

TwinTrain - Real-Time

Real-time monitoring and
simulation



SPHEREA

TwinTrain – Real-Time

Automated data recording, monitoring and simulation of signals to solve complex error patterns.

If fault cases only occur in certain situations during operation, their recording and analysis can quickly become very complicated. Together with an expert from SPHEREA, a concept for data acquisition is developed. The TwinTrain-Real-Time records various electrical and electronic signals as well as bus communication in real time. The display of the recorded data can be adapted depending on the fault. The TwinTrain-Real-Time can detect previously defined fault patterns and inform the user in real time about the occurrence. As part of the troubleshooting process, the system can simulate various signals in a model-based manner. In addition, the TwinTrain-Real-Time can be configured for background monitoring during test drives. No active supervision is required for this.

Advantages

- More safety in troubleshooting/failure analysis/failure documentation through accurate measurements
- Exchange with experts for measurement and test concepts
- Re-enactment of (fault) situations
- Targeted modification of signal parameters to find solutions
- Use in the workshop environment as well as during test drives

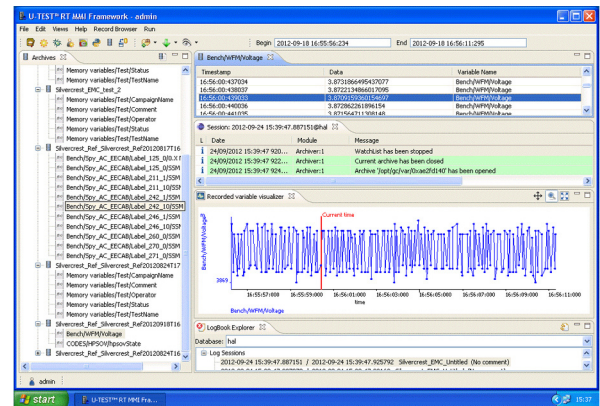


Technical Highlights

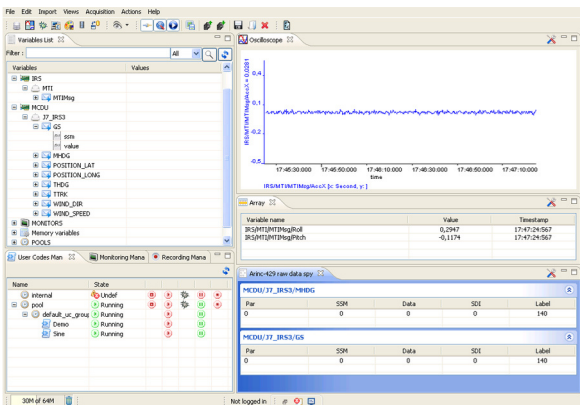
Various HW interfaces



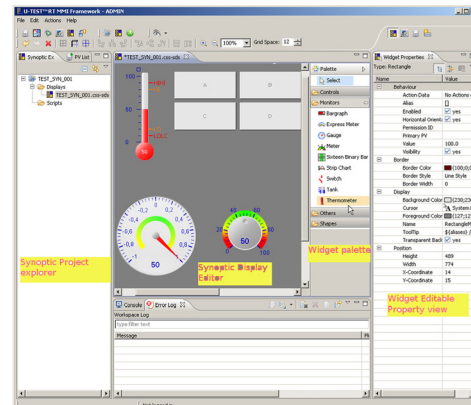
Data analysis



Data recording



Customised HMI



Field of application

- Maintenance
- Commissioning
- System Verification

Technical Parameters

Data buses

MVB - ESD and EMD via hardware setting (1x)

Ethernet (1x)

CAN (1x, optional)

WTB (1x, optional)

Digital I/O

8 digital inputs 0 V/24 V

8 digital outputs 0 V/24 V

Analogue I/O

8 analogue inputs 0...+-10 V

8 analogue inputs 0/4...20 mA

2/4 analogue inputs for resistance measurement (configurable whether 3- or 4-wire measurement)

4 analogue outputs 0...+-10 V

4 analogue outputs 0...+-20 mA

Relay

2 relays 230 VAC- 1A / 50 VDC - 15A

Communication

W-Lan

GSM 3G/4G/5G (optional)

Positioning

GPS (optional)

Other

USB (1x)

Remote tablet/pad

Local touch screen (optional)

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in safety and mobility!



www.spherea.de

SPHEREA GmbH
Magirus-Deutz-Strasse 13
89077 Ulm

T +49 (0) 731 17630 0

F +49 (0) 731 17630 109

E sales@spherea.de



SPHEREA