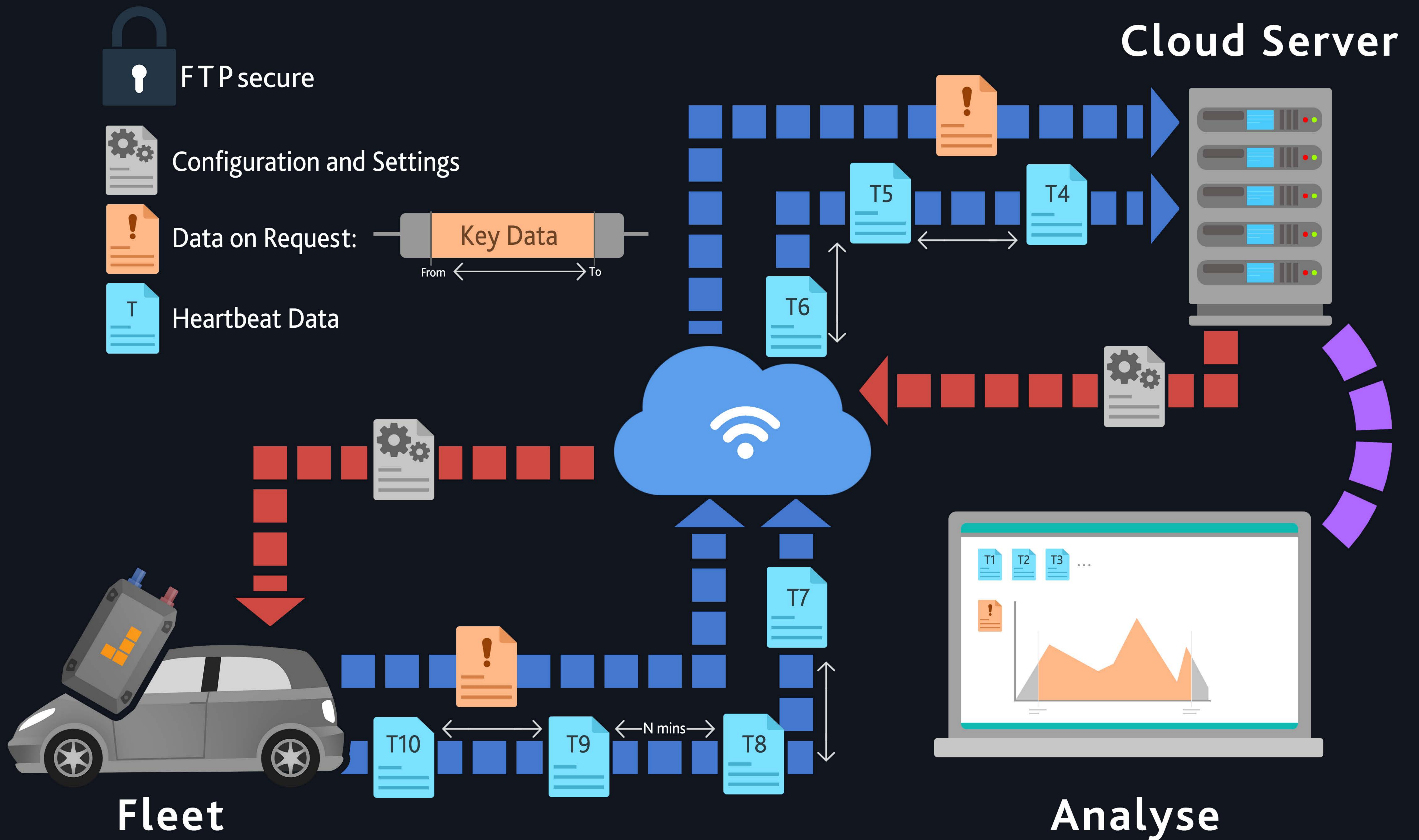




# REliable neXt GENeration data computing



# RE<sup>liable</sup> neX<sup>t</sup> GEN<sup>eration</sup>

data computing



Data Transfer via  
FTP<sup>s</sup>

Open  
platform

Scalable  
in production

Configurable  
Edge Computing

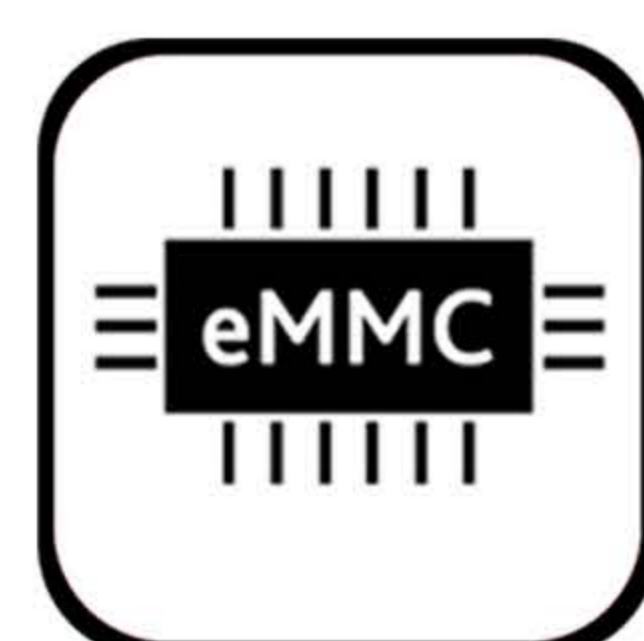
Automated  
Data Processing



## Key features

- Up to 4 CAN/CAN FD buses
- x2 Analog Inputs, x1 Power Stage Relay Driver (Optional)
- x1 LIN bus
- x2 Digital inputs
- Integrated 18Hz GNSS (u-Blox)
- Integrated IMU (6 axis)
- Encrypts data logs using Advanced Encryption Standard (AES)
- Open API or XML Schema provided
- Live CAN/CAN FD Monitoring
- Enables Locking of the device using RSA data security
- Micro USB 2.0 for data transfer and configuration
- NB-IoT/CAT-M or CAT -1 connectivity
- Secure Data transfer using FTPs
- Supported Data formats -  
ASAM MDF4 MATLAB (.mat), CSV, ASC & BLF
- Various sleep modes, with low power consumption
- x4 configurable LEDs
- CAN/J1939 filters
- Easily stackable and installable
- Automotive grade Molex Mini50 connection system

## Hardware Configurable



Up to **64GB**



## REXGEN AIR

Reliable, Secure, Accurate data computing that you can trust.



P/N: INF2116.NN

ReXgen Air is a compact, robust, accurate and cost-effective solution specially designed to become a part of your fleet during production.

A progressive system that works on LTE CAT1/M/NB-IoT. A data logger with on-board processing and telematics capabilities connects machines to the cloud or stores data locally.

It can securely transmit data over FTPs to be easily set up on the local or cloud server. Allows the encryption of data logs with Secure Hash Algorithm (SHA). An open platform that can be supported by any 3rd party tools and can be integrated into any data system. Also supplied with a free powerful graphic interface application tool.

ReXgen Air provides you with the freedom to build your system to maintain your data.

Functions	ReXgen AIR
CAN Interfaces	Up to 4 x CAN/CAN FD
	ISO 11898-1: Compliant with CAN (up to 1 Mbit/s)
	ISO & Bosch CAN FD (up to 8 Mbit/s)
	Conforms to CAN protocol version 2.0 - part A, B
	Up to 20000 mps
	Meets the requirements of ISO 11898-2:2016 & ISO 11898-5:2007
	SO 11898-5:2007 physical layer standards
CAN/CAN FD Functions	CAN/CAN FD Bit timing selection
	SAE J1939 support (Source Address, Destination Address & PGN Filters)
	Silent Mode Configurable
	Periodic CAN Transmission
	CAN DBC Support
	CAN frame error detection
LIN Interface	1 x LIN
LTE	CAT 1 (see uBlox Lara R2 Series) OR CAT M/NB-IoT (see uBlox Sara R5)
Relay	1 x Power Stage Output capable of driving a relay. (Option)
Inputs	2 x Digital and 2 x Analog
Instrumentation Supply	5 Volts (Ensure that current draw is not more than 100mA)



# Technical Specifications

Functions	ReXgen AIR
GNSS	Up to 18 Hz rate 72-channel, GNSS L1C/A, SBAS L1C/A, QZSS L1C/A, QZSS L1-SAIF, GLONASS L1OF, BeiDou B1I , Galileo E1B/C
Position Accuracy	2.0 m CEP*
Acquisition	Cold starts: 26s Reacquisition: 2 s
Antenna	External FAKRA Code C
Accuracy	Velocity: 0.05m/s Heading: 0.3 degrees
	<b>Others</b>
Accelerometer	±2/±4/±8/±16 g full scale
PC Interfaces	Micro USB Type AB 2.0 interface (Standard version) USB interface via the Molex Mini50 connector (Optional)
Gyroscope	±125/±250/±500/±1000/±2000 dps full scale
Data Storage Capability	Up to 64 GB eMMC storage
Supported Protocols	CAN Monitoring (RAW CAN signals, SAE J1939 support)
Triggering	Trigger on CAN ID, CAN Signal, Digital Input Trigger on DM1 counter
LEDs	4
File Format Supported	RXD, RXE, ASAM MDF (.mf4), CSV, MATLAB, ASC, BLF



# Technical Specifications

Functions	ReXgen AIR
Data Transfer Protocol	FTPS
Security Functions	Encryption of data logs, Locking of device
Encryption Standard	RSA (for locking device) and AES (for log data)
Data Logger Configuration	Supplied with Influx ReXdesk configuration software, API, CLI
Configuration	XML based (Shema provided)
	<b>Analog Input</b>
Number of channels	2 x Bipolar single-ended inputs
Range	+/- 10 V
Resolution (ADC)	12 Bit
Max Sampling Rate	1 kHz
Input Impedance	> 50 K Ohms
Safe Applied Voltage	+/- 28 V
	<b>Digital Input</b>
Number of channels	2 x Unipolar single-ended inputs
Input Switching Thresholds	Low < 0.8 V, High > 2.5 V (up to 28V)
Safe Applied Voltage	+/- 28 V

Integrated GPRS	LTE Modem
Category	*LTE CAT1 Or CATM/NB-IoT/3G/2G multi-mode modules
LTE CAT1 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(1500 MHz),7(2600 MHz),1(2100 MHz) UMTS(3G) Bands: 850MHz,1900 MHz,2100 MHz GSM(2G) Bands: 900MHz, 1800MHz
LTE-M/NB-IoT Bands	1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 28, 66, 71, 85
Receiver input Sensitivity	-98dBm to -114dBm: 700MHz to 2100MHz
Antenna	External FAKRA Code D

BUS & Signals	Operating Voltage
Power supply - OBD	+4.5 to +31V
Power supply - USB	+4.5 to +5.5V
CAN/CAN FD	+2 to +3V
LIN	0 to +24V
Digital Input	0 to +28V
Analog input	+/- 10V





# Technical Specifications

Function	Description
Transceiver Protection	Bus fault protection: $\pm 58$ V
	Thermal-shutdown protection (TSD)
	Under-voltage protection
Enclosure	PC+ ABS
IP Rating	IP50
Dimension	L - 100 mm, W - 73.5 mm, H - 27.4 mm*
Weight	112g*
Mounting Holes	4 mounting holes and screws
Stackable	Yes
Environmental Tolerance	Working temperature -40degC to +85degC; Humidity max 90%
Power Saving	Wake Up On CAN, Power Down Mode, Sleep Modes,
	Wake Up On Movement*
Power Consumption	Normal Operation: 300 mA at 12 V
	Power Down Mode: <2 mA



# Influx

## REXDESK

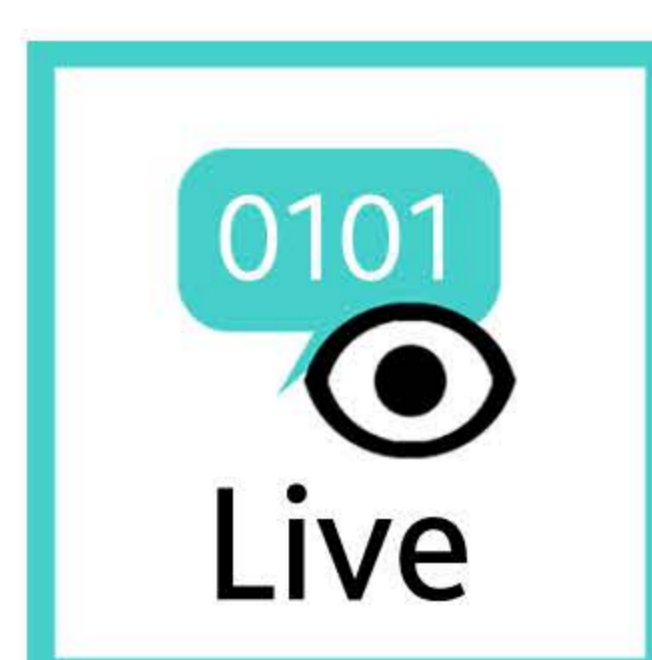




ReXdesk is our freely distributable configuration and general-purpose software tool to work with the ReXgen. Designed to make CAN bus data logging easier.

ReXdesk supports multiple DBC files enabling configurations that includes filters and log on parameter values. Freely distributable, ReXdesk can be downloaded from our website.

- Supports industry standard DBC files.
- Software Operating System: Windows



### Live Data

Allows monitoring of Live CAN data.



### CAN

Allows to configure the CAN bus.



### FTP

Allows storing data using FTPs



### Encryption

Encrypts data logs using Advanced Encryption Standard.



### Periodic

support periodic CAN/CAN FD message transmission with standard and extended can identifiers.



### Sleep

Supports various power modes, for minimal power consumptions.



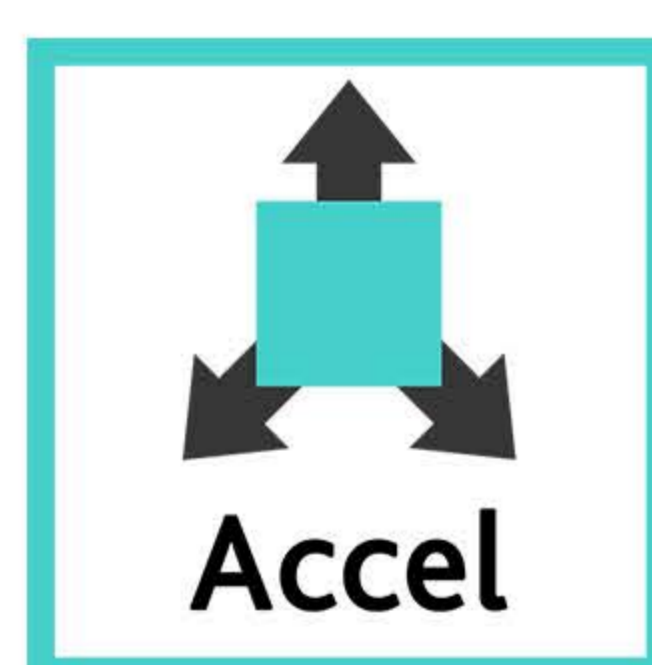
### Can Errors

Allows to log CAN bus Errors.



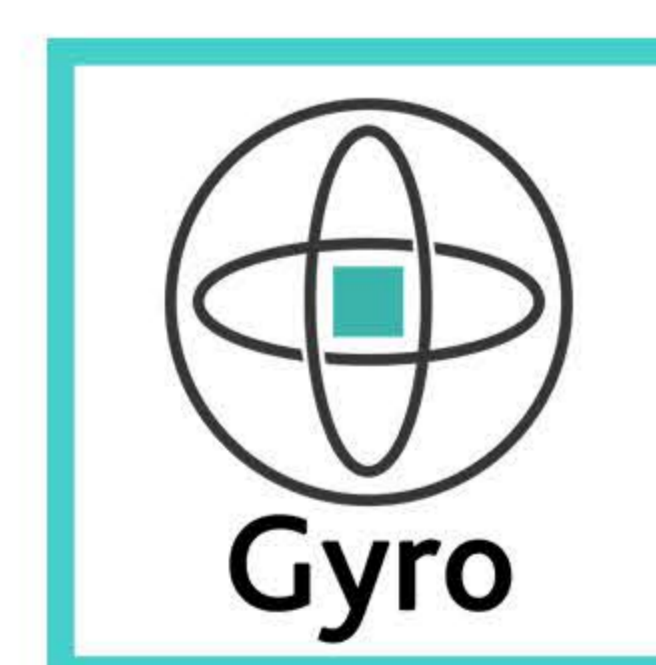
### Analog

Allows to add an analogue channel and set the sampling rate and conversion formula.



### Accelerometer

Allows to configure Accelerometer (IMU) channels.



### Gyro

Allows to configure Gyroscope (IMU) channels.



### GNSS

Displays the logged can trace .Rxd data. Allows user to export the loaded data to .mf4, .csv, mat, asc, .xml, rxd format



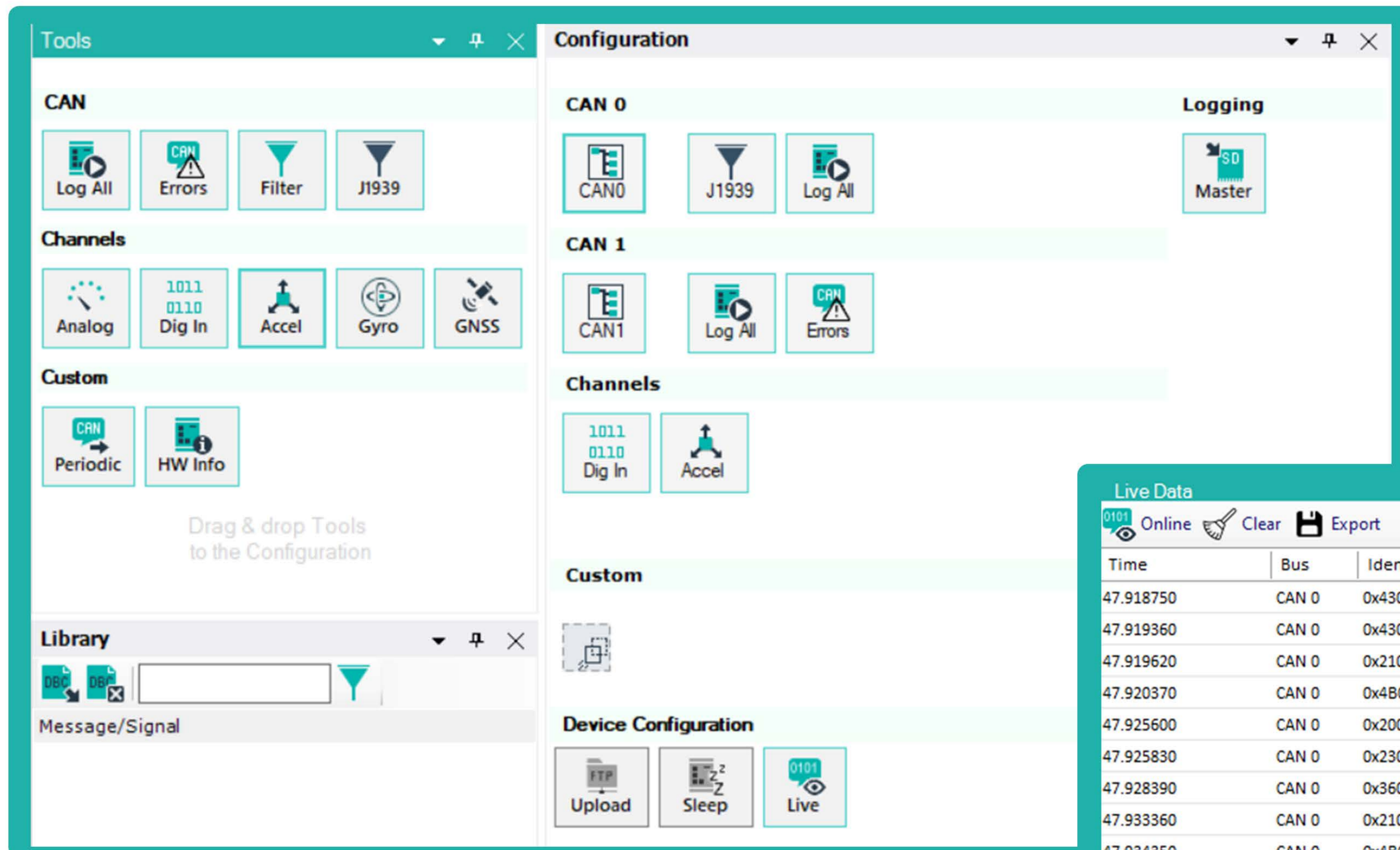
### More

Find more functions on our website

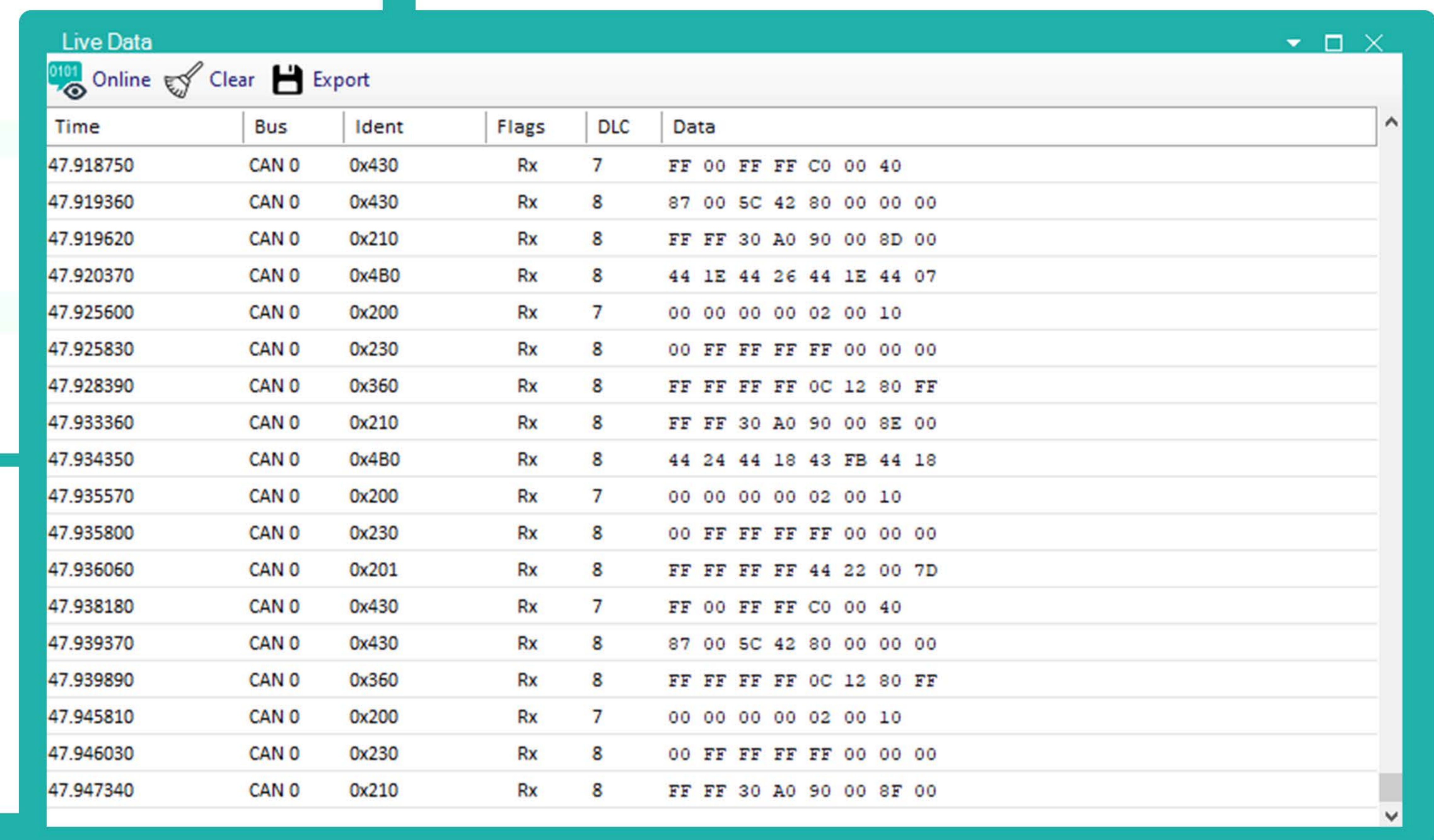
## REXDESK

### Configure logger and retrieve data

- Supports standard and extended messages.
- Triggers, on parameter value or CAN Identifier
- Supports FTPs data transfer over LTE
- Supports Command Line Interface
- ReXdeskconvert console application available
- Supports J1939
- CAN error logging and Live CAN trace viewer
- Fast data retrieval and export to other format files

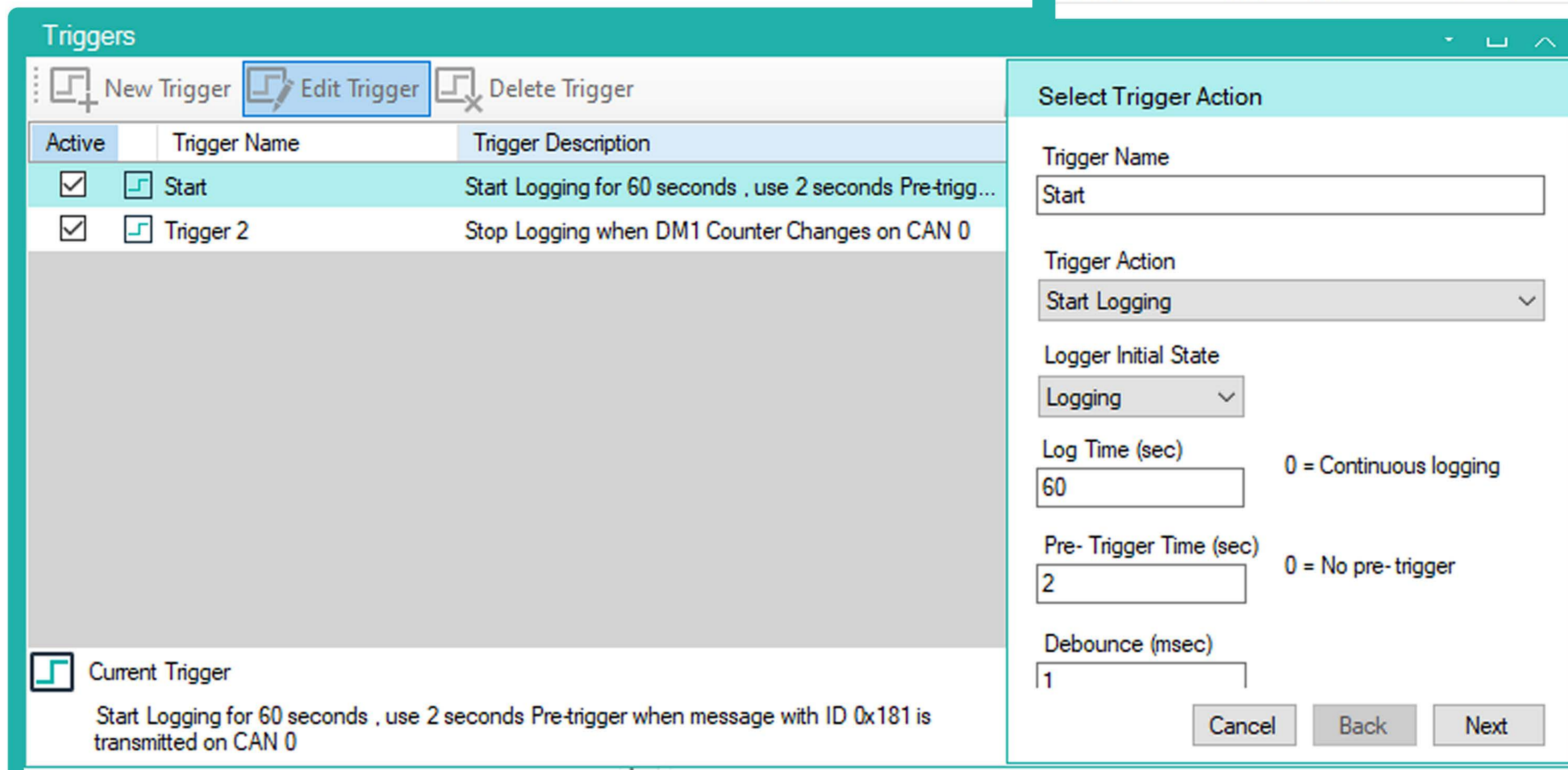


Tools and Configurations



Time	Bus	Ident	Flags	DLC	Data
47.918750	CAN 0	0x430	Rx	7	FF 00 FF FF C0 00 40
47.919360	CAN 0	0x430	Rx	8	87 00 5C 42 80 00 00 00
47.919620	CAN 0	0x210	Rx	8	FF FF 30 A0 90 00 8D 00
47.920370	CAN 0	0x480	Rx	8	44 1E 44 26 44 1E 44 07
47.925600	CAN 0	0x200	Rx	7	00 00 00 00 02 00 10
47.925830	CAN 0	0x230	Rx	8	00 FF FF FF FF 00 00 00
47.928390	CAN 0	0x360	Rx	8	FF FF FF FF 0C 12 80 FF
47.933360	CAN 0	0x210	Rx	8	FF FF 30 A0 90 00 8E 00
47.934350	CAN 0	0x480	Rx	8	44 24 44 18 43 FB 44 18
47.935570	CAN 0	0x200	Rx	7	00 00 00 00 02 00 10
47.935800	CAN 0	0x230	Rx	8	00 FF FF FF FF 00 00 00
47.936060	CAN 0	0x201	Rx	8	FF FF FF FF 44 22 00 7D
47.938180	CAN 0	0x430	Rx	7	FF 00 FF FF C0 00 40
47.939370	CAN 0	0x430	Rx	8	87 00 5C 42 80 00 00 00
47.939890	CAN 0	0x360	Rx	8	FF FF FF FF 0C 12 80 FF
47.945810	CAN 0	0x200	Rx	7	00 00 00 00 02 00 10
47.946030	CAN 0	0x230	Rx	8	00 FF FF FF FF 00 00 00
47.947340	CAN 0	0x210	Rx	8	FF FF 30 A0 90 00 8F 00

Live Data and Trace View



Active	Trigger Name	Trigger Description
<input checked="" type="checkbox"/>	Start	Start Logging for 60 seconds , use 2 seconds Pre-trigg...
<input checked="" type="checkbox"/>	Trigger 2	Stop Logging when DM1 Counter Changes on CAN 0

Select Trigger Action

Trigger Name: Start

Trigger Action: Start Logging

Logger Initial State: Logging

Log Time (sec): 60 (0 = Continuous logging)

Pre- Trigger Time (sec): 2 (0 = No pre-trigger)


Debounce (msec): 1


Buttons: Cancel, Back, Next

Multiple Trigger Settings

FTPs

### Device Configuration

  
 Encrypt

  
 Upload

Store data to FTP using mobile internet

Mobile:

FTP:

Check Config Time (min):

Send Status Time (min):

Check Firmware Time (min):

Automatic Firmware Update

```

1 reference
private void btnXMLToRXC_Click(object sender, EventArgs e)
{
    if (dlgOpenXML.ShowDialog() != DialogResult.OK)
        return;
    if (dlgSaveRXC.ShowDialog() != DialogResult.OK)
        return;
    RxLib.XmlToRxc(dlgOpenXML.FileName, dlgSaveRXC.FileName);
}

1 reference
private void btnConvertRXD_Click(object sender, EventArgs e)
{
    if (dlgopenRXD.ShowDialog() != DialogResult.OK)
        return;
    if (dlgSaveConvertedData.ShowDialog() != DialogResult.OK)
        return;
    RxLib.ConvertData(dlgopenRXD.FileName, dlgSaveConvertedData.FileName);
    MessageBox.Show(RxLib.LastConvertStatus(
  
```

.net DLLs available

Periodic CAN message transmission

Ident	Type	BRS	CAN 0	CAN 1	Period	DLC	Data
0x111	CAN Standard		<input checked="" type="checkbox"/>	<input type="checkbox"/>	100	8	11 11 21 11 21 21 21 11
0x01211111	CAN Extended		<input type="checkbox"/>	<input type="checkbox"/>	100	8	21 11 11 11 22 22 22 22
0x121	CAN FD Standard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	100	8	12 22 22 22 22 22 22 21
0x07478E50	CAN FD Extended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	64	11 11 11 11 12 22 22 22 11 11 11 55 11 11 22 22 22 22 22 22 22 22 22 21 11 11 11 11 11 12 22 22 22 22 22 25 55 55 55 22 21 11 11 11 11 11 12 22 22 22 22 22 22 22 22 22 11 11 11 11 11 11 11 12
0x07478E50	CAN FD Extended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	64	22 22 22 22 22 21 00 00 01 11 11 11 22 22 22 22 22 11 11 11 11 11 11 11 12 22 22 22 22 22 11 11 11 11 11 11 11 11 12 32 45 55 55 55 55 45 55 65 55 55 55 57 78 78 79 80 98 09 00 00 00 00 00 00

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