

EN50155 Railway LTE Datalogger

D2007 Dual SIM cellular datalogger is an EN50155:2017 certified equipment that designed for rolling stock applications such as railways and trams.

The datalogger has industrial grade operating temperature range is -25 to +70 °C and equipped two serial interfaces and LANs for connecting the railway devices. With proprietary software, the datalogger could connect with railway signal system to conduct data processing and recording. All the serial ports equipped with optical isolation that provides comprehensive protection to other onboard devices.

The datalogger equipped with a U-shaped mounting and industrial grade antenna with 1.7 meters coaxial cable that ease the installation works of equipment on railways. It also provides with secured internet connectivity protocol (i.e. VPN) for encoding the sending messages to backend network. The datalogger equipped that could capture and store over 30GB messages from onboard devices that cater the unstable network conditions.

D2007 Railway LTE Datalogger		
Antenna	Dimension	118 mm x 20mm ±5mm (Height x Diameter)
	Length of connection cable between datalogger and antenna	At least 1.7 meters
	IP Rating	IP67
	IMD	IMD level 145 dB at carrier power 2x 30dBm
	Voltage standing wave ratio (VSWR) from socket, datalogger to antenna	<2
	Composite Power max (W)	At least 25W
	Weight	0.28kg ± 0.05kg
Cellular interface	Number of antennas	1
	Connector socket on datalogger side	SMA female socket (N-Type)
	Sim card	Support at least 2 sims at the same time
	Frequency Bands	Global: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/ B28/B38/B39/B40/B41 AU: B1/B2/B3/B4/B5/B7/B8/B28/B40 EMEA: B1/B3/B5/B7/B8/B20/B38/B40/B41 CN: B1/B3/B5/B8/B38/B39/B40/B41

Datasheet of D2007 Railway LTE datalogger

Ethernet Interface	Number of ports	1 LAN
	Magnet isolation	1.5KV
Mechanics/ Electronics	Supply Voltage	200V – 240V AC
	Power Socket	BS Female socket with indication light
	Fuse	2A
	Datalogger Dimension (without mount)	280mm x 160mm x 60mm ± 2mm
	Datalogger Dimension (with U-mount)	280mm x 187mm x 80mm ± 2mm
	Weight of datalogger	<3 kg (without U-mount)
	Housing material	Aluminum
Operating Temperature	EN50132-2:2016 +A1:2019	
Serial Interface (RS232)	Number of ports	Min. 2 ports
	Connector	7-pin 3.5mm male socket with lock
	Isolation	Optical isolation
	Baud rate	300bps to 230400 bps
Software	OS	Embedded Linux with GUI interface
	Software to connect railway system	Proprietary software
Others	Storage	1 micro SD slot (support at least 32GB SD card)
	VPN Tunnel	OpenVPN that comply auth SHA512 and AES-256-CBC)
	End to End Time from datalogger to backend server	<4 seconds

Standards and Regulations

Temperature, humidity, shock, vibration	EN50155:2017
EMC for datalogger and antenna	EN50132-2:2016 +A1:2019
EMC (Electrical Fast Transient Immunity Test and Conducted Immunity Test) for two RS232 ports	EN 50121-3-2: 2016 +A1: 2019 EN 61000-4-4:2012 EN 61000-4-6:2014

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