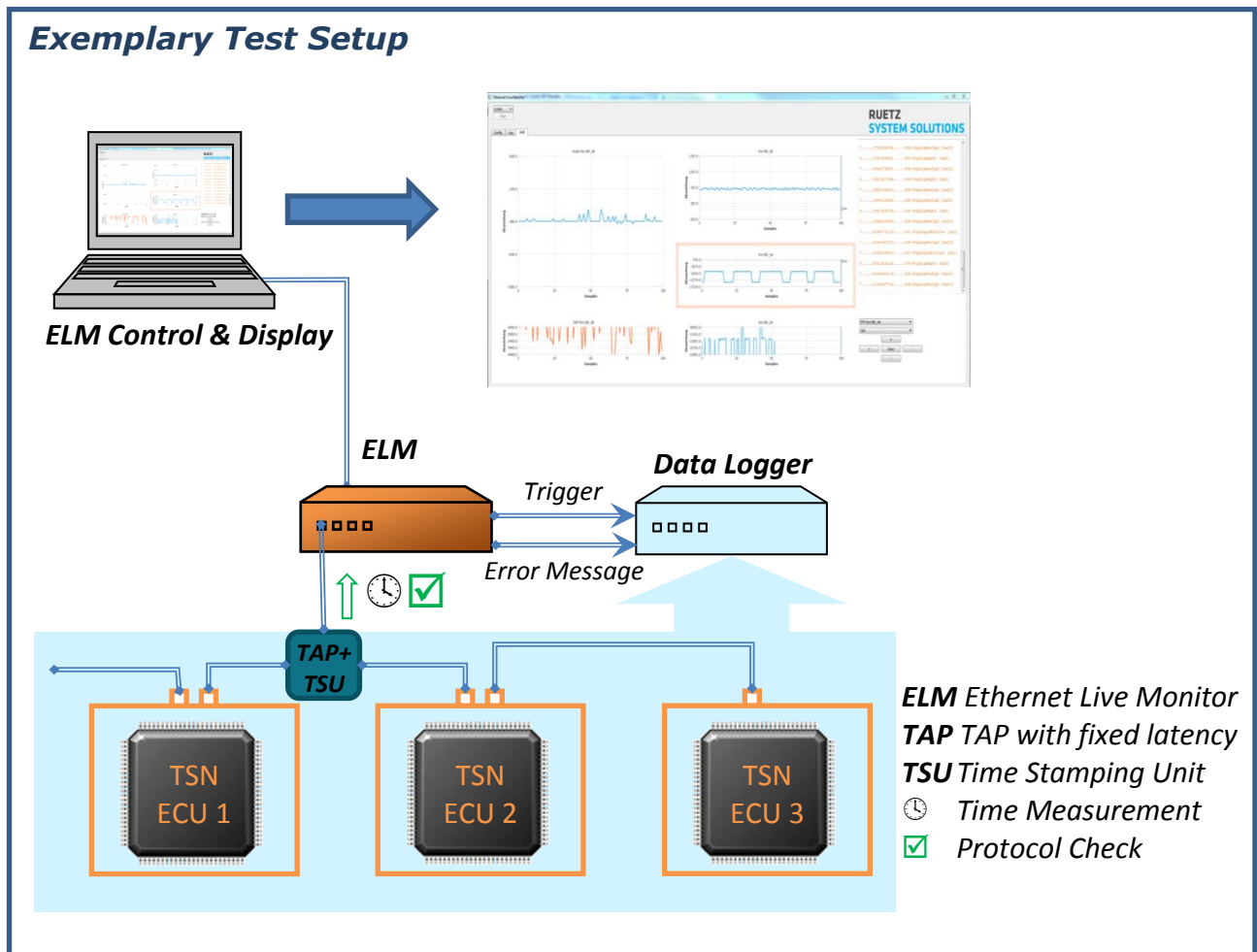


## Technical Data Sheet

Ethernet Live Monitor 1000BASE-T

V 1.0



- ⇒ The Ethernet Live Monitor (ELM) allows the testing of TSN/AVB implementations in Ethernet networks.
- ⇒ Implemented rule checkers identify errors in real time and initiate a recording in the data logger through the trigger output.
- ⇒ An additional monitoring function displays analysis data in real time on the PC client and informs about time deviation of the TSN/AVB implementation.

### **Functionalities**

- ⇒ In system diagnosis of AVB/TSN in real time
- ⇒ Support of 802.1AS, 1722/1722a as standard including clock reference streams (CRF)
- ⇒ Analysis of protocol mechanisms and time requirements relating to time synchronization/traffic shaping
- ⇒ Configuration and monitoring of user-defined protocol formats (e.g. SOME/IP, UDP-NM, etc.)

### **AVB/TSN Rule Checker with Trigger**

- ⇒ Over 40 complex test algorithms for 802.1AS, 1722/1722a
- ⇒ Evaluation of time-sensitive protocol data
- ⇒ Freely definable test patterns for further protocol formats
- ⇒ Trigger output for data logger control
- ⇒ Extensive configuration of the rule checker through PC application
- ⇒ Test algorithms are based on actual error scenarios from our test laboratory

### **PC Client for AVB/TSN Monitoring Function**

- ⇒ Real-time logging function of diagnosed errors
- ⇒ Display of chronological sequence of time synchronization according to 802.1AS (deviation, drift, inconsistency ...)
- ⇒ Display of chronological sequence of data transport according to 1722/ 1722a (deviation, quality of traffic shaping ...)
- ⇒ Quality comparison of individual protocol process at different net positions

### **Technical Data**

- ⇒ Compact stand-alone device
- ⇒ Operating voltage 9 to 16 volts
- ⇒ Dimensions app. 130x55x170 mm
- ⇒ Robust body
- ⇒ Automotive plug connectors

### **System Requirements**

- ⇒ For logging: X2E data logger (tested)
- ⇒ For data tapping: Technica Spy/Spy Mini (tested)