

Intelligent sensing



E-Trailer BV was founded in Delft 2015 and has quickly become recognised as a supplier of digital sensing solutions to OEMs and the aftermarket. Collaboration partners include some of the best-known RV manufacturers in Europe

Words Terry Owen

E-Trailer has developed a portfolio of wireless sensors that can make all RVs 'smart' and future ready, by providing information to enhance driving safety and comfort. The sensors include items like tyre pressure, noseweight, gas level, water level, temperature, levelling, and so on.

How does E-Trailer work?

At the heart of the system is the E-Connect base station with which the sensors communicate. Connection to the base station is via Bluetooth or a hard-wired connection. For sale to end users Bluetooth is standard as it greatly simplifies installation. However, OEMs usually prefer hard-wired versions (where appropriate), as they are easy to fit during construction, whilst eliminating the need for sensor batteries.

Sensors can be supplied as standalone items or with the base station. If required, this has the ability to communicate via its CI bus interface to the OEM's own master panel, where fitted. Alternatively, E-Trailer's sensors can be connected directly to the master panel. Branding can either be E-Trailer's or that of the OEM. E-Trailer reckons it can integrate everything based on the OEM's requirements and can

handle all common protocols such as CAN-Bus, LIN-Bus, Bluetooth and so on.

Presently the base station connects to a smartphone app just via Bluetooth. However, it will soon be able to connect via the mobile phone network using 4G, or falling back to 2G, if 4G is not available. This will give the user a continuous connection and the ability to perform many functions remotely. These include track and trace (in case the vehicle gets stolen), monitoring of all sensor values, and (soon) control of heating and air conditioning.

Proven reliability for Bluetooth

Bluetooth communications can become flaky, especially in a complex environment like an RV. The company acknowledges that some early devices had issues but these have all been ironed out. The base station is in its third generation and is fitted with a powerful Bluetooth chip that eliminates any problems. Thousands of systems have now been sold without any issues.

Dealers and distributors

E-Trailer's first route to market in 2017 was the Dutch dealer and distributor network. Their smart sensors quickly became available

as a standard option in the caravans and motorhomes of one of the largest dealers in the Netherlands.

With the support of a private investor, E-Trailer is accelerating its growth and is already active in eleven countries outside the Netherlands and including Germany, France, Belgium, Switzerland, Scandinavia, the UK, South Korea and Australia.



Boy Trip (left) and Rick Lenssen (right)



Supply to OEMs

E-Trailer's OEM market is growing strongly as manufacturers realise the company offers a simple bolt-on solution for many of their sensing needs. E-Trailer says this has become something of a hot topic at the moment. To this end it is actively working with OEMs to offer solutions for their sensing requirements. As a result, it has become a strategic partner of many well-known brands, including Hobby, where E-Trailer's vehicle levelling, and gas level measurement sensing, is offered as a factory fit option on all its RVs.

Other OEMs include some five brands within the Erwin Hymer Group where various E-Trailer combinations are offered as aftermarket options through licensed dealers. E-Trailer says OEMs like to work with them because they have proven products and can respond quickly to their needs.

Certification and approvals

E-Trailer is proud that its products meet all latest European standards including: E-Mark, ISO:9001, KTW-BWGL, EMC and so on. KTW-BWGL is a drinking water standard as defined by the German Federal Environment Office. This covers the hygiene requirements for plastics and silicones that come into contact with drinking water, such as in E-Trailer's water level sensor. According to the CIVD this is the first such sensor for the RV industry to be certified to the new standard.

Proud to be Dutch

E-Trailer is proud of its Dutch origins and the fact that it remains based in Delft, in the heart of the Netherlands, next to Delft University of Technology, where it all started.

What's more, final assembly, testing and calibration all take place in Delft. In this way the company can be sure that customers will receive a top-quality product that will work reliably 'out of the box'.

Future developments

More OEMs are coming on board all the time and will be including E-Trailer as part of their standard offering during the next 12 months. At the same time E-Trailer is continuing to expand its product offering and add new sensors. In 2022 we can expect to see sensing and control developments in the areas of heating and air conditioning, and security. E-Trailer is also open to ideas from OEMs who may want a specific function measuring, or to develop a product in a particular way. It is now looking for more collaborations with OEMs to 'make every RV connected'.



E-Trailer at a glance

E-Trailer BV was founded by Delft University of Technology pals Rick Lensen (CTO) and Boy Trip (CEO), in late 2015. It just so happened that Rick was a caravanner and Boy enjoyed sailing, activities that have much in common. Rick had experience in solar car racing and the two decided that Rick's experience could be applied to the RV market. They carried out a survey to see how the caravanning public might react to their ideas. The feedback was very positive, and E-Trailer was born. Following a year of intense development work during 2016 a public launch took place in March 2017.

The response was enthusiastic and E-Trailer's products quickly appeared in more than 25 Dutch caravan stores, with some 500 pre-sold systems delivered. At the same time the company was offered office space in a local start-up incubator for tech projects called YES!Delft, where it remains to this day. Some 15 staff are currently employed, with 10 of those directly involved in engineering. The company has won various awards including 'Camping & Caravanning Start-up of the Year, 2017' in the Netherlands, 'Practical Caravan accessory of the year, 2019' (UK) and the 'Blogger's favourite' European Innovation Award 2020. The current range of sensors includes:

- Battery voltage
- Levelling
- Tyre pressures
- Temperature
- Gas bottle level
- Noseweight
- Water level
- Door/window sensing

More sensors are in development. In six short years these two young lads from Delft have made quite an impact on the RV industry, driven on by a total belief in their product. Make no mistake they're going places, and we'll hear much more about their products in the future.