## Reliable Data Communications for the Rail Industry

Westermo offers complete data communications solutions for the many systems used within the rail industry. Our networking technology is used to support both critical and non-critical rail systems installed in hundreds of applications around the world. The wide range of robust, cybersecure and rail-approved networking products are specifically designed for on-board, trackside or train-to-ground applications. Our extensive experience and technology make it easier for you to create the robust, secure, and efficient data networks the rail industry relies on.



#### Westermo provides



Uninterupted service 24/7



Long operational



High level of cybersecurity



Easy configuration and mantainance

# Westermo

## Robust and Secure Data Communication Networks

To provide the best support globally, we have local presence through our authorised distributors and Westermo offices in more than 40 countries worldwide.

Visit www.westermo.com to find your nearest Westermo office or distributor.

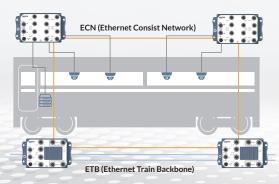




### On-board CCTV and network recorder connectivity

The Westermo Viper switch family offers gigabit Ethernet support to build high-definition onboard video surveillance networks for modern passenger safety systems.

Modern video surveillance systems demand high-definition video recording as a pre-requisite for ensuring passenger safety as well as ensuring global security standards are followed onboard trains. Having a Gigabit consist network coupled with a modern network video recorder (NVR) will ensure a modern and robust video surveillance system that is fully EN50155 compliant to guarantee high definition and high-speed video monitoring and recording onboard trains. Depending on network requirements, multiple Gbit ports are available along with PoE support to support modern high definition cameras and network video recorders.



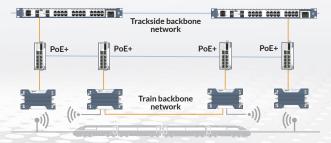
## Seamless handover train to ground connectivity

Seamless handover train to ground connectivity solutions can be created with the Westermo wireless product range. The data communication systems for railway applications provide data connectivity between the train and the trackside.

Westermo solutions have been deployed to provide CBTC (Communications Based Train Control) and multimedia trainto-ground applications with high availability (24/7) redundant transmission and continuous links at vehicle speeds up to 200 km/h.

Trackside equipment complies to EN50121-4 trackside EMC requirements and onboard WLAN radios the meet EN50155 standard for operation on trains.

> 50121-4 **EN 50155**



#### WLAN access points with in built 5G/LTE routers

Build simple and secure high-speed IoB (Internet on Board) capability using the Westermo Cybox LTE/5G gateway with integral access point. This application ensures minimal integration in the vehicle with no requirement for comms between carriages. The CYBOX GW2-P is a combination device which includes a 5G/LTE 4x4MIMO modem combined with 2x AC 3x3MIMO WLAN access points (2.4GHz and 5GHz). Additionally, each GW2-P device can be fitted with an integrated SSD (Solid-State Drive) that can be utilised for serving on-train third party authentication software. The use of a single combined router / gateway device in each carriage negates the need for any additional networking components and so simplifies the onboard connectivity solution and increases data transfer speeds over a single centralised networked router solution.





#### **Key benefits**

- Fully EN50155 compliant
- Gigabit Ethernet support for state-of-the-art NVR (Network Video Recorder)
- Robust, high speed and compact onboard CCTV network

### Key benefits

- Fully EN50155 compliant
- Long lifecycle
- High output power

#### **Key benefits**

- Minimal cabling and configuration
- Latest communication technologies
- Easy-to-use web interface for easy remote configuration