COBALT
aselsan

ONBOARD

LEVEL 1 & 2 ON-BOARD TRAIN CONTROL SYSTEM

#Transportation

COMPATIBLE WITH INTERNATIONAL RAILWAY STANDARDS
CONFIGURABLE TO ANY RAILWAY VEHICLE WITH ITS MODULAR AND COMPACT STRUCTURE
SIL 4 SAFETY LEVEL AND HIGH AVAILABILITY

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ASELSAN ERTMS/ETCS On-Board System is based on the ERTMS traffic management system standard. An infrastructure for smart and safe railway operation is provided. Efficiency can be maximized thanks to integrated employee planning, analysis, management, security, information systems and maintenance functions.

- Compatible with ETCS Baseline 4 Release 1 [(ETCS B4 R1) or higher] and Global System for Mobile Communications – Railway Baseline 1 Maintenance Release 1 (GSM-R B1 MR1)
- Compatible with all documents (Subsets) defined by TSI CCS:2023/1695
- System safety level is SIL-4
- Compatible with ERTMS/ETCS Level 1 and Level 2
- Compatible with CENELEC standards (EN 50126, EN 50128 and EN 50129)
- Compatible with safe communication infrastructure EN 50159 standard
- Compatible with EN 50155, EN 50125-1 and EN 45545 standards.

ERTMS/ETCS On-Board System Units
- European Vital Computer (EVC)
- BTM Subsystem
- GSM-R Data Radio Subsystem
- Driver Machine Interface (DMI)
- Juridical Recorder Unit (JRU)
- Odometer Subsystem
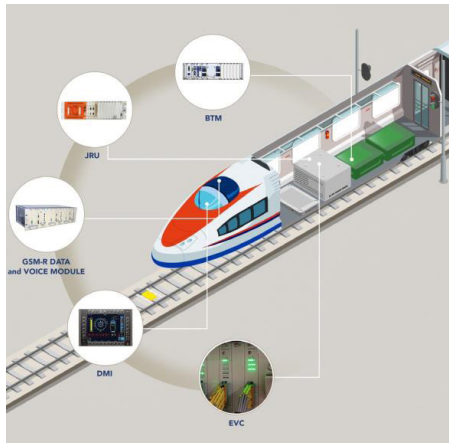
EVC
- Performs train control and protection according to information such as movement authorization, speed limits, speed restrictions in the relevant mode and temporary speed restrictions.
- Performs functions as SIL-4 with 99.99% availability.
- Compatible with EN 50128 and EN 50129 standards
- Provides diagnostic data for fault and maintenance purposes

BTM Subsystem
- Used for localization and receiving data from the track
- Compatible with Subset-036 and Subset-085

GSM-R Data Radio Subsystem
- Sends and receives messages for train protection and control by establishing a communication session with the Radio Block Center (RBC)
- Compatible with EIRENE FRS and EIRENE SRS

DMI
- Shows the basic information defined in standard to driver and enables to enter data by driver when needed
- Safety level is SIL-4
- Compatible with ERA ERTMS 015560

JRU
- Used for legal data recording for accident or investigation purposes
- Compatible with Subset-027 and IEEE1482.1:2013

Odometer Subsystem
- Performs functions such as speed measurement, position measurement and direction detection as SIL-4 according to

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