

Tacholink 6



Event Data Recorder Vehicle Health Alerts and Monitoring System

High Resolution Data Recording

Circuitlink has built its reputation over two decades building tough, reliable Event Data Recorders and the T6 is the 6th generation in the series. With two variations in the series, The **T6 EDR** is a powerful onboard and online EDR which has the processing power, memory and communication options to undertake a wide variety of modern telematics functions including the optional onboard data analytics, while the **T6 Analytical Recorder** version carries onboard processing to provide artificial intelligence tasks.

With an internal uninterruptable power supply, the Tacholink 6 is in a class of its own providing an impartial insight to the vehicle's operation and dynamics even when power is lost. Aided by the T5 Remote Accelerometer, the pair provide accident reconstruction grade, SAE J2728 compliant data.

Networking

Integrated onboard networking allows for real time data communication between your fleet and Intelligo. High resolution data is made available for analysis in Intelligo moments after uploading with real time data available instantly for alerts and integration into 3rd party systems such as maintenance management and bus tracking applications via an internal VPN tunnel.

A built-in secure web management portal allows for remote management and instant device diagnostic reports.

Vehicle Communication

The T6 offers compliant interface to modern communication buses such as multiple J1939, J1708 and legislated OBD 2 protocols. These interfaces allow the high accuracy data element recording of drivetrain, safety systems and body control systems which the Tacholink platform is renowned for.

Vehicle Health Alerts and Monitoring

With the capture of over 500 distinct SAE and proprietary data elements from the vehicles CANBus along with diagnostic, brake wear and tire pressure monitoring, understanding what your fleet is doing has never been easier. With the assistance of Intelligo's state of the art analysing and data warehousing services custom insights can be gathered on signals or events.

VHAMS allows not only for the monitoring of distinct data elements and onboard active faults but the configuration control of onboard subsystems. Get a real time view of what equipment is installed and their operating software with the inbuilt functionality of the T6 EDR's VHAMS module and the optional machine learning co-processor.

Positioning

The T6 EDR provides high accuracy, high frequency navigation with the assistance of the integrated dead reckoning GPS receiver. Know where your vehicles are even in the most challenging of locations.

Technical Specification Sheet

Tacholink 6 Event Data Recorder

Tacholink 6 Event Data Recorder Specification Chart

Voltage	24V DC Nominal, 6-36V DC Range
Power Drain	1 W nominal, up to 3W with Cellular Communication
Protection	Reverse polarity and overvoltage
Uninterruptable Power	Integrated, up to 1 hour hold up
Wake on CAN (WoC)	Optional with Expansion Network Card
Computing	
CPU	150MHz ARM Cortex M4
RAM	128MB LPDDR
Mass Storage	32GB non-volatile flash
USB Ports	USB 2.0: 1x Host, 1x OTG
Software	Circuitlink Embedded Platform
Crash Hardened Memory	Optional via USB
Networking	
Ethernet	1x 10/100 MB
WIFI	Integrated 802.11 ac/a/b/g/n
Cellular	Integrated 4G LTE Modem
Bluetooth	Optional 4.2 / BLE
Vehicle Networking	
CAN / SAE J1939	2x 250/500 kbps Onboard Up to 2x additional 250/500 kbps via optional expansion
SAE J1587 / J1708	1x port Onboard 1x port via optional expansion
Optional Interfaces (Available through internal expansion)	- All legislated OBD2 protocols - CAN FD - GMLAN / Ford CAN - MODBus - FlexRay
Serial Ports	1x dedicated RS232
Dedicated Inputs	Ignition / Run Switch, Vehicle Speed, Engine Speed
General I/O	4 Multipurpose Digital / Analogue Inputs 4 Open Collector Outputs 4 PWM Outputs
Sensors - Standard	- Accelerometer (3 Axis 16G) - Gyroscope
Sensors - Optional	9 DOF IMU - Barometer - Hydrometer - Thermometer (Internal and external)
Mechanical	
Dimensions	150mm (w) x 200mm (d) X 50mm(h)
Enclosure	Cast Aluminium
Weight	600g
Environmental	
Operating Temperature	-20 – +65 ° C
Storage Temperature	-40 – +85 ° C
Seal	EDR - IP 40

Receiver	72Ch. 3D inertial sensing GNSS receiver
Navigation Update Rate	Up to 30Hz
Dead Reckoning	via inertial sensors or wheel clock
Acquisition	Cold: 26s Aided : 3s Reacquisition : 1
Accuracy	Autonomous: 2.5 CEP With SBAS : 1.5 CEP
Antenna Support	Passive or Active
Operation	
Initialisation Time	~ 30 seconds depending on configuration
Onboard Data Retention	No less than 2 years
Data Recording Accuracy	~ 1mS
Digital Data Element Capture	256 (J1939)
Analogue Data Element Capture	256 (J1939)
J1939 Features	- Raw CAN capture - J1939 DM1 Capture - TPMS Capture - Brake wear monitoring - ECU ID / Software Version Logging - J1939 DM1 Event Broadcast - Operator / Route ID Capture - Zero Emission / Hybrid Bus Support - VIN Logging - Odometer Capture
Remote Accelerometer Capture	Raw Acceleration and programmed DM1 Messages
Remote Accelerometer Control	Firmware and configuration management over CAN
Compliance	
Radio Disturbance Limits	CISPR22
Equipment Authorization	FCC Part 15 Class B
Electromagnetic Compatibility (Rail)	EN50121-3-2
Electromagnetic Compatibility	SAE J1113-21
Environmental	SAE J1455
Heavy Duty Event Data Recording	SAE J2728
ROHS	Compliant
J1939 Compliance	SAE J1939-82
Security	
Software	- Mass Storage R/W Permission - VPN tunnelling
Physical	- Connector Tamper Detection - Case Tamper Detection - Kensington Slot - Security Tag Seal