TMH | SMART SYSTEMS

CTRL@TRACK

Computer-Based Track Circuit System

CTRL@TRACK

TMH SMART SYSTEMS

Computer-based system monitors track circuits status and generates code. CTRL@TRACK is a key element of interlocking system.

KEY FUNCTIONS

- **Track section vacancy/occupancy control**
- **Generating and sending cab signaling code to the track circuit** (ALS-ARS codes for metro)
- **Interface both with relay and computer-based interlocking systems**
- **Record-keeping of system's operation**

CUSTOMER BENIFITS

- **Adaptation and certification for EU and CIS markets**
- **Compact design: track circuit + coding**
- **Shift to predictive maintenance** (instead of scheduled maintenance)
- **Diagnostics and self-checking functions**
- **Interface flexibility**

APPLICATION SCOPE

URBAN TRANSPORT (INCL. METRO)

MAINLINE TRANSPORT

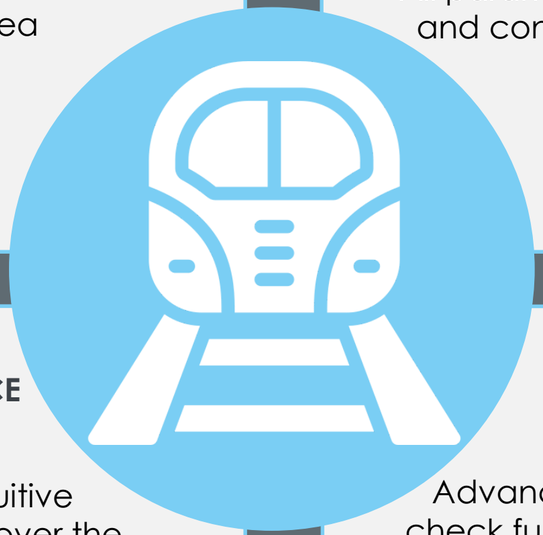
CTRL@TRACK fulfilling customer requirements

COMPACT DESIGN

Less equipment and spare parts – more usable area

EASY CONTROL

All parameters can be managed and controlled from automated work station



EASY-TO-USE INTERFACE

Data display in the intuitive interface - full control over the system

SMART DIAGNOSTICS

Advanced diagnostic and self-check functions are built into the system and lead to maintenance cost savings

2

interface options
with interlocking systems

CTRL@TRACK100
relay based interface

OR

CTRL@TRACK100C
digital interface

CTRL@TRACK SALES FOOTPRINT

283

CTRL@TRACK100
units supplied

3 YEARS SUPPLY PLAN

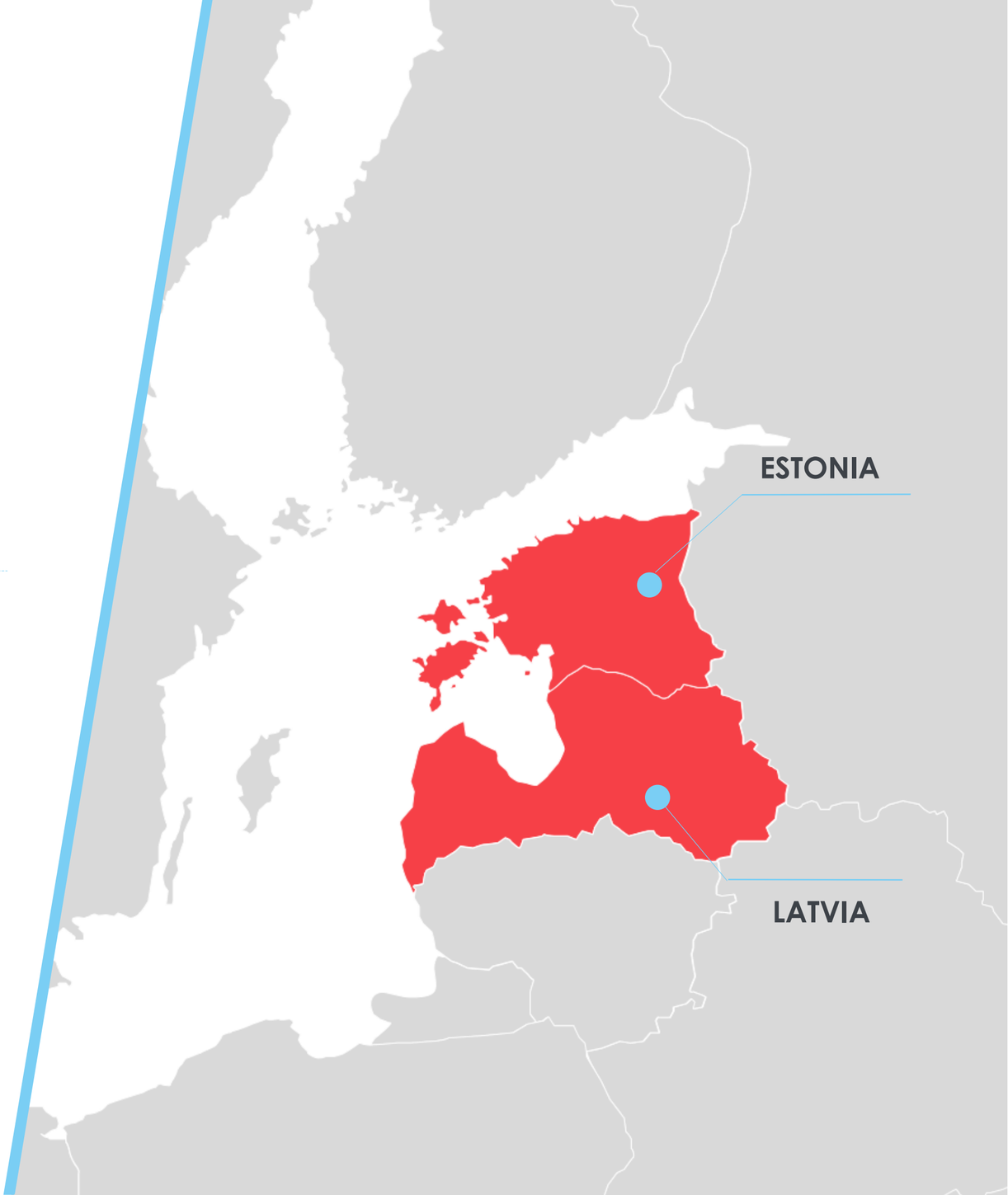
599

CTRL@TRACK100*
units to supply

470

CTRL@TRACK100C
units to supply

* preliminary supply volume



CTRL@TRACK100 STRUCTURE

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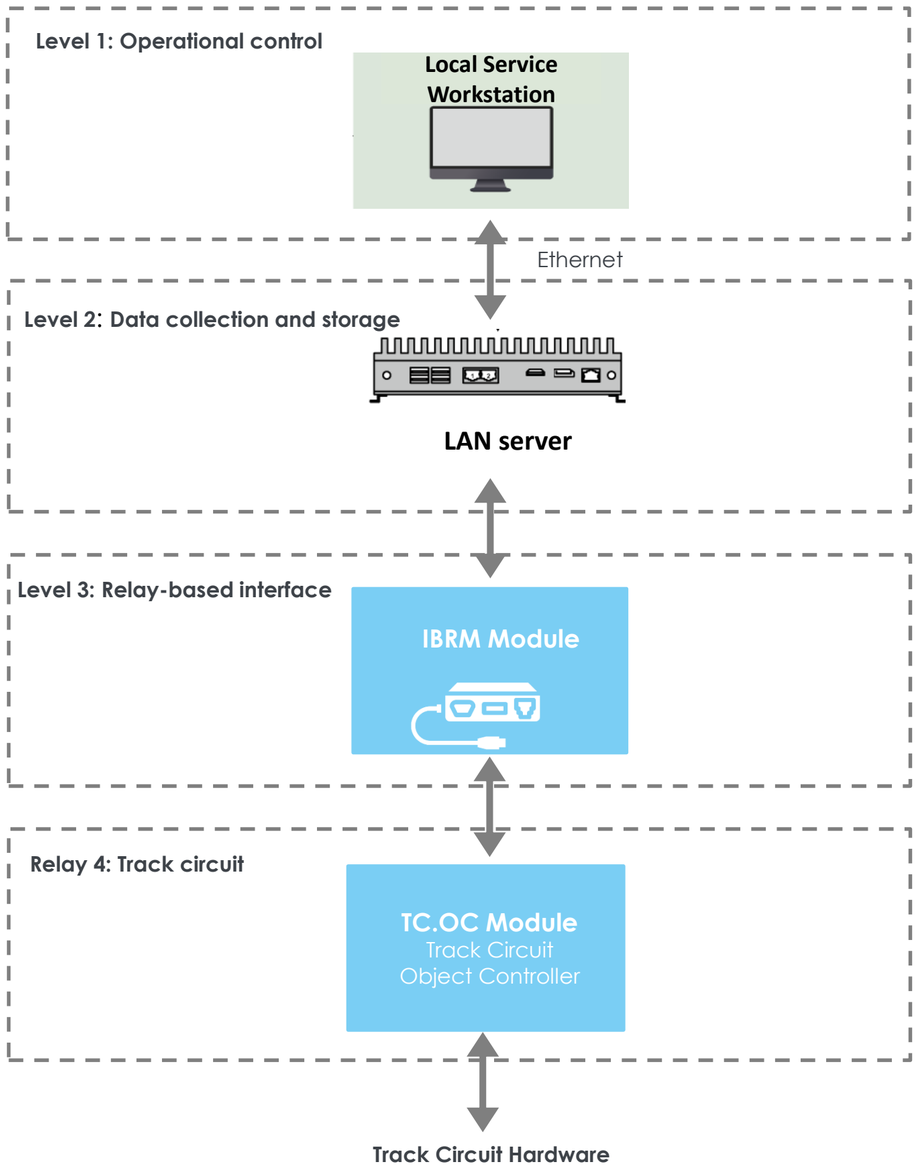
Architecture



Levels' key functions

HUMAN MACHINE INTERFACE

- Display of status and diagnostic information
- Voltage control of AFTC* and cab signaling codes (ALS-ARS codes for metro)
- Modification of generated carrier frequencies of cab signaling signals (25, 50, 75 Hz)
- Event log access

LAN server

- Reception of status and diagnostic information
- Storage of all notifications and system's status information
- Web interface with local service station via Ethernet

IBRM module

- Issuing commands for the TC.OC to generate a cab signaling code (ALS-ARS codes for metro)
- Voltage output to track relay coils
- Operation self-test

TC.OC module

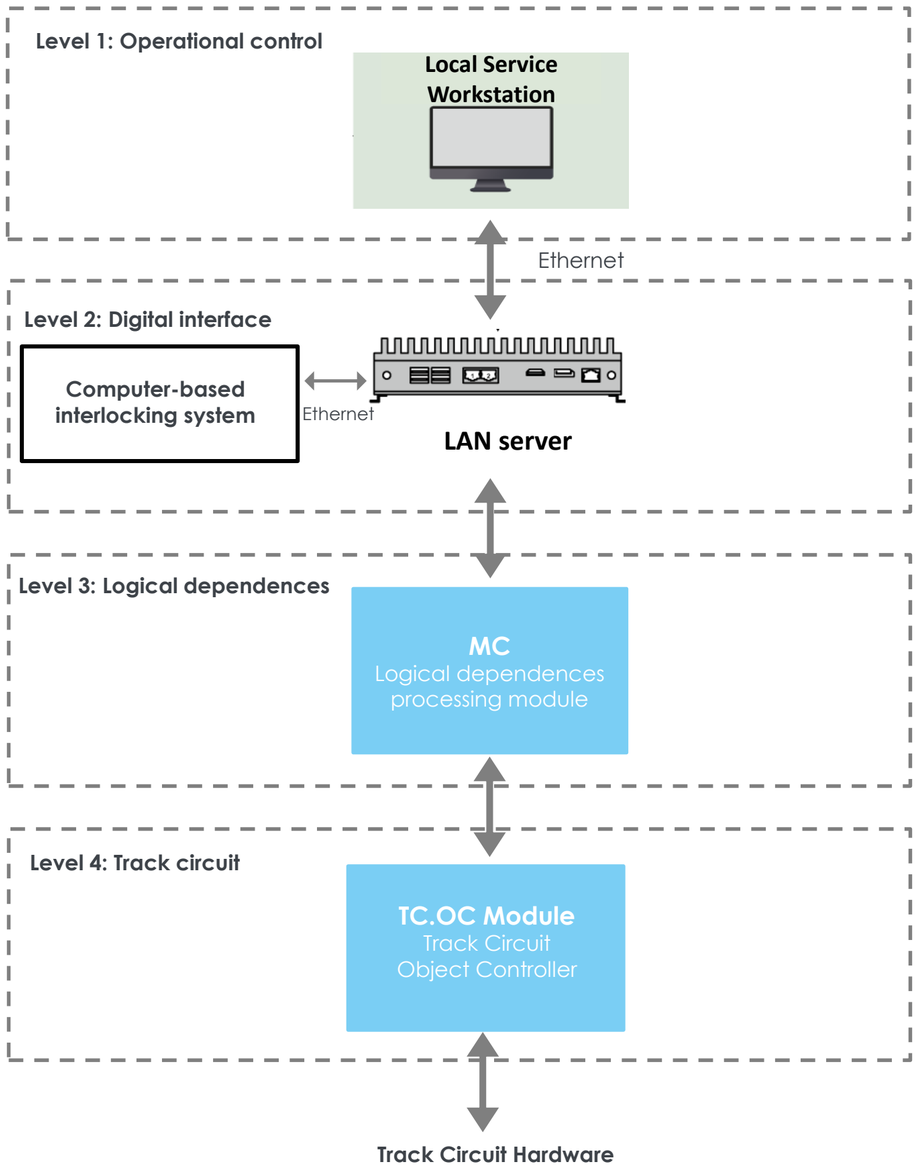
- Reception of AFTC code
- Simultaneous AFTC and cab signaling code generation (ALS-ARS codes for metro)
- Operation self-test

* audio frequency track circuits

CTRL@TRACK100C STRUCTURE

TMH SMART SYSTEMS

Architecture



Levels' key functions

HUMAN MACHINE INTERFACE

- Display of status and diagnostic information
- Voltage control of AFTC* and cab signaling codes (ALS-ARS codes for metro)
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LAN server

- Reception of status and diagnostic information
- Storage of all notifications and system's status information
- Web interface with local service station via Ethernet
- Interface gateway with computer-based interlocking system

MC module

- Processing of logical dependences
- Control command generation for TC.OC module
- Reception of status data from TC.OC module
- Data generation for computer-based interlocking system
- Data processing from computer-based interlocking system

TC.OC module

- AFTC signal reception mode
- Simultaneous AFTC and cab signaling code generation (ALS-ARS codes for metro)
- Operation self-test

* audio frequency track circuits

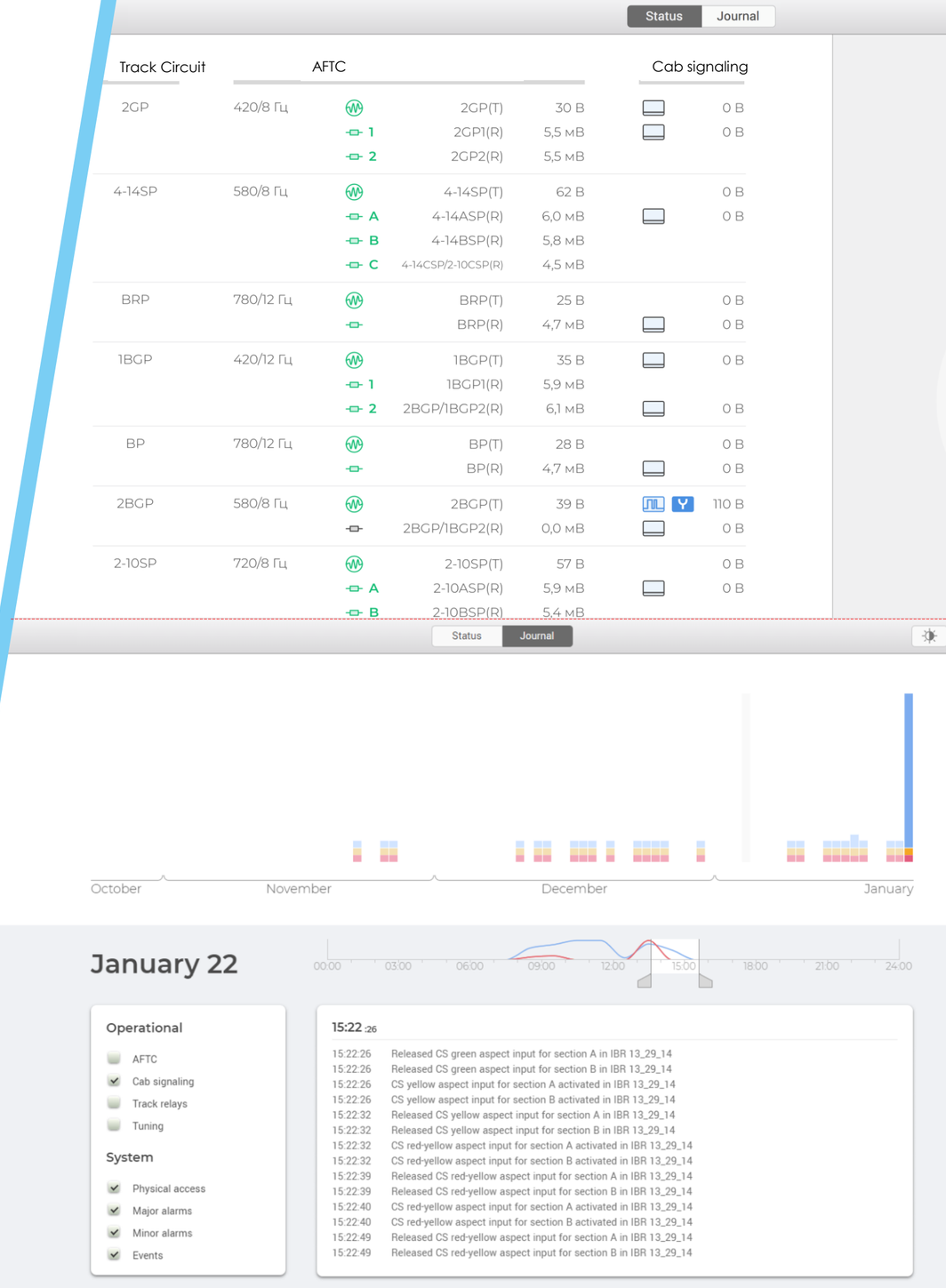
WORKSTATION SUBSYSTEM*

USER-FRIENDLY INTERFACE

- Modification of AFTC and cab signaling signal voltage (ALS-ARS codes for metro), as well as cab signaling carrier frequency (25, 50 or 75 Hz)
- Indication of Track Circuits occupancy/vacancy status
- Indication of generated cab signaling code
- Electrical diagnostic of AFTC, cab signaling code, track relay output voltage
- Electrical diagnostic of AFTC received signal voltage

CONTINIOUS CONTROL

- Event log in the form of color-coded statistical chart of operational and system's events allows for quick and easy analysis
- Simple search and filtering of events



*Interface to work with the system and store information

LET’S TALK!

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- discover more about TMH Smart Systems