

**OVERVIEW**

Transmission Dynamics® has developed the MANTA Gateway, an in-service data logging system that can be paired with a variety of devices, allowing wireless condition monitoring of a railway vehicle and infrastructure. Examples of devices typically paired with the MANTA Gateway are Smart Oil Plug®, Wireless Accelerometer and SmartBug®.

The MANTA Gateway is powered from the train's power supply (24 VDC). The transceiver features high-accuracy GPS location and train direction, plus 4G-LTE cellular connectivity via a shark fin antenna. Data is transferred from the transmitters, via the transceiver, to the Global Data Network®, where it can be viewed and manipulated remotely by the client (figure 2).

The MANTA Gateway is designed to be mounted on a bespoke sub-plate, tailored to each application using 4 x M6 through holes for fixing. The transceiver incorporates a circular plug-in power connector, which allows for quick and easy replacements of the device if required.



Figure 1

**TRANSCEIVER (figure 1)**

|                   |   |
|-------------------|---|
| Communication     | - 2.4 GHz Licence-free<br>- 4G-LTE<br>- GPS |
| Power             | 24VDC, 10 W                                 |
| Size              | 140 x 143 x 94 mm                           |
| Weight            | 0.6 kg                                      |
| Temperature Range | -40 °C to +85 °C                            |
| IP Rating         | IP67  |
| Warranty          | 12 months                                   |

**TESTING STANDARDS**

|                           |  |
|---------------------------|--|
| EMC and EMI compatibility | BS:EN 50121-3-2:2016<br>BS:EN 301489-1 V2.1.1<br>BS EN 301-17 V3.2.0 |
| Environmental suitability | BS:EN 50155:2017   |
| Shock and Vibration       | BS:EN 61373:2010   |

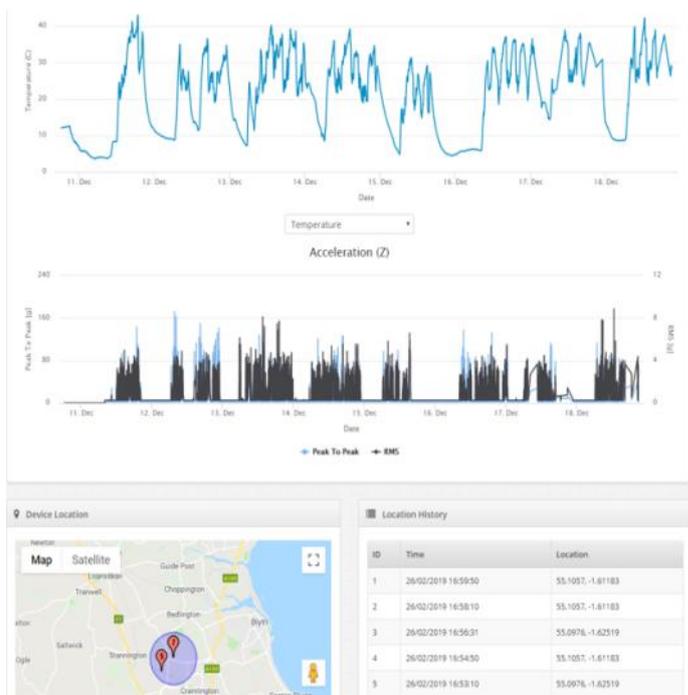


Figure 2