QUARK-ELEC

SMART SOLUTIONS, SIMPLY CONNECTED

PROUD MEMBER OF BRITISH MARINE LEADING THE INDUSTRY

PROUD SUPPORTER RNLI Lifeboats

NMEA® MEMBER

WELCOME TO QUARK-ELEC

From our headquarters located on the outskirts of Cambridge in the UK, Quark-elec is leading a transformative shift in the realm of marine electronics. We are driven by a profound passion for uniting the imperative for top-notch, cost-effective smart marine solutions tailored to our valued customers.

Our core strength lies in our expertise in marine data communications. By crafting intuitive, user-friendly products and solutions, we empower our customers to savour their sailing experiences to the utmost.

Wherever your aspirations may lead you, we firmly believe in the concept of effortless connectivity. It's about attaining a state of tranquillity, staying well-informed, and maintaining absolute control. This ethos allows you to wholeheartedly focus on what genuinely matters.

SMART SOLUTIONS, SIMPLY CONNECTED

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Commercial Grade AIS Devices

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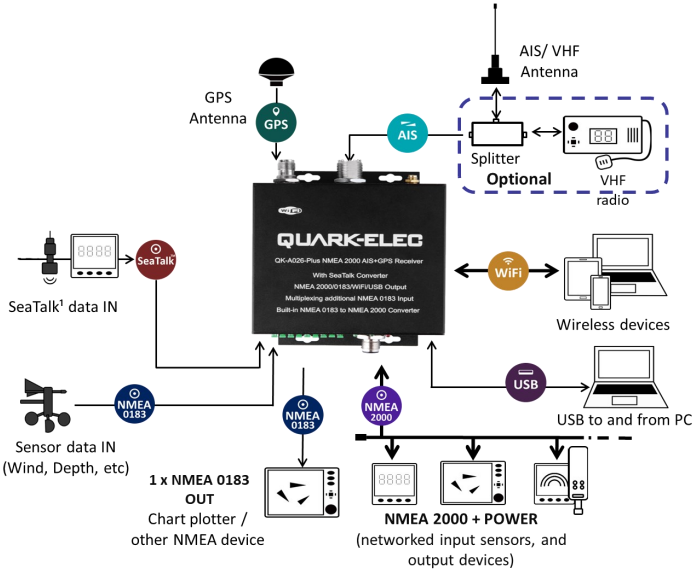
COMMERCIAL GRADE AIS DEVICES

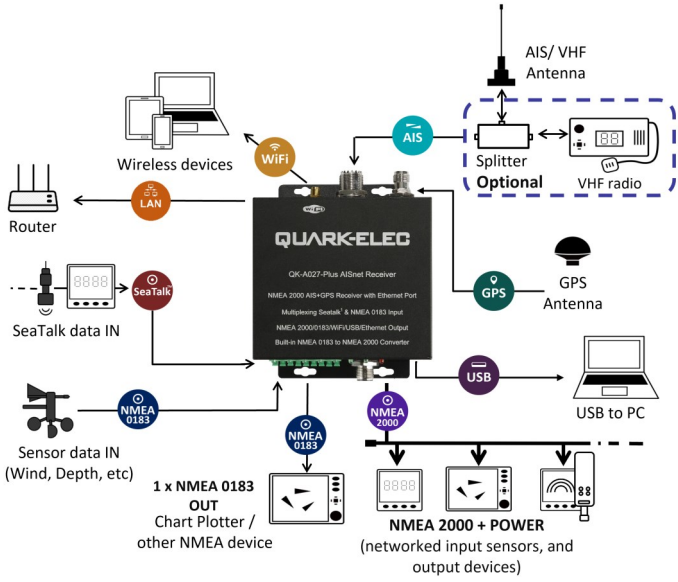
A026+ NMEA 2000 AIS receiver with NMEA multiplexer:

'I'm so pleased I finally found a fully integrated bi-directional data converter which allows my devices to communicate with no delay / data lag.'



A027+ NMEA 2000 AISnet receiver with Ethernet port:

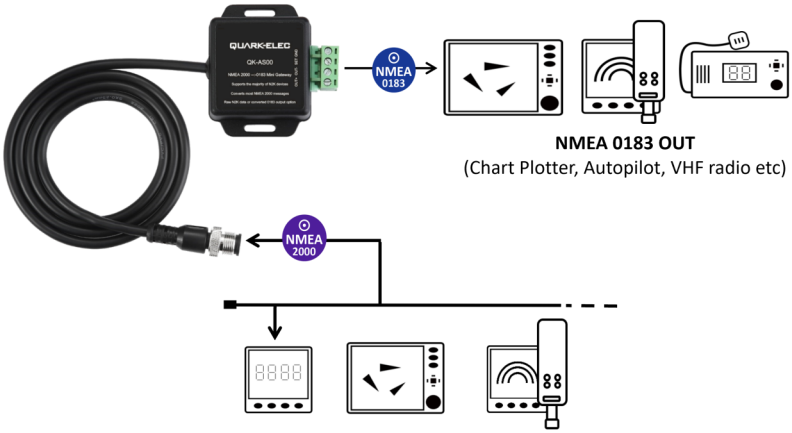
'It's so easy to plug it straight into my router and receive AIS signal directly to my computer.'



NMEA 2000 Gateway

AS00 NMEA 2000 to 0183 mini gateway:

'Converts AIS, depth, wind, heading, GPS & other NMEA 2000 data to NMEA 0183, it's the perfect device for the job.'

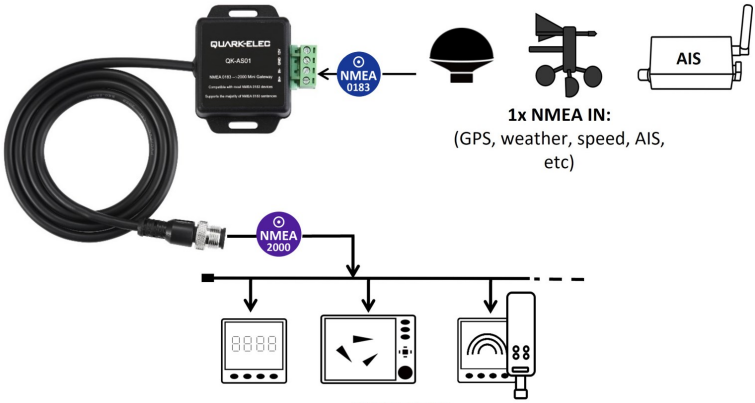


NMEA 0183 OUT
(Chart Plotter, Autopilot, VHF radio etc)

NMEA 2000
(NMEA 2000 devices)

AS01 NMEA 0183 to 2000 mini gateway:

'This compact device easily converts NMEA 0183 data to NMEA 2000 .'



1x NMEA IN:
(GPS, weather, speed, AIS, etc)

NMEA 2000
(NMEA 2000 devices)

N2K CABLES AND CONNECTORS

NMEA 2000 N2K starter kit:

This starter kit provides a complete NMEA 2000 data and power network to all your NMEA 2000 marine electronic devices.

This kit is comprised of the following items:

AS2K-B backbone . . . . .

. . . . . AS2K-T terminators (male and female)

AS2K-P power-tap splitter cable . . . . .

. . . . . AS2K-C NMEA 2000 drop cable (2m)

**1m and 5m drop cable also available separately*

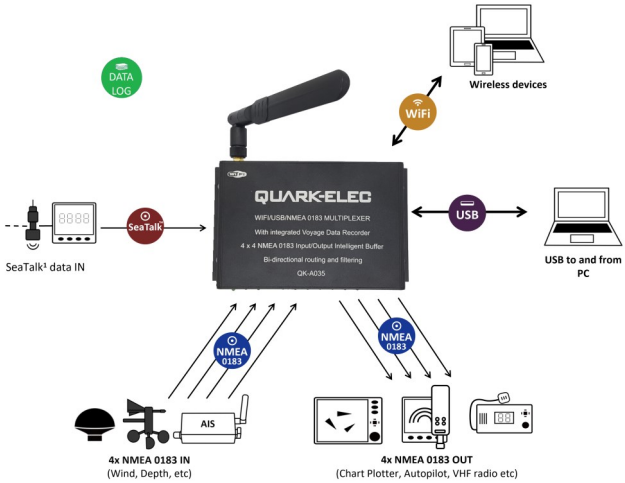
AS2K-TP NMEA 2000 T-piece connector:

'For use when a drop or 'port' is required from the NMEA 2000 backbone to connect another device.'

Please note: this item is not included in the NMEA 2000 N2K starter kit

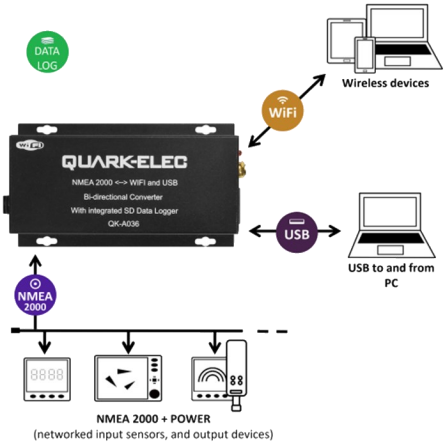
A035 NMEA 0183 4x4 multiplexer with SeaTalk[1] converter + integrated voyage data recorder:

'Providing a highly customizable solution to work as an NMEA 0183 hub on my boat. Automatic data recording that can be uploaded to the Quark Cloud to offer online tracking, data backup, sharing and export.'



A036 NMEA 2000 to WiFi / USB bi-directional converter + integrated voyage data recorder:

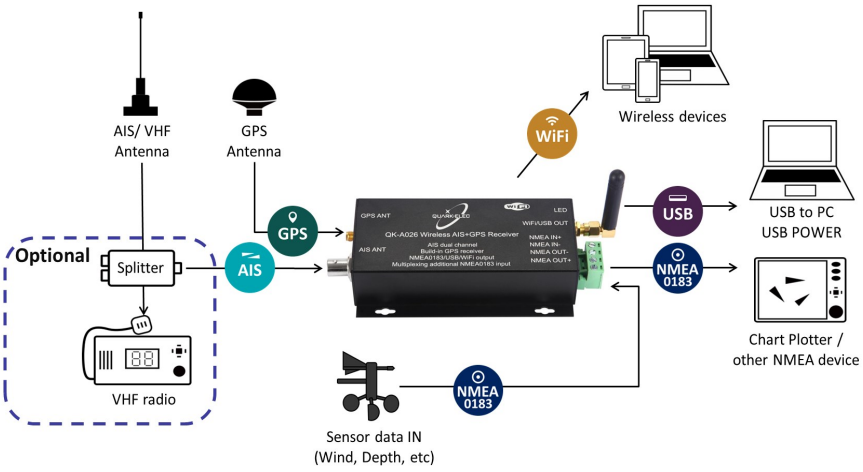
'Records all NMEA 2000 network data for system diagnosis, performance analysis, and accident investigation, all in an effort to reduce operating costs and improve safety. Online backup allows for remote access or sharing.'



AIS FAVOURITES

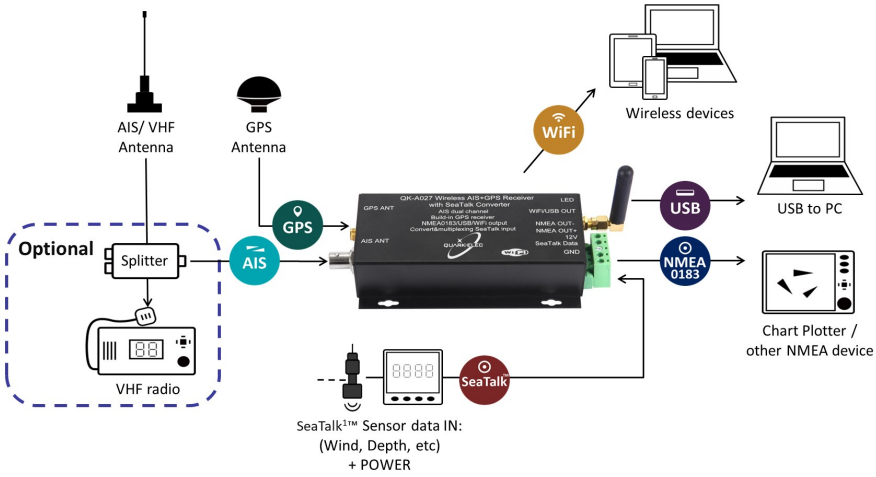
A026 AIS and GPS receiver + NMEA multiplexer:

'Portable USB powered AIS and GPS receiver with NMEA 0183 Multiplexer with WiFi output.'



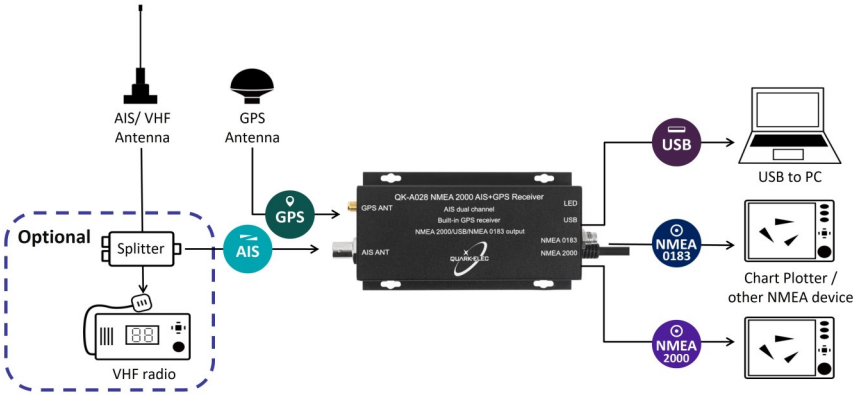
A027 AIS and GPS receiver + SeaTalk[1] converter:

'A fantastic and compact AIS and GPS receiver with integrated SeaTalk[1] converter .'



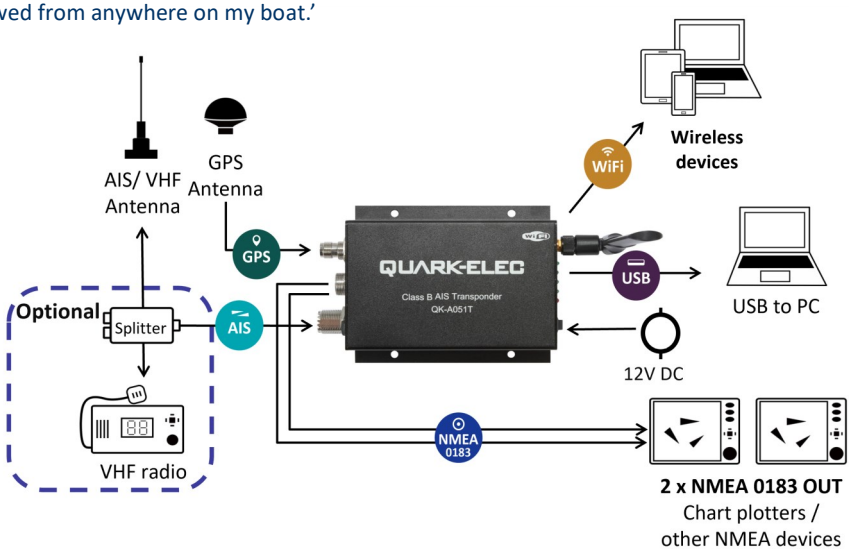
A028 NMEA 2000 AIS and GPS receiver:

'Plug and play N2K AIS and GPS receiver.'



A051T WiFi AIS transponder (Class B):

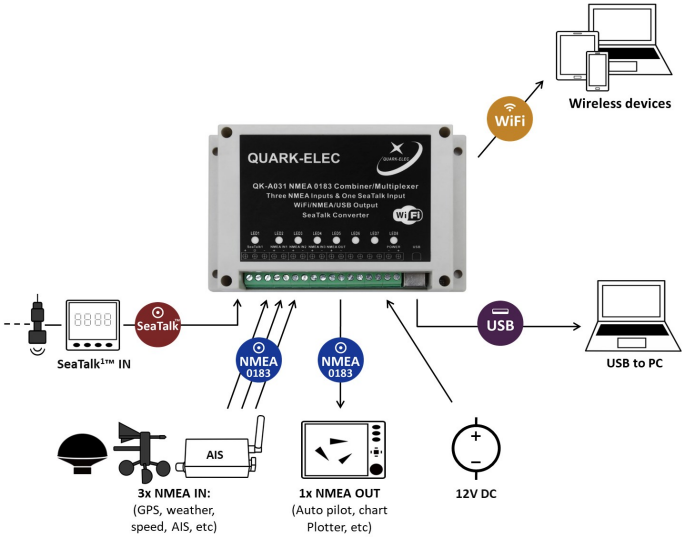
'Class B AIS transponder with built-in GPS and WiFi, allowing AIS and GPS information to be viewed from anywhere on my boat.'



WiFi MULTIPLEXERS

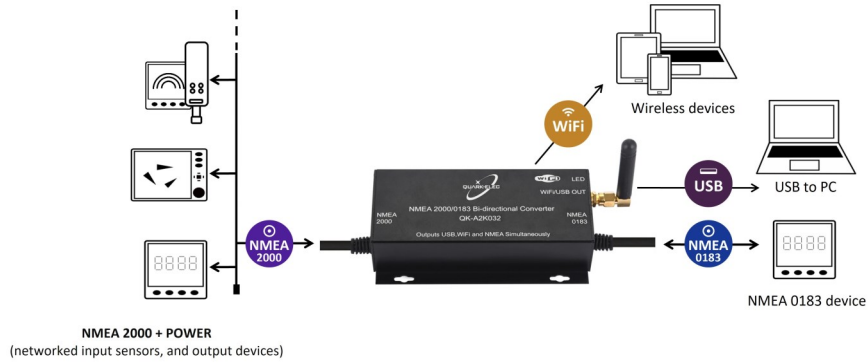
A031 NMEA 0183 multiplexer (with SeaTalk[1] converter):

'Happy to see my merged NMEA and SeaTalk[1] equipment data on my phone.'



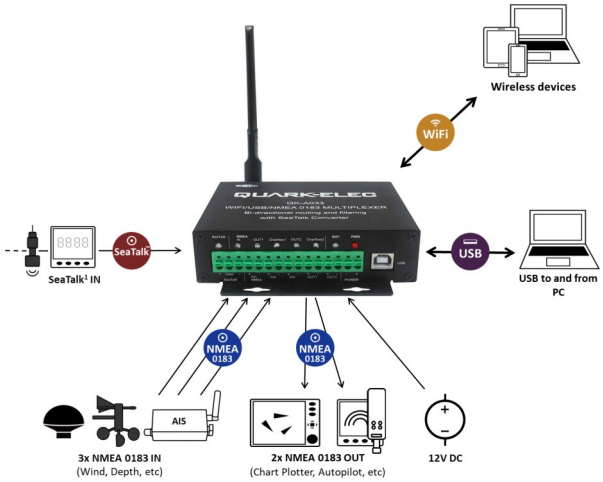
A032 NMEA 2000 / 0183 Bi-directional gateway + WiFi:

'The only N2K bi-directional gateway with WiFi and USB data output.
The longest 0183-2000 and 2000-0183 conversion lists on the market.'



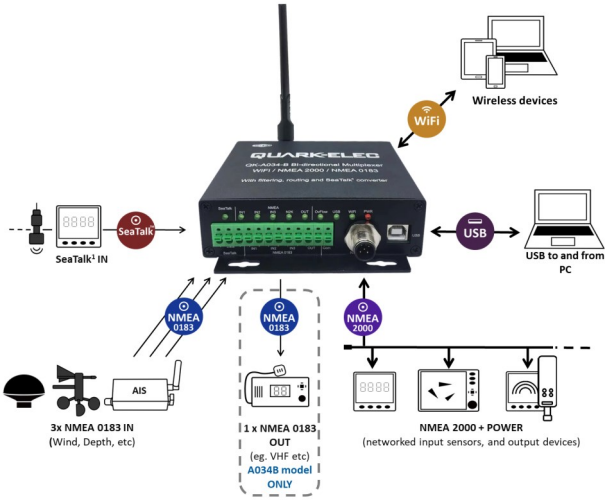
A033 Bi-directional NMEA multiplexer + WiFi + NMEA 0183 + USB (with SeaTalk[1] converter):

'The perfect 2-way WiFi solution to connect to my autopilot and sensors. With sophisticated filtering and routing, this is a multiplexer that grows with me.'



A034 Bi-directional multiplexer + WiFi + NMEA 2000 + NMEA 0183 + USB (with SeaTalk[1] converter):

'Connects the NMEA 0183 sensors to my NMEA 2000 chart plotter and phone.'

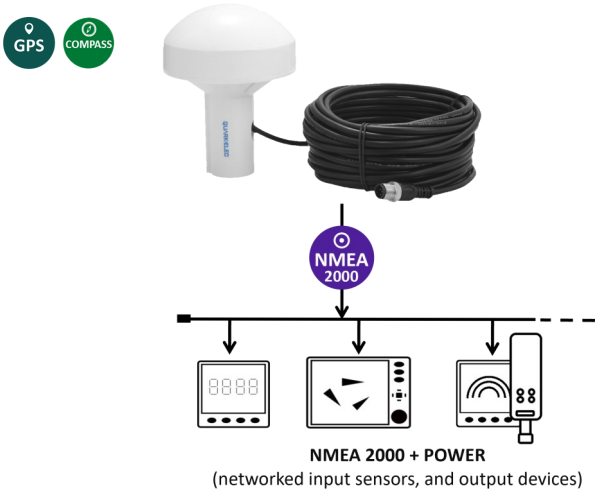


AS07-0183 NMEA 0183 GPS & heading sensor with optional USB output:

'Combines GPS positioning and highly accurate heading information in one compact antenna. Only one installation above the deck is required, saving time and space.'

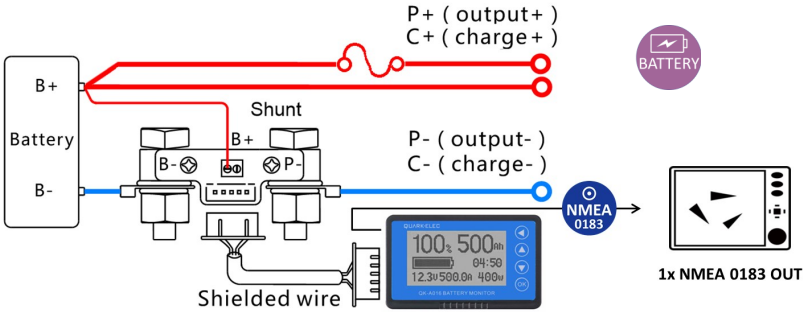
AS07-N2K NMEA 2000 GPS & heading sensor:

'We get great positioning and heading accuracy within one robust antenna. Plug & play NMEA 2000 connectivity allows for a quick and easy installation process, getting us up and ready to navigate on the water.'



A016 battery monitor with NMEA 0183 output:

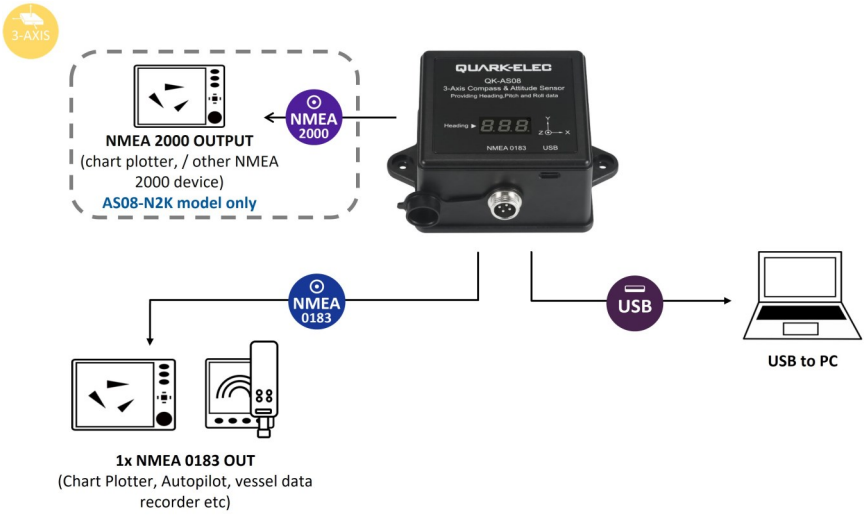
'Knowing how my batteries are performing, the state of charge, and the overall condition gives me peace of mind on the boat.'



Shunt selection capability up to 500Amps (Both 100A and 500A variations available)

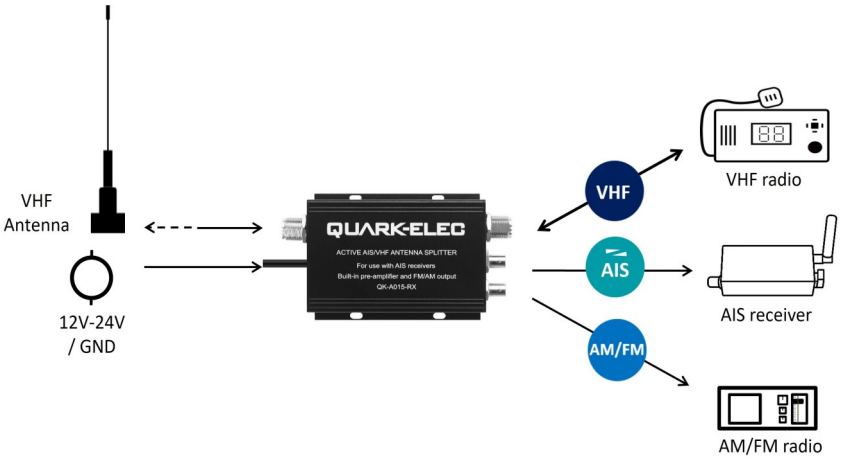
AS08 3-axis compass & attitude sensor:

'Provides accurate, stable readings during dynamically changing conditions at sea, making it an ideal 3-axis status sensor for autopilot and radar overlay applications.'



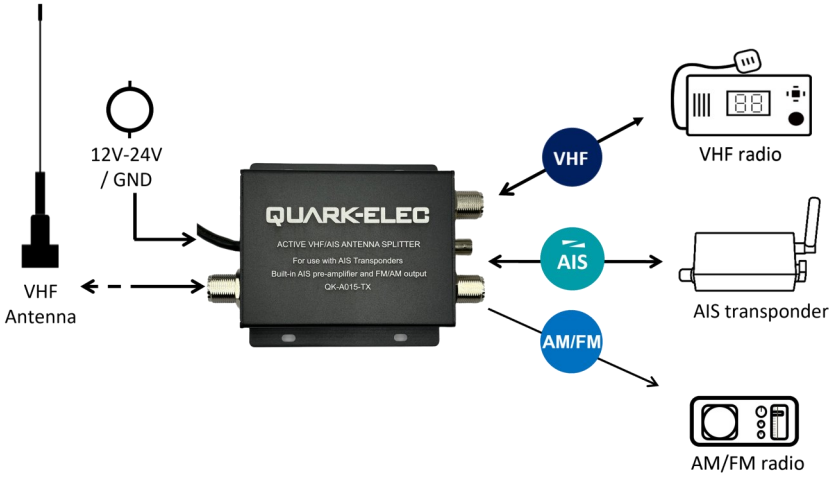
A015-RX active VHF antenna splitter (for AIS receivers):

'This competitively priced active splitter allows me to use one VHF antenna for AIS receiver, VHF and AM/FM feeds on the boat.'



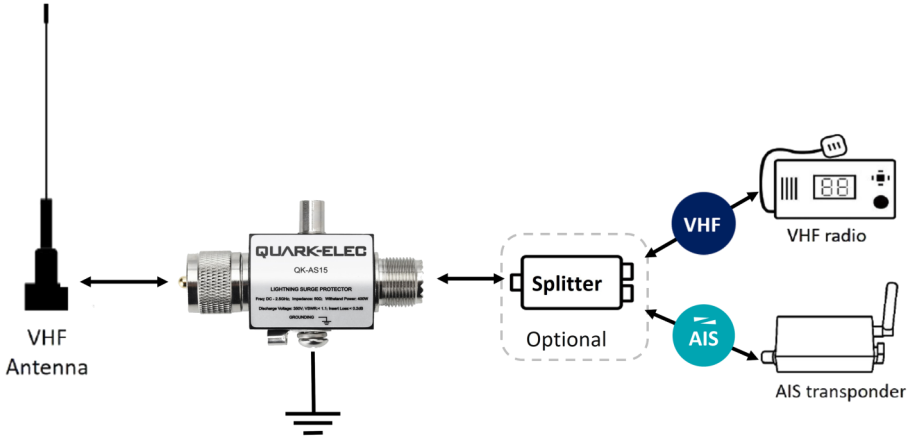
A015-TX active VHF antenna splitter (for AIS transponders):

'Built-in pre-amplifier providing AIS signal gain to maximize AIS reception and range. Features fail -safe circuitry to ensure safe operation of the two transmitting devices.'



AS15 coaxial lightning surge protector:

'To ground the surge of lightning strikes on VHF/AIS/4G antennas. Providing full lightning protection for electronic devices on my boat.'



AS06 wind sensor with NMEA 0183 output:

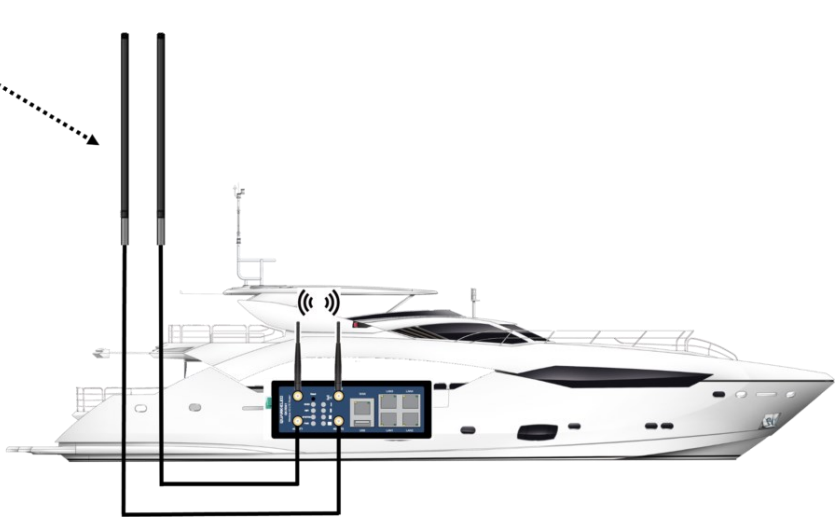
'The perfect solution for any sailor looking to get accurate and responsive wind data to their instruments.'

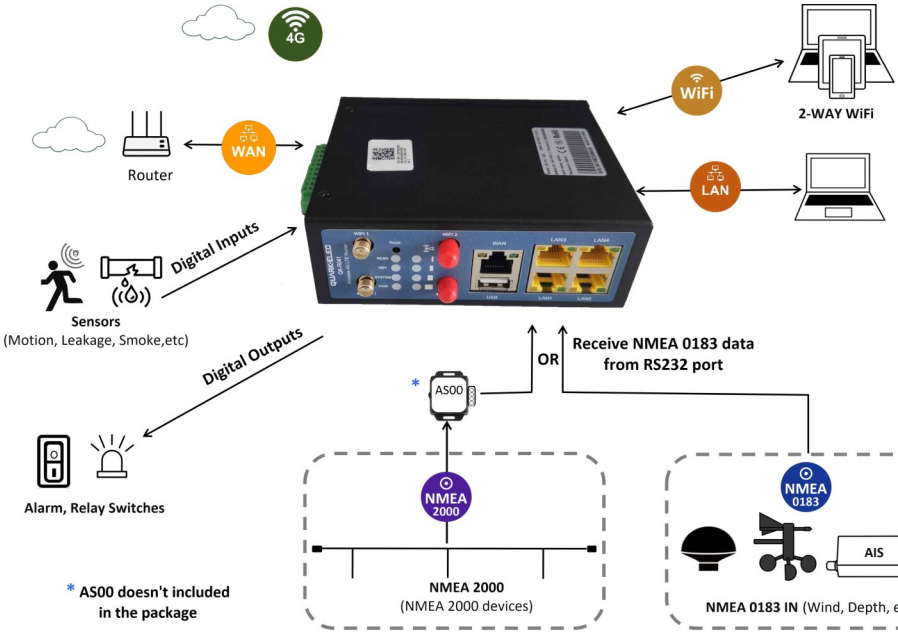
Please note: this wind sensor is available with 20meter and 30meter cable options.

INTERNET ON BOARD

R041 marine wireless 4G LTE router:

'Providing a WiFi internet connection on my boat via 3G/4G network with just a SIM card.'



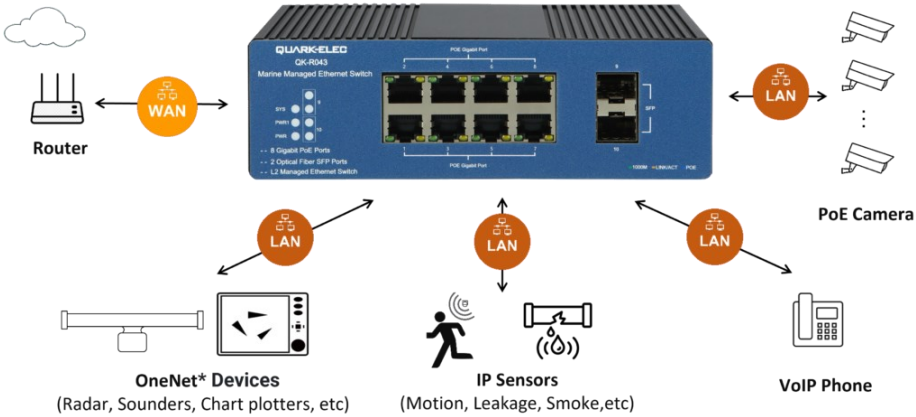


R042 marine mobile phone signal booster:

'Greatly improves the 2G/3G/4G reception of onboard mobile devices for up to 15 miles away from the shore.'

R043 managed marine Ethernet switch:

'Compatible with most Plug & Play IP cameras, IP sensors, VoIP phones on our boat. Ready to support the next generation NMEA standard, OneNet* .'



* OneNet is a marine industry standard, developed by members of NMEA, based on Internet Protocol, and the IEEE 802.3 Ethernet Local Area Network.

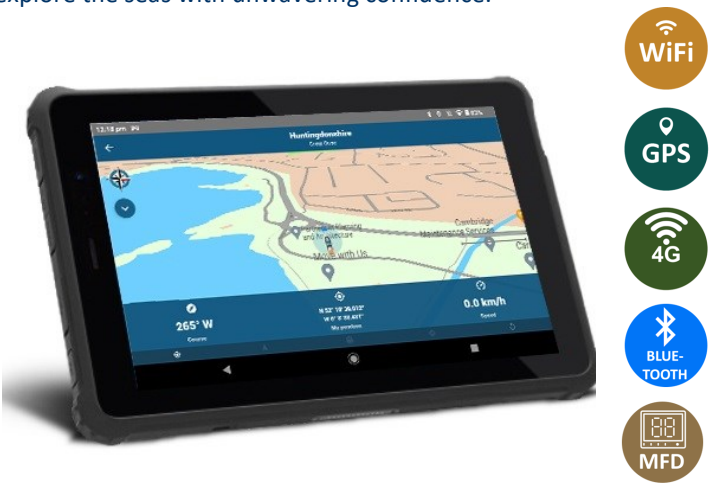
Instrument Displays

IS20 Networked Multifunction Instrument

‘Consolidates multiple marine instrument functions into a single display, thereby simplifying your on-board experience with the IS20.’

AD08 Rugged Marine Waterproof Tablet

‘Experience precision navigation, unstoppable processing power, and all-weather reliability all in one rugged tablet with the ultimate marine companion, AD08. Sail smarter and explore the seas with unwavering confidence.’



Features		A024	A026	A026+	A027	A027+	A028
Description	Function	Dual channel AIS receiver **Combines** AIS (+GPS) and NMEA 0183 input **Outputs** WiFi/ USB/NMEA 0183	Dual channel AIS receiver(+GPS) **Combines** AIS (+GPS) and NMEA 0183 input **Outputs** WiFi/ USB/NMEA 0183	NMEA 2000 AIS Receiver with NMEA Multiplexer+N2K Converter + WiFi + GPS **Outputs** USB/ WiFi/NMEA 0183/NMEA 2000	Dual channel AIS+GPS receiver, with SeaTalk™ to NMEA converter **Combines** AIS, GPS and SeaTalk™ input **Outputs** WiFi/ USB/NMEA	NMEA 2000 AIS receiver wit NMEA Multiplexer + N2K converter + WiFi + GPS **Outputs** USB/ WiFi/NMEA 0183/NMEA 2000	NMEA 2000 AIS receiver + GPS **Outputs** USB, NMEA 0183 and NMEA 2000
INPUT connections	AIS dual channel	✓	✓	✓	✓	✓	✓
	AIS sensitivity	-105dBm	-105dBm	-110dBm	-104dBm	-112dBm	-105dBm
	Typical AIS range[2]	22nm	22nm	45nm	20nm	45nm	20nm
	AIS antenna	BNC	BNC	SO239	BNC	SO239	BNC
	NMEA 0183 input	✓	✓	✓		✓	
	SeaTalk™ bus input			✓	✓	✓	
	GPS module integrated		✓ SMA	✓ TNC	✓ SMA	✓ TNC	✓ SMA
OUTPUT connections	USB (NMEA 0183	✓	✓	✓	✓	✓	✓
	NMEA 0183 output	✓	✓	✓	✓	✓	✓
	NMEA 2000			✓		✓	✓
Power Options	Powered through	USB	USB	12V	SeaTalk™ bus/12V	12V	N2K bus (12V)
Multiplexing	Multiplexing	✓ AIS+NMEA	✓ AIS+NMEA+GPS	✓ AIS+GPS+SeaTalk™ + NMEA	✓ AIS+GPS+SeaTalk™	✓ AIS+GPS+SeaTalk™	✓ AIS and GPS
WiFi	Ad-hoc and Station	✓	✓	✓	✓	✓	
	Option to disable	✓	✓	✓		✓	
Configuration	Configuration through USB port. Windows PC	✓	✓	✓	✓	✓	not required
Compatible devices and software	Windows / Mac / Linux through USB	✓	✓	✓	✓	✓	✓
	Chart Plotters	✓	✓	✓	✓	✓	✓
	Android / iOS	WiFi	WiFi	WiFi	WiFi	WiFi	

Features		A026+	A027+	A031	A032	A033	A034&B	A035	A036
Description	**Function**	NMEA 2000 AIS Receiver with NMEA Multiplexer+N 2K Converter + WiFi + GPS **Outputs** USB/ WiFi/NMEA 0183/NMEA 2000	NMEA 2000 AIS receiver wit NMEA Multiplexer + N2K converter + WiFi + GPS **Outputs** USB/WiFi/ NMEA 0183/ NMEA 2000	NMEA 0183 and SeaTalk™ multiplexer. **Combines** up to 3 MNEA 0183 inputs with SeaTalk™ . **Outputs** WiFi/USB/ NMEA 0183	NMEA 2000/0183 Bi -directional Gateway **Combines** NMEA 2000/0183 **Outputs** WiFi/USB/ NMEA 0183/ NMEA 2000	Bi-directional WiFi Multiplexer with SeaTalk™ converter **Combines** up to 3 NMEA 0183 inputs with SeaTalk™ WiFi and USB	Bi-directional WiFi/NMEA 2000/NMEA 0183/USB Multiplexer **Included** SeaTalk™ to NMEA 0183 converter **Outputs** WiFi/USB/ NMEA 0183/	NMEA 0183 4x4 Multiplexer with SeaTalk™ converter and Integrated Voyage Data Logger **Combines** up to 4 NMEA	NMEA 2000 to WiFi/USB Bi-directional Converter With Integrated Voyage Data Logger **Outputs**
INPUT connections	**NMEA 0183**	✓	✓	✓x3	✓	✓x3	✓x3	✓x4	
	NMEA 2000	✓	✓		✓		✓		✓
	SeaTalk™ bus input	✓	✓	✓		✓	✓	✓	
	AIS receiver	✓ Dual channel	✓ Dual channel						
	GPS module	✓	✓						
OUTPUT connections	**USB (NMEA**	✓ 2 way	✓	✓	✓	✓ 2 way	✓ 2 way	✓ 2 way	
	NMEA 0183	✓	✓	✓	✓	✓x2	✓ (A034 -B only)	✓x4	
	NMEA 2000	✓	✓		✓		✓		✓
Power source	**Powered**	12V	12V	12V - 35V	N2K bus (12V)	12V - 35V	N2K bus (12V)	12V - 15V	N2K bus (12V)
Multiplexing	**Multiplexing**	✓	✓	✓	✓	✓	✓	✓	
	Filtering	✓	✓			✓	✓	✓	
	Routing	✓	✓			✓	✓	✓	
WiFi	**Ad-hoc and station modes**	✓ 2 way	✓	✓	✓	✓ 2 way	✓ 2 way	✓ 2 way	✓
	To disable	✓	✓		✓	✓	✓	✓	
Configuration	**Configuration through USB**	✓	✓	✓	✓	✓	✓	✓	✓
Compatible devices and software	**Windows /**	✓	✓	✓	✓	✓	✓	✓	✓
	Chart Plotters	✓	✓	✓	✓	✓	✓	✓	✓
	Android/iOS	WiFi	WiFi	WiFi	WiFi	WiFi	WiFi	WiFi	WiFi
Voyage data recorder	**Save voyage data to SD card**							✓	✓

QUARK-ELEC

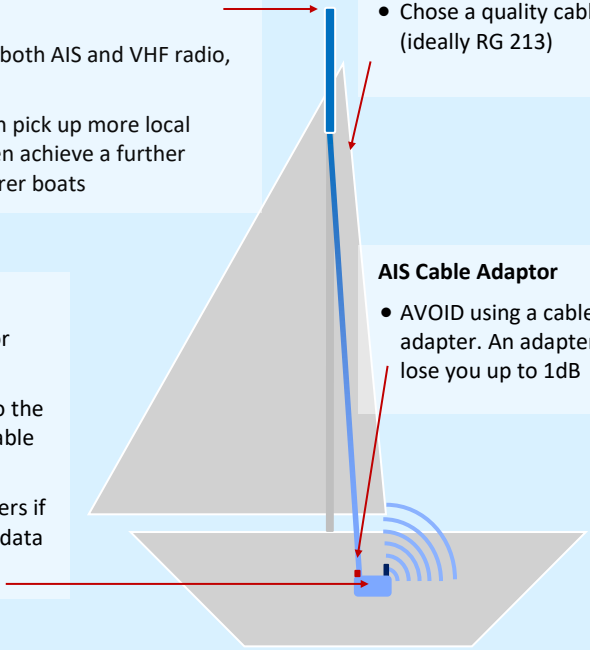
TOP TIPS: Maximising AIS reception and range

Antennas

- Place your antenna as high as possible, ideally 4-7 meters
- Use a quality antenna, with a max 3dB gain
- If possible, use a dedicated AIS aerial, not shared with a radio antenna
- If using one antenna shared for both AIS and VHF radio, use an ACTIVE splitter
- Omni-directional antennas often pick up more local boats. Directional antennas often achieve a further range, but could miss some nearer boats

Antenna Cable

- Keep the cable as short as possible (You lose 0.1dB per metre)
- Use a Coaxial cable
- Chose a quality cable (ideally RG 213)



AIS Receiver

- Use the correct power supply for your AIS receiver
- Locate your AIS receiver close to the antenna. You can shorten the cable and extend with WiFi
- AVOID single channel AIS receivers if the speed and completeness of data is important to you

AIS Cable Adaptor

- AVOID using a cable adapter. An adapter can lose you up to 1dB

External Factors

- Nearby equipment, especially LED lighting, can reduce your AIS reception. Check the RF spec when buying new equipment or lighting for your boat.
- Weather conditions, for example, high humidity, can strongly decrease AIS range.
- The range of an AIS signal is affected by the strength of the signal's transmission.
- Lengthy and complex AIS messages in busy areas take longer to receive.

Your local distributor:

Find more information at:

www. QUARK-ELEC .com

Distributors / re-sellers:
www.quark-elec.com/distributors