

# DEUTA

## Success Story

DEUTA Crash Hardenend Event Recorder for SEPTA's PTC

### About DEUTA

DEUTA-WERKE is a market leading international supplier of electronic systems to the freight and passenger rail industry. Operating in Europe, Asia, Middle East, and the Americas.

DEUTA's products include driver display technologies, odometry and positioning systems as well as event recorders and safety relevant controllers.

DEUTA-America Corp. is the U.S. operating entity of DEUTA-WERKE.



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01\_2015\_US

**DEUTA AMERICA** 

## DEUTA Crash Hardened Event Recorder for SEPTA's PTC

### Customer & Requirements

DEUTA, the international market leading manufacturer of locomotive and carborne railway components, supplies FRA event recorder systems for the **Positive Train Control project** of the **Southeastern Pennsylvania Transportation Authority (SEPTA)**.

This project requires **upgrading** the entire SEPTA commuter railroad fleet based on **FRA CFR 49 Part 236 Subpart I. 317 vehicles in 13 different vehicle types** are being equipped with one recorder version – the new **DEUTA REDBOXstar**.

### Why DEUTA?

» The DEUTA REDBOXstar was chosen based on its versatility to accommodate analog, digital, serial, USB and Ethernet interfaces.

Thanks to DEUTA`s technical support and full-length documentation, installation, maintenance and troubleshooting is a smooth process!«

*Jian Sun, Principal Project Engineer, Ansaldo STS USA*

DEUTA's REDBOXstar was chosen based on **its versatility** to accommodate analog, digital, serial, USB, and Ethernet interfaces. The memory module provides **sufficient and stable data storage**.

The REDBOXstar integrates the specific requirements for **integration in FRA/IEEE environments**, accompanied with a **web-based maintenance tool** and **ADS4 playback software**.

DEUTA's REDBOXstar variants offer **flexible configuration and compact dimensions** - ideal for new vehicle equipment, retrofit and PTC applications in freight locomotives and mass transit vehicles. Data protection is covered by DEUTA **crash hardened memory module PMU 24** (IEEE and FRA compliant).

### »DEUTA Event Recorder REDBOXstar RBS 3 -

For PTC and customized vehicle data«



#### REDBOXstar

- Digital inputs galvanically isolated (4KV)
- Operating temperature: -25°C to +70°C
- Storage temperature: -40°C to +85°C
- Configurable analog inputs
- RS422 and Ethernet vehicle network
- Vehicle data compatible recording
- PTC compatible recording

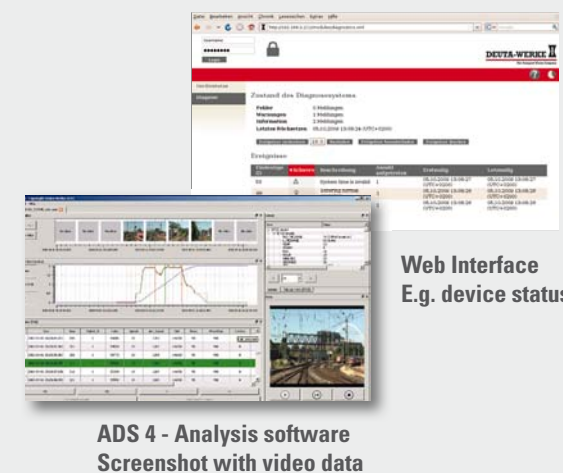
#### Hardware

- Standard power supply nominal value: 37.4 or 74 V (± 30 %)
- Crash hardened memory module with 1 GB (DOT certified)
- Ethernet ports for vehicle network, service and automatic data downloading via WLAN
- Data downloading via card reader unit, download box, ethernet or USB
- RS422 serial interface (isolated)
- Digital and analog inputs according to IEEE1482.1 (isolated)
- MIL Connectors
- Customized mounting plate
- Multi color LED for visual status information

Onboard Software (application)

Onboard Maintenance Web Interface

Playback Software (Data analysis)



ADS 4 - Analysis software  
Screenshot with video data

Web Interface  
E.g. device status

### Project Highlights

- **Engineering Competence:** 317 vehicles with **13 different vehicle types** were equipped with the REDBOXstar
- **One for all:** Upgrade of the entire SEPTA commuter railroad fleet based on FRA CFR 49 Part 236 Subpart I
- **Versatility:** DEUTA REDBOXstar accommodates analog, digital, serial, USB, and Ethernet interfaces
- **Premium Support:** DEUTA`s technical support and full-length documentation provide a smooth installation, maintenance and troubleshooting
- **Norms & Features:** The REDBOXstar is FRA/IEEE compliant, DOT certified and interoperable with PTC

