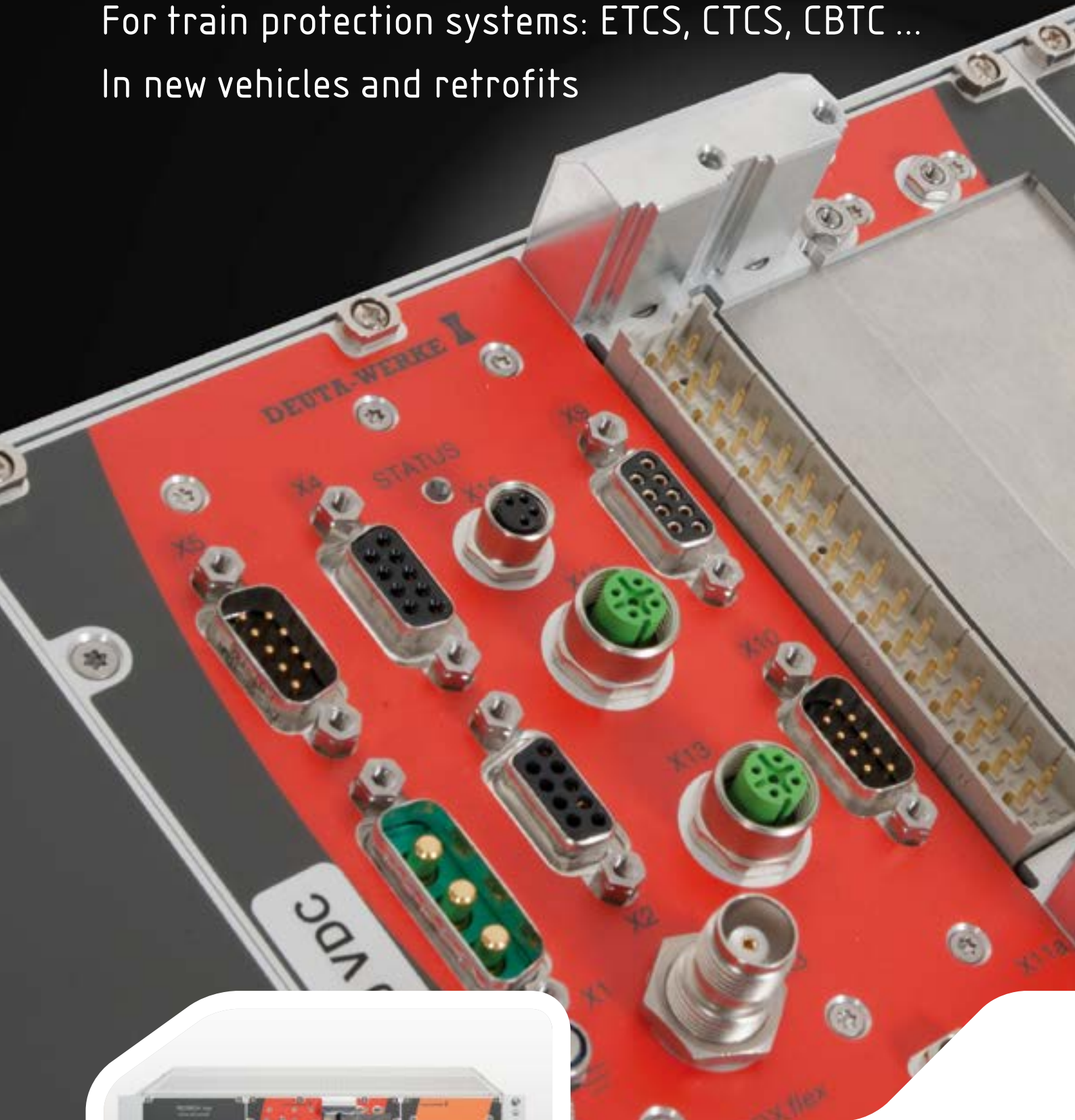


DEUTA REDBOXtop signalling

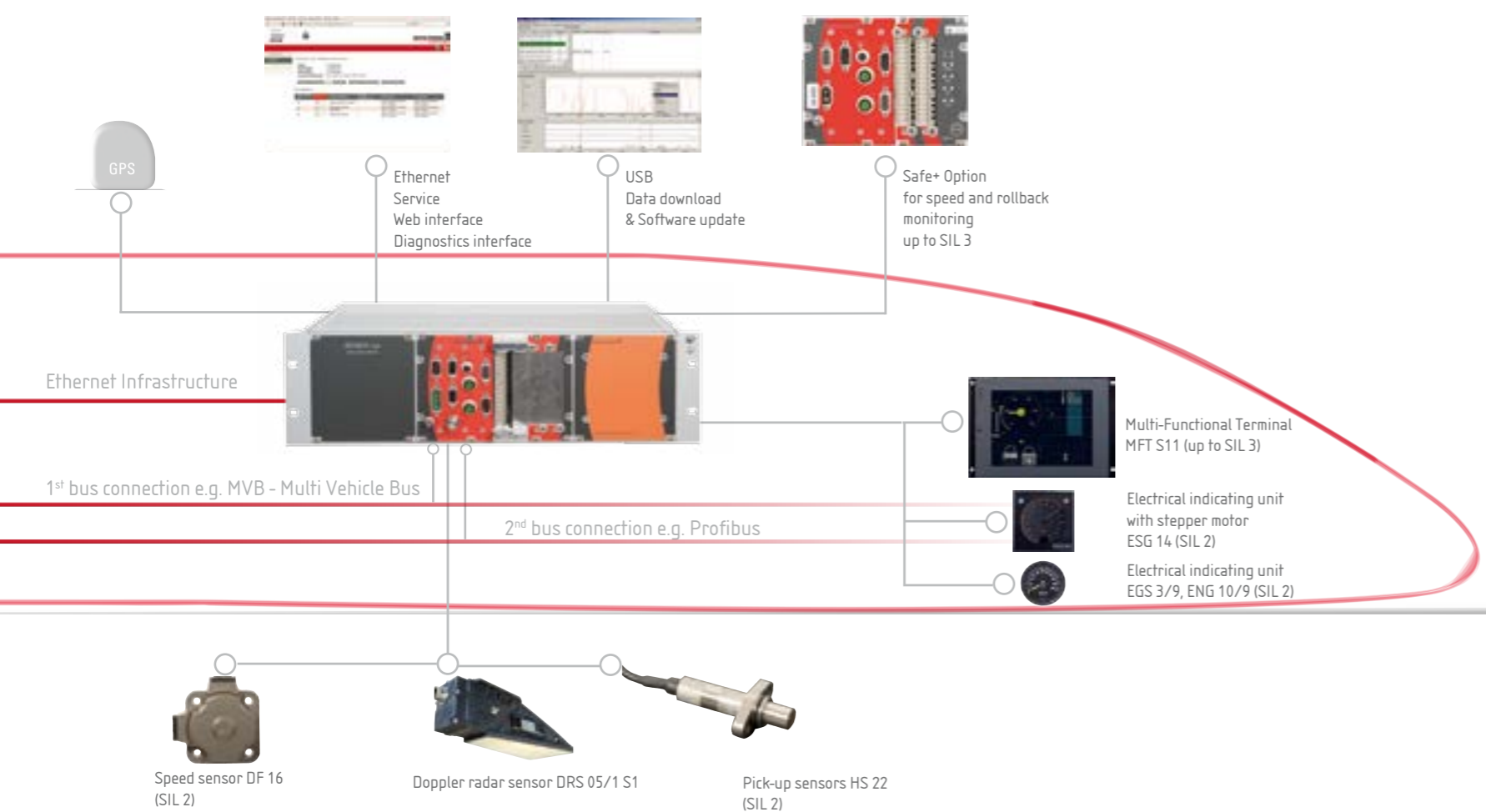
For train protection systems: ETCS, CTCS, CBTC ...
In new vehicles and retrofits



»DEUTA REDBOX^{top} signalling -

easy to combine in the system!«

- **Combinable:** With DEUTA sensors, indicating units and multi-functional terminals
- **Flexible:** Compatible with your train protection hardware and software
- **Safe:** Travel data storage on an integrated Crash Protected Memory
- **Versatile:** One hardware platform with many possible variations
- **Individual:** Adapted to your functional requirements
- **Convenient:** Service functions for reading out and evaluating the travel data



»Your train protection memory«

Worldwide train protection

The REDBOX^{top} signalling records all of the required train protection data. This flexible REDBOX variant is used as Juridical Recorder Unit in train protection systems such as e.g. ETCS, CTCS or CBTS on locomotives, high speed trains, regional vehicles and metros. The REDBOX^{top} signalling is compatible with all ETCS/CTCS levels as well as CENELEC standards Baseline 2 and Baseline 3.

In new vehicles and as plug-and-play replacement

The basic combination of the REDBOX^{top} signalling consists of a DEUTA REDBOX^{flex} and an integrated Crash Protected Memory PMU 22. The hardware concept of the REDBOX^{top} signalling allows free space for all areas of application: In new vehicles and as plug-and-play replacement in retrofit projects. MVB, Ethernet and profibus await their use in the communication network of your train protection.

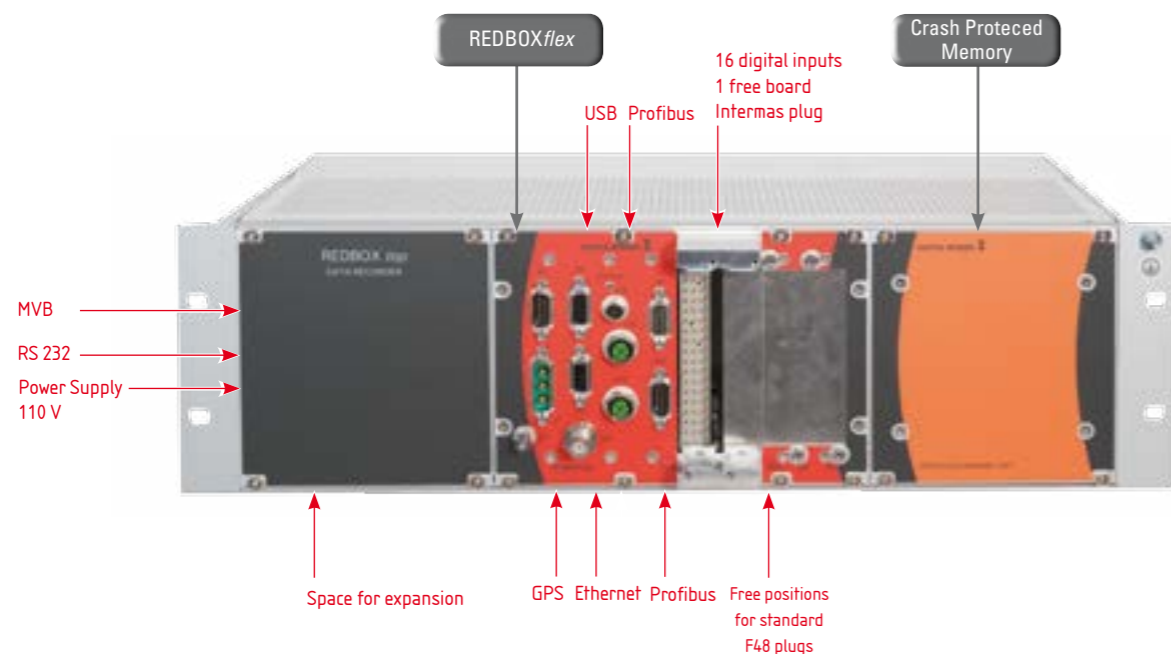
In the hands of experts

Our experts accompany you with transparent processes during the entire project planning and usage phase. Localised approvals and the configuration of your REDBOX^{top} signalling comply with the latest standards.



»DEUTA REDBOX^{top} signalling-

for new vehicles and retrofit equipment!«

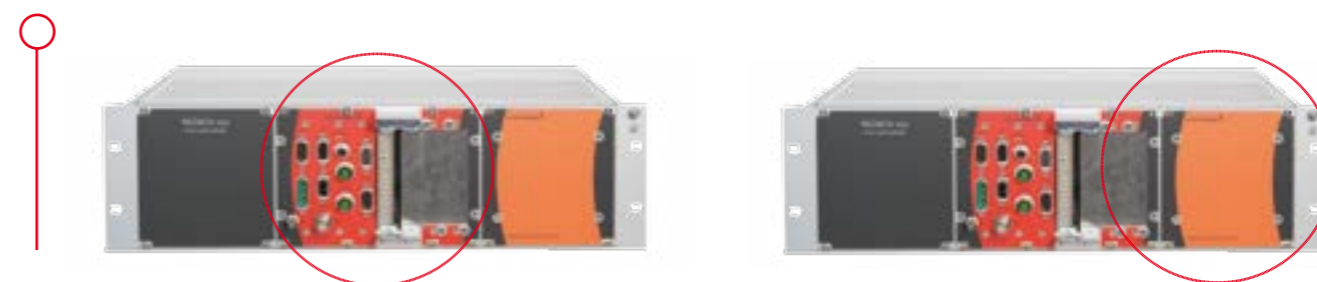


Protected and visible at all times

The travel data are on a 2 GB memory card and protected from manipulation and unauthorised data removal - ready for data download via USB and ensuing travel analysis with the convenient evaluation software ADS 4. The memory card offers adequate memory space for the large volumes of CENELEC Baseline 3 data.

Globally available

Use the opportunity of worldwide access and diagnostics function with the REDBOX^{top} signalling. The integrated web interface functions on standard web browsers of many different operating systems and is practical and easy to operate.



Feature/Specification	REDBOX ^{top} signalling
DEUTA REDBOX	DEUTA REDBOX ^{flex}
Memory size	2 GB memory card
Power supply	110 VDC
Temperature range	-25°C to +70°C (operation) -40°C to +85°C (storage)
Housing	19" Rack - 84 TU
Service PC connection	1 USB
MVB	ESD or EMD
MVB	DSUB-9, 2 plugs
USB CPM front face	M8
Ethernet	2 plugs managed by int. switch
Ethernet service	M12
Ethernet bus	M12
Internal GPS receiver	yes, TNG plug
RS 232	1
RS 232 plug	DSUB-9
Profibus	1 channel, 2 plugs, DSUB-9
Slot 1	Intermas plug 16 x DI
Slot 1	Intermas plug - free for subsequent expansions
Slot 3	Harting plug - free for subsequent expansions
Slot 4	Harting plug - free for subsequent expansions
Digital inputs	16
Mechanics	
Width	482.6 mm
Height	132.55 mm
Depth	238.4 mm
Weight	approx. 6 kg
Protection category	IP 20
Standards	EN 50155, EN 50121-3-2, EN 45545,

Feature/Specification	Crash Protected Memory PMU 22 aab
Power consumption	max. 180 mA, 5 V
Temperature range	-25°C to +70°C (operation) -40°C to +85°C (storage)
Storage medium	Int. Compact Flash 2 GB
Static pressure	20 kN (25 mm diam./1 min.)
Shock	100 g peak (10 ms duration)
Thermal load capacity	700°C (5 min.)
Tightness	60 minutes each: Mains water, Fire extinguisher foam, coolant 134 A
Magnetic field	Current flow from 0 to 64 kA at a slew rate of 107 A/s and a distance of 1 m
Mechanics	
Width	482.6 mm
Height	132.55 mm
Depth	238.4 mm
Weight	approx. 2 kg
Protection category	IP 64
Standards	GM/RT 2472/06-2002 IEEE 1482.1 or FRA 49 CFR 229 possible

»DEUTA ADS 4 -

efficient Evaluation Software!«



Convenient download via USB stick or Ethernet

The data medium protects the travel data from manipulation. You can load the data from the recorder either with a USB stick or an Ethernet connection. A password reliably protects the output of your travel data from unauthorised access. ETCS, train security, video and audio data are read in with filter functions for easy data analysis.

Graphics and tables synchronously on one screen

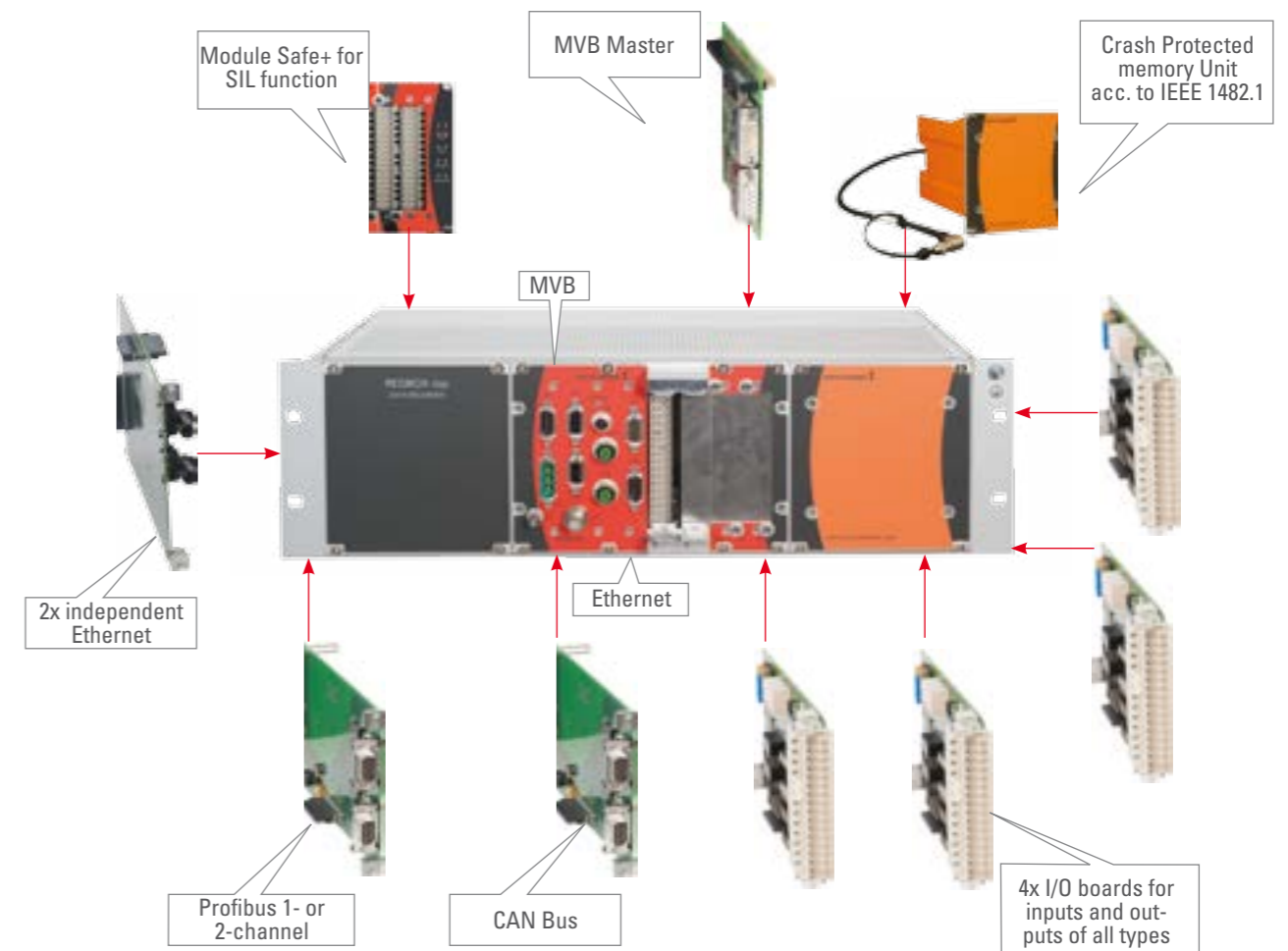
The innovative user interface of the ADS 4 presents all your data clearly at a glance with freely configurable windows and tabs. Speed, analogue and digital tracks, ETCS data and train security data are displayed synchronously. You can choose to view the data chronologically (time-based) or for a certain stretch of the track (route-based). The table display shows decoded signals and messages chronologically. Additional items of information such as vehicle number, owner and data scope are also provided.

GPS tracking and video data for even greater clarity

Optional GPS and video data make your data even more transparent. You can track the route virtually on a railmap on the GPS screen. With front video, for example, you also receive a clear view of the route and additional information about behavioural causes.

»DEUTA REDBOXtop signalling -

modular and variable!«



For every application there is a right DEUTA REDBOXtop signalling

Whatever area of application you are planning for your DEUTA REDBOXtop signalling – the basic equipment is identical: A uniform platform for all REDBOX variants. The unit core consisting of the communication structure, the microprocessor and the memory module forms the solid basis. Depending on area of application, the REDBOXtop signalling is variably configured. Consistently developed, produced, tested and qualified by DEUTA staff, actively accompanied by our obsolescence management.

Make the DEUTA REDBOXtop signalling the heart of your train protection!

DEUTA-WERKE 



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