TerraBridge

Delivering wireless connectivity at 5G speeds for station and depot data offload.

Trains today are equipped with numerous CCTV cameras and sensors to continuously record onboard data, used to enhance safety and operations. Data recorded on trains can accumulate over a single day into terabytes, therefore requiring frequent and quick offload, either when trains arrive to the station or park in the depot.

In addition, passenger information systems (PIS) and onboard multimedia systems require frequent updating and uploading of new data to the trains.

Wireless offload solutions available today are limited by:

- Insufficient throughput to address the quantity of data requiring offloading, especially when considering limited instances to connect.
- Limited spectrum in the 5 GHz / 2.4 GHz bands prevents effective connectivity when multiple trains are parked in the depot.
- Interference from other Wi-Fi systems operating in the same bands can degrade offload performance.

TerraBridge Highlights:

- 5G speeds based on the 60GHz millimeter-wave, license free spectrum
- Throughput >1.5Gbps
- Uniquely designed for railway applications
- Minimal footprint, low visual impact
- Minimal setup and configuration
- Ideal for short range connectivity
- Easy to install with zero maintenance

RADWIN's TerraBridge enables automatic, high capacity connectivity to the train as soon as it arrives to the station or terminates its journey when reaching the depot.

TerraBridge is based on mmWave, 60GHz technology enabling ultra-high throughput of over 1.5Gbps for data offload or upload.

TerraBridge's small footprint and auto-connect functionality make it an ideal solution for upgrading stations and depots to high speed data offload spots. Designed to operate in tough environments, alongside IP69k rating and practically zero maintenance requirements, TerraBridge enables train operators to migrate to 5G speeds with minimal cost requirements.

Technical highlights:

Throughput:	1.5 Gbps
Latency:	Maximum<4msec; Average <2msec (for 90% load)
Power:	PoE Gbe interface, 802.3af
Connector:	M12 X-coded connector
Operating Temperatures:	-40° to 70°C / -40° to 158°F
Environmental:	IP-69K, NEMA-type 4
Railway standards:	EN50155, EN50121, EN61373, EN45545
Antenna:	integrated inside the radio unit
Size (HxWxD):	12x12x2.25 cm / 4.7x4.7x1 in

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