Event recorder

The EVR100C is a railway onboard recorder designed to gather data on train operations, detect events, and securely store this information in a memory resistant to fire, immersion, shocks, penetrations, and compression, meeting current European standards.
This recorder is part of the event recorder series developed, engineered, and supplied by MIOS Elettronica specifically for the railway industry.
Data collected by the device can be accessed via Ethernet through specialized PC software or a front USB port for analysis, useful both in the case of accidents or incidents and for monitoring driver behavior and onboard system status.
The EVR100C adheres to applicable European regulations and standards, making it suitable for managing data and event collection from onboard systems such as the TCMS.
Additionally, the device features a GPS receiver to track vehicle location and WiFi connectivity for automatic data transfer.

EN 50155
EN 45545-2
EN 62625-1
EN 14033-1

International Standards & Regulations<
EN 50155/IEC 60571, EN 50121-3-2, EN 45545-2, EN 50657, EN/IEC 62625-1, 49 CFR Part 229 rule, TSI CCS, TSI LOC&PAS, Decreto ANSF n. 01/2016 Annex 1a and Annex 1c, EN 14033-1

Technical Data	
Dimensions (W x H x D)	254 x 191 x 169 mm.
Weight	< 8 kg
IP grade	IP20 according to IEC 60529
Power supply (nominal)	24 Vdc (72Vdc and 110Vdc available on request)
Power Supply Range	16,8 to 30 Vdc (14,4 to 36 Vdc per 100 msec.)
Voltage interruption	Class S2 according to EN 50155/IEC 60571
Supply Change over	Class C1 according to EN 50155/IEC 60571
Consumption	15W typ., 40W max.
Operating Temperature	-40° C a +70° C (+85° C per 10 min.) secondo EN 50155 class OT4 + class ST1 or according IEC 60571 class TX
Storage temperature	-40° C a +85° C
Humidity (non-condensing operation)	<75% yearly average <95% for 30 days in one year
Shocks and vibrations	according IEC 61373 category 1, class B
EMC	according EN 50121-3-2
LED indicators	12 LEDs on the front panel for diagnostic information

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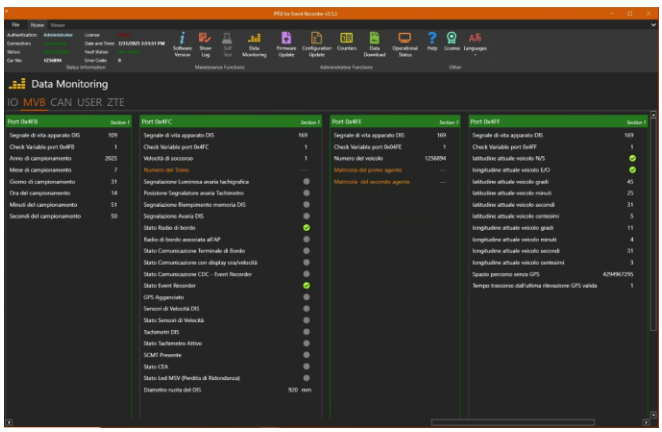
Technical Data (continues)	
CPU Features	Dual core ARM Cortex A9; 256 MB DDR3 RAM; 32 MB QSPI Flash; 8 GB Memoria interna eMMC RTC with supercapacitor back-up
Communication Interfaces	2 M12 D-coded Fast-Ethernet interfaces for communication on vehicle network and/or for data download and maintenance via portable test unit (PTU) 1 SMA connector for GPS/GNSS receiver with LNA 1 SMA connector for WiFi interface 1 DB9 connector for CAN interface 1 front USB-A service port for downloading recorded data
Galvanically isolated I/O interfaces	24 battery-powered digital inputs 3 digital relay outputs (NO, NC, Common) 3 analog inputs (current 0…25 mA) 3 analog inputs (voltage 0…15 V) 2 analog outputs (current 0…20 mA) 2 analog outputs (voltage 0…15 V) 2 frequency inputs (current signal) 2 frequency inputs (voltage signal) 2 power supplies for speed sensors 15V 3W each.
Protected Storage Medium - Memory size	8 GB (larger sizes available on request)
Protected Storage Medium - Protection levels	IEC 62625-1:2013 (parameters “A”)
Fixing method	Adjustable flanges, fixing with 6 screws

Portable Test Unit for Event Recorder



MIOS Elettronica has created PC software designed to extract and display data captured by the Event Recorder.

The application, named PTU4EVR, enables monitoring of the EVR100C unit, performing diagnostics, downloading and converting recorded data into CSV format, as well as updating the device firmware and the EVR100C configuration file.

Furthermore, with a dedicated optional visualization plug-in, PTU4EVR can present the event recorder's stored data in both list and graphical views.