weight Temperature	1.4 kg (3 lbs) Operating: -15°C to 55°C (5°F to 131°F); Survival: -25°C to 70°C (5°F to 158°F)		
Weight Temperature Heading Input	1.4 kg (3 lbs) Operating: -15°C to 55°C (5°F to 131°F); Survival: -25°C to 70°C (5°F to 158°F) NMEA 2000, NMEA 0183 magnetic or true heading		
Weight Temperature	1.4 kg (3 lbs) Operating: -15°C to 55°C (5°F to 131°F); Survival: -25°C to 70°C (5°F to 158°F) NMEA 2000, NMEA 0183 magnetic or true heading 10-30 VDC, 125W max		
Weight Temperature Heading Input	1.4 kg (3 lbs) Operating: -15°C to 55°C (5°F to 131°F); Survival: -25°C to 70°C (5°F to 158°F) NMEA 2000, NMEA 0183 magnetic or true heading		

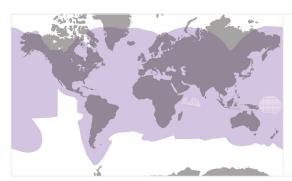
System Options			
KVH OneCare <sup>™</sup> Support Program	Available; see kvh.com/onecare for details		
Iridium Certus <sup>®</sup> Optional Backup	Available; see "Optional Backup" on <u>kvh.com/H30</u> for details		
Terrestrial Comm	unications Module –	Cellular Specifications	
Band Support			
Regions	Global, except China		
5G	Standards	3GPP Release 15 NSA/SA operation, Sub-6 GHz	
	ΜΙΜΟ	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) <sup>2</sup>			
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 Comm	unications Module -	Wi-Fi Specifications	
Wi-Fi Standards	IEEE 802.11ac/a/b/g/n		
Band Support	2.4 Ghz / 5 Ghz		
Data Rate (max) <sup>3</sup>	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 <sup>3</sup>	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	01-0432-11		

Meets ( $\epsilon$  requirements. Exceeds Inmarsat operational, survival, and shock specifications.

<sup>1</sup> Published data speeds are maximum speeds and may vary in different regions and under different conditions.

<sup>2</sup> Data rates theoretical only and actual value depends on network conditions. Data rates limited by 1 Gbps Ethernet LAN interface.

<sup>3</sup> Unless subject to in-country regulations. Restrictions apply. Visit <u>kvh.com/warranty</u> for details.



#### KVH Global, Layered Ku-band HTS Network Coverage

The map depicts KVH's expectations for the HTS network's coverage for the TracNet H30; actual coverage and availability may vary. Data rates may also vary in different regions. Go to <u>www.kvh.com/tracnetmaps</u> to view our global coverage maps for TracNet H30.

Ku-band Coverage

TracNet H30 has a 2-axis stabilized antenna pedestal design that does not provide coverage in areas where the satellite is directly overhead.



World Headquarters KVH Industries, Inc. · Middletown, RI U.S.A. +1.401.847.3327 · info@kvh.com

### kvh.com

EMEA Headquarters KVH Industries A/S · Kokkedal, Denmark +45.45.160.180 · info@emea.kvh.com Asia-Pacific Headquarters KVH Industries Pte Ltd. · Singapore +65.6513.0290 · info@apac.kvh.com

©2022 KVH Industries, Inc. KVH, TracNet, KVH ONE, RingFire, KVH OneCare, and the unique light-colored dome with dark contrasting baseplate are trademarks of KVH Industries, Inc. Specifications subject to change without notice. All other trademarks are the property of their respective companies.

# Airtime Rate Sheet KVH ONE<sup>™</sup> TracNet<sup>™</sup> H30

#### Delivering the power of global hybrid connectivity with:

- High-speed VSAT (as fast as 6/2 Mbps down/up) on KVH's global HTS network
- SG/LTE cellular connectivity in 150<sup>+</sup> countries<sup>1</sup>
- O Compatibility with shore-based Wi-Fi networks
- Seamlessly managed with intelligent, automatic switching
- O Month-to-month plans with no annual contract and flexible suspension policies

## STEP 1: Select Your VSAT Rate Plan:

### High-Speed Plans

#### High-speed fixed price with unlimited use

If the monthly high-speed data allotment is consumed, the system will automatically shift to the unlimited use shaped data rate and reset to the high-speed data rate on the first day of the following month.

Monthly Data Plans	\$/month (USD)	High-speed Data Rates <sup>2</sup>	Shaped Data Rates	High-speed Data/month
H30-200MB	\$159	6/2 Mbps down/up	32/32 Kbps	200 MB
H30-500MB	\$309		64/32 Kbps	500 MB
H30-1GB	\$619		128/64 Kbps	1 GB
H30-2GB	\$1,239			2 GB
H30-5GB	\$1,669			5 GB
H30-10GB	\$2,249			10 GB
Plus Enhanced Voice Service				
All phone calls to land or mobile lines worldwide only \$0.59/minute!				

Effective 1 July 2022



## High-Speed Metered Plans

#### Lowest cost, affordable overage rates

Simple, usage-based plans that offer the highest speeds and lowest costs with user-friendly tools for monitoring and controlling data usage.

Monthly Data Plans	\$/month (USD)	High-speed Data Rates <sup>2</sup>	High-speed Data/month	Overage Rates \$/MB (USD)
H30M-200MB	\$109	6/2 Mbps down/up	200 MB	\$1.02
H30M-500MB	\$269		500 MB	\$0.71
H30M-1GB	\$539		1 GB	\$0.61
H30M-2GB	\$1,069		2 GB	\$0.50
H30M-5GB	\$1,549		5 GB	\$0.30
H30M-10GB	\$2,129		10 GB	\$0.20
Plus Enhanced Voice Service				

All phone calls to land or mobile lines worldwide only \$0.59/minute!

#### All Plans Offer:

- Speeds as fast as 6 Mbps/2 Mbps (down/up)<sup>2</sup>
- Unrestricted access to all applications and protocols<sup>3</sup>
- Unique Application Category Control tool to Allow, Restrict, or Block VSAT data usage in eleven application category groups to limit unintended data consumption
- 100% transparency with easy-to-use alerts, system configuration tools, and data allocation controls via the secure KVH Manager suite of tools

#### • Long distance phone service with simple, single price worldwide

- Includes one phone line for Enhanced Voice Service with the option to add up to five virtual numbers for inbound local calling
- Flexible suspension policies
- Month-to-month service with no annual contract for purchased equipment

### STEP 2: Activate the integrated KVH cellular service

Take full advantage of KVH ONE's global hybrid network covering 150<sup>+</sup> countries by choosing to activate the optional integrated KVH cellular service for only \$99/month! Visit <u>kvh.com/Iteglobalzones</u> for details on per-country cellular data costs.

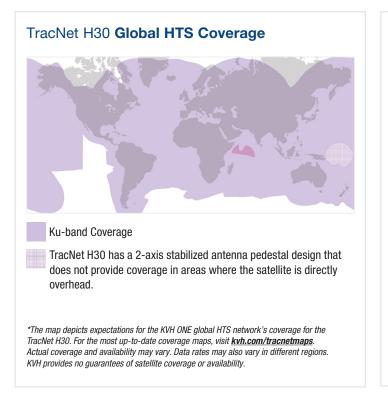
<sup>1</sup>SG and LTE-A cellular speeds where available and compatible with the KVH- or user-supplied SIM cards and service <sup>2</sup>Published data speeds are maximum speeds and may vary in different regions and under different conditions <sup>3</sup>Excludes BitTorrent and similar protocols



# KVH ONE TracNet H30

#### **Enhanced Voice Service**

KVH's Enhanced Voice Service is a managed solution optimized for satellite communications and fully integrated into the KVH ONE Global HTS Network. Network voice prioritization assures that bandwidth is allocated to the telephone line to ensure a high-quality VoIP connection. With Enhanced Voice Service you will enjoy always-on voice connections and a great suite of convenient features and account management tools that you can access anywhere in the world!



#### **General Terms**

- All prices are in \$USD and do not include any taxes or fees that may apply.
- All services and plans are subject to the KVH Master Services Agreement.
- HTS network published data rates are rate plan maximums and may vary in different regions and under different conditions. Service reception may be affected by environmental or operational conditions and its uninterrupted availability is not guaranteed.
- No annual contract for purchased equipment; rate plans are month-to-month, automatically renewing on a monthly basis. For leased terminal equipment, the contract term must be concurrent with, and extend to, the end of the lease period.
- VolP-only Suspension Plan is offered at \$50/month with no limitation on the number of months. May not be used as activation plan. Plan change fee does not apply.
- When not in use, cellular service may be suspended independently of the satellite service. A \$9.99/month fee applies during suspended months.
- Subscribers are not permitted to use the global HTS service for BitTorrent and all such data-intensive applications and protocols will be blocked by KVH.
- Subscribers are permitted to change HTS rate plans and switch between unlimited use and metered plans with certain restrictions. \$100 fee applies for plan changes to lower priced plans (excluding VoIP-only Suspension Plan), except during the first 90 days of service to allow the subscriber to determine the plan most appropriate for their usage needs. For complete details on plan changes, "Airtime Rate Plan Change/Suspension Policies" at <u>kvh.com/airtimeresources</u>.

#### TracNet H30 Cellular Coverage



The KVH ONE cellular airtime plan is a monthly credit towards usage in all active destination zones. Usage is calculated and charged by the MB at each destination zone's \$/GB rate. The Tier 1 and Tier 2 zones are on (active) by default, while you have the option to activate the Tier 3 and Tier 4 zones. Visit <u>kvh.com/Iteglobalzones</u> for details.

\*For the most up-to-date coverage maps, visit <u>kvh.com/tracnetmaps</u>. Actual coverage and availability may vary. Data rates may also vary in different regions. KVH provides no guarantees of cellular coverage or availability.

- One voice line with a KVH-assigned phone number is provided at no charge and is carried via the global HTS network. A user-specified voice line phone number is \$31/month.
- Virtual local phone numbers can be added for a monthly fee of \$31 per number (5 max.) where available/subject to in-country regulations.
- Both incoming and outgoing calls are charged at \$0.59/minute. A few select countries and satellite phone services are blocked. Contact KVH Airtime Services for special rates for these areas and services.
- Global Static IP Service is available for \$30/month per IP address. Visit <u>kvh.com/staticip</u> for details.
- BitTorrent and all such data-intensive applications and protocols will be blocked by KVH.

#### Additional Terms for Unlimited Use Rate Plans

When the data allocation for the high-speed rate plan has been consumed, service will
automatically shift to the reduced data rate plan with no overage charges until the end
of the calendar month. The high-speed data allocation will reset on the first day of the
following month.

#### kvh.com/one



#### World Headquarters

KVH Industries, Inc. · Middletown, RI U.S.A. +1.401.847.3327 · info@kvh.com

**EMEA Headquarters** KVH Industries A/S · Kokkedal, Denmark +45.45.160.180 · info@emea.kvh.com Asia-Pacific Headquarters KVH Industries Pte Ltd. · Singapore +65.6513.0290 · info@apac.kvh.com

©2022 KVH Industries, Inc. KVH, KVH ONE, TracNet, and the unique light colored dome with dark contrasting baseplate are trademarks of KVH Industries, Inc. All other trademarks are the property of their respective companies.