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TECHNOLOGY



Rebel Data Logging Solutions

Out the box dataloggers



connect, simply configure and go

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REBEL LT



Rebel LT Data Loggers



P/N: INF2101

Typical Applications



- Vehicle testing with OBD data and additional instrumentation (Analogue, digital, temperature etc.).



- R&D competitor benchmarking tests (reverse engineering) via J1939 and OBD (UDS) data.



- Vehicle engineering with CCP/xCP on CAN.



- CAN bus data logger applications

Rebel LT Data Loggers - A complete solution

Need to collect CAN data? The Influx Rebel Lite (LT) is a cost effective CAN bus data logging solution for you. The Rebel LT supports advanced functionality such as CAN monitoring, OBD and UDS data logging. The Rebel LT series key advantages include, USB galvanic isolation to protect connected devices, easy configuration via Dialog software, expandability to GNSS and 4G LTE CAT 1. Our Rebel LT data loggers are suitable to be left on vehicles unattended with the critical power saving functions of the 'Power down mode' and the ability to 'WakeOnCAN'. Data is stored on the externally accessible expandable SD card slot. In addition these data loggers have 4 high speed analogue input channels and 3 digital I/O channels as standard.

Key features

- 2x CAN buses.
- 1x K-Line (request when ordering).
- 3x digital I/O channels.
- 4x analogue inputs (each channel can be calibrated independently).
- Galvanic isolation. (USB, enclosure)
- SDHC card data storage (Up to 64GByte).
- Low power consumption in sleep mode and WakeOnCAN or wake up on signal feature.
- Stackable with K-Series instrumentation.

Options

- Internal GNSS module (socket for external antenna).
- Internal 4G LTE CAT 1 module (socket for external antenna).
- Larger capacity data storage SDHC cards available. (up to 64GByte).
- Dialog Standard is required for data analysis/ live data/GPS maps.
- Dialog Plus is required for xCP/CCP or to connect to StreamLog.
- Extension cable to connect directly to the vehicle OBD Port. (9 Way D Sub to OBD).
- Rebel Dash display for real time CAN messages and signals display.

Function	Description
Supported Protocols	<p>OBD (CAN) ISO15765/ISO14229 (UDS)</p> <p>CCP, xCPOnCAN</p> <p>CAN monitoring (raw CAN messages or signals via CAN DBC)</p> <p>J1939</p>
CAN functions	<p>Output CAN signals (applications include display units)</p> <p>Create user defined CAN messages for periodic transmission</p>
Data storage format	FAT32 (PC readable)
Data logger configuration	Configuration via USB, 4G LTE CAT 1 and SD card
Trigger Condition	<p>Up to 20 configurable conditions</p> <p>(>, <, =, increment, decrement or on-change)</p>
Trlgger Action	<p>Up to 20 configurable triggers</p> <p>Functions include start or stop, sample one-shot data, sample DTC, read OBD data.</p> <p>Configurable pre and post trigger times</p> <p>Configurable LED functions</p>
Wake up time	<p>Wake up from normal sleep mode logging starts within 20mSec</p> <p>Wake up from power down mode, logging starts < 5 secs</p>
Data Formats	<p>Large quantities of recorded data can be conveniently converted to MDF, MDF4, MAT (Matlab), nCode, CSV by batch processing.</p>



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Function	Description	Function	Description
Power supply	4.7V to 36V DC (12V typical) internally fused with reverse protection		Analogue Inputs
		Number of channels	4 bipolar single-ended inputs
Power consumption	Normal operation approx. 250mA to 350mA @12V Sleep mode approx. 80mA @12V Power down standby mode < 2mA @12V	Range	±10V
		Resolution (ADC)	12 bits
		Max sampling rate	1 KHz
		Input impedance	>50K Ohms
Wake up	WakeOnCAN function	Min/Max applied voltage	±40V
PC interfaces	Isolated USB2.0 (Type B) – can be powered by USB		Digital Input / Output
		Number of channels	3 unipolar single-ended inputs/outputs
CAN interfaces	2x CAN 2.0B Max 1MBit/s	Input switch thresholds	Low < 2V, High > 2.5V (up to 36V)
LED	9x LEDs	Output Drive details	Collector-emitter voltage 36V max Collector current (DC) 50mA max. Saturation voltage <0.6V
Enclosure	Dimension (LxHxW): 115x26x105mm		
	Weight 400g		
	Stackable ABS	Min-Max applied voltage	-0.5V to 36V
Environmental	-40degC to +80degC	Optional	GNSS
	Humidity max 90%		4G LTE CAT 1
Data storage capability	Removable SDHC max 64GByte		



Upgrade Options

Function	Upgrade Options	
Remote Server	Remote Server	
	Non-Managed	Managed
Cloud Server	Customer own installation version of StreamLog compatible with Microsoft Azure® Cloud Servers.	Customer secure login to managed StreamLog account enabling remote data and fleet management.
Local Server	Installation Files to setup remote data and fleet management system on a Windows® server. (Requires Microsoft MS SQL®.)	
Integrated GPRS	4G LTE CAT 1 modem	
UMTS	*LTE CAT 1 / 3G/ 2G multi-mode modules	
Bands	LTE FDD bands: 12 (700 MHz), 28 (700 MHz), 13 (700 MHz), 20 (800 MHz), 5 (850 MHz), 19 (850 MHz), 8 (900 MHz), 4 (1700 MHz), 3 (1800 MHz), 2 (1900 MHz), 7 (2600 MHz), 1 (2100 MHz) UMTS(3G) Bands: 850MHz, 1900MHz, 2100MHz; GSM(2G) Bands: 900MHz, 1800MHz	
Receiver Input Sensitivity	-98 dBm to -114 dBm: 700MHz to 2100MHz	
Antenna	External	

*Modules changes as per region, mention region of usage while ordering.



Upgrade Options (Continued)

Function		
Integrated GNSS	NEO-M8Q	NEO-M8L (Coming soon)
Receiver type	Standard Precision GNSS	Dead Reckoning, continuous navigation during signal loss. Continuous accurate navigation under all signal conditions using integrated 3D sensors and speed information from vehicle.
	72-channel, GPS L1C/A, SBAS L1C/A, QZSS L1C/A, QZSS L1-SAIF, GLONASS L1OF, BDS B1I , Galileo E1B/C	
Nav. update rate	Up to 18Hz	Up to 30Hz
Position accuracy	2.0 m CEP	Autonomous 2.5 m CEP with SBAS 1.5 m CEP
Acquisition	Cold starts: 26s Re acquisition: 1s	
Geo fencing	Up to 4 circular areas (coming soon)	
Antenna	External	
Accuracy	Velocity: 0.05m/s	Velocity: 0.05m/s
	Heading: 0.3 degrees	Heading: 0.3 degrees
	Not Specified	Altitude: with SBAS 3.0m CEP
Sensors	3D Accelerometer and 3D Gyro	
Linear Acceleration Measurement Range	$\pm 2g, \pm 4g, \pm 8g, \pm 16g$	
Linear Acceleration Sensitivity	0.061mg/LSB, 0.122mg/LSB, 0.244mg/LSB, 0.488 mg/LSB	
Linear Acceleration Output Data Rate	1Hz, 10Hz, 25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1000Hz	
Angular Rate Measurement Range	$\pm 125dps, \pm 250dps, \pm 500dps, \pm 1000dps, \pm 2000dps$	
Angular Rate Sensitivity	4.375mdps/LSB, 8.75mdps/LSB, 17.50mdps/LSB, 35mdps/LSB, 70mdps/LSB	
Angular Rate Output Data Rate	1Hz, 10Hz, 25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1000Hz	

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DIALOG



DiaLog Software



DiaLog



P/N: INF1101 DIALOG CONFIGURATOR

P/N: INF1102 DIALOG STANDARD

P/N: INF1103 DIALOG PLUS

Key Features

Our intuitive editor allows you to easily configure the Rebel data loggers.

Functions at a glance:

- Build and exchange Rebel data logger configuration files using industry standards such as **DBC**, **A2L** and **ODX**.
- Connect and reconfigure Rebel data loggers via USB.
- Monitor live data whilst data logging is active.
- Upload and analyse data recording files.
- Supports in field firmware upgrade.
- Batch processing to handle large amounts of recorded data.
- Supports direct connection to remote and local **StreamLog** servers.

See Software Version Matrix for each feature.

Data Logger configuration with integrated data analysis.

Advanced Rebel Data Logger configuration tool with all the features you require to setup the Rebel family of data loggers, acquire recorded data and analyse or export the data. **DiaLog** has built in support for industry standard files, integrated graphical data analysis and includes batch processing for handling very large amounts of data files.

With well over 5000 registered users worldwide **DiaLog** is a popular tool in the industry.

Versions

DiaLog is available in 3 versions.

■ Dialog Configurator

Available free of charge and allows configuration of Rebel data loggers as well as recorded data export to CSV and MDF formats.

This version does not support the advanced features such as xCP/CCP, graphical data analysis, live data viewer and recorded data merging.

■ Dialog Standard

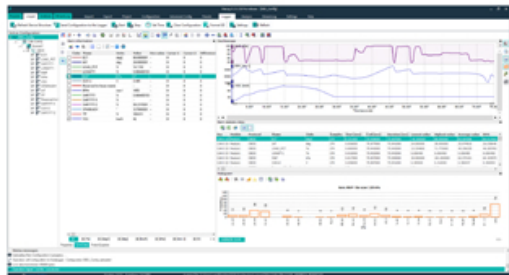
Includes a powerful built in data analysis tool and graphical live viewer of the recorded data.

■ Dialog Plus

Ideal for professional engineers that use ASAM xCP/CCP protocols or require the FlexRay network support. In addition **Dialog Plus** is required for connecting to the remote fleet management '**StreamLog**' server.



DiaLog Analysis



DiaLog includes many features that are essential or engineers in the automotive industry.

- Supports ISO14229, ISO14230, ISO15765-1 and ISO1565-2.
- Engineering CCP and xCP protocols. (With Seed and Key)
- J1939 including DM1 messages.
- OBD Diagnostic Fault Codes.
- Advanced UDS functions such as Fast Data Acquisitions.

Compatible with the industry standards

Dialog supports standard data description file formats making it easy to build complex configurations.

Data description files:

- *.DBC for CAN and CAN FD.
- *.LDF for LIN.
- ASAM *.A2L – for direct memory read operations.
- ODX/MDX/GDX for UDS diagnostic databases.
- Fibex format for FlexRay networks.

Data analysis files:

- Matlab™ *.MAT
- MDF (*.DAT)
- ASAM MDF4 (*.MF4)
- Vector® BLF
- CSV for data analysis with Excel
- Ncode®
- National Instruments® TDM format

Data Analysis

DiaLog Plus and Dialog Standard includes a professional data analysis visualization tool which allows you to visualize and analyse your data quickly.

- Twin axis cursors.
- Zoom feature.
- Histograms.
- XY plotting.
- Edit notes.
- User defined templates.
- Post calculated channels.
- Show individual sample points.
- Statistical data, such as min/max and average.

Batch Processing

Help to manage multiple files from multiple vehicles over several weeks, months of data. DiaLog Plus includes the batch processing server tool that enables you to merge and convert several days of recorded data files in a single process, saving hours of work!



	Config urator	Stand ard	Plus		Config urator	Stand ard	Plus
Network Protocols				Export data formats			
OBD (ISO 15765)	X	X	X	Vector™ MDF	X	X	X
CCP/xCP (CAN and Flexray)			X	Vector BLF (CAN trace)	X	X	X
Extended ISO14229 (UDS)	X	X	X	ASAM MDF4	X	X	X
CAN/CAN FD (x4 CAN Buses)	X	X	X	Vector™ ASC (CAN trace)	X	X	X
CAN/CAN FD (x7 CAN Buses)			X	Matlab™ Mat		X	X
FlexRay			X	NCode™ S3		X	X
J1939	X	X	X	Microsoft™ Excel	X	X	X
K-LINE		X	X	National Instruments™ TDM		X	X
LIN		X	X	GPS data		X	X
Industry standards				Advanced Network Functions			
Import ASAM A2L			X	Create Tx periodic CAN Frames (E.g. to drive display units)		X	X
Import CAN DBC	X	X	X	Create CAN messages for periodic transmission or on trigger event			X
Import LIN LDF	X	X	X	Create one-shot data lists for data to be acquired on event only			X
Import Diagnostic ODX, GDX, MDX	X	X	X	Create/edit simple triggers (start/stop)	X	X	X
Import Fibex	X		X	Create/edit advanced triggers (Mark/Tx on event etc...)			X
Import IVS (Influx Configuration File)	X	X	X				
DBC Editor		X	X				
ODX Editor		X	X				
Standard Rebel Data Logger Functions				Functionality			
Firmware update (Function requires valid License to be enabled)	X	X	X	Live Data		X	X
Set Time/Date Function	X	X	X	Graphical Data Analysis		X	X
Configuration via Influx IVS file	X	X	X	Data Statistics		X	X
Diagnostic Report	X	X	X	GPS Map Viewer (Function requires valid License to be enabled)		X	X
Set APN/WiFi settings	X	X	X	Connect to StreamLog (Remote data management)			X
Sensors - GPS	X	X	X	Data trace		X	X
Sensors - xyz Accelerometer	X	X	X				
Sensors - Gyro	X	X	X	Data processing and reports			
Digital I/O	X	X	X	Output data logger configuration reports		X	X
Analog	X	X	X	Batch conversion and data merging			X

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