

ETCS On-board >> Equipment



ETCS Level 2 On-board Equipment

The on-board equipment is a system independently developed by HollySys on the basis of on-board vital platform. It supervises the operation of the trains according to the information received from the trackside subsystems and the driver's operation, and outputs braking when the train is detected to be overspeed to ensure the safe operation of the train. The on-board equipment consists of VC, BTM, TIU, JRU, speed sensors, DMI and other components.

>> Features



Safety

- **SIL4** Certified VC, BTM; **SIL2** Certified DMI
- **"2x2oo2" Redundancy Structure** ensures safety and reliability



Interoperability

- **TSI** Certified for ERTMS ETCS Level 1 and Level 2
- Ongoing development and certification for ETCS **TSI Baseline 4** and **ATO**



Real-time

- Preemptive RTOS: **Real-time** and **deterministic** for high reliability
- Task Switch $\leq 60\mu s$, Interrupt Latency $\leq 50\mu s$, Minimum Response Time $\leq 2ms$



Flexibility

- Modular design, compact, integrated
- **Flexible** to install, **easy** to deploy, **applicable** to various train types



Compatibility

- **Flexible** interfaces for high compatibility
- **Backward-compatible** hardware architecture for ETCS L1/L2



Configurability

- Support **satellite positioning** and **ATO**
- Ready for diverse operating scenarios: high-speed railways, regional railways, and commuter lines

>> References



HollySys provided self-developed ETCS Level 2 on-board equipment to commuter trains manufactured by the **Turkish Railway Vehicles Industry Inc. (TÜRASAŞ)**, and to the **Passenger Rail Agency of South Africa (PRASA)** in the KwaZulu-Natal (KZN) Service Region.

