CSS ELECTRONICS

CANedge2
2xCAN/LIN Data Logger (SD + RTC + WiFi)

PLUG & PLAY: Log data out-the-box. Standalone. Power via CAN connector

SECURE WIFI: Push data via WiFi to your own server. Enterprise-grade security

PRO SPECS: Extractable 8-32 GB SD. 2xCAN/LIN. CAN FD. Zero data loss. 50 µs RTC

MANAGE FLEET: Easily update config/FW over-the-air across fleet. Auto-sync RTC via WiFi

COMPACT: Only 8 x 5 x 2 CM. 100G. Alu enclosure. 5 LEDs. Configure CH2 5V power out

INTEROPERABLE: Convert MDF4 to e.g. CSV, ASC, TRC. Free open source GUI/API

The plug & play 2xCAN/LIN logger records timestamped CAN data (Classical/CAN FD) to the extractable 8 GB industrial SD card.

The small device connects via WiFi access points (e.g. WLAN or 3G/4G routers) to securely push data to your server. Further, the device can be updated over-the-air. The CANedge2 is ideal for telematics & fleet management - as well as R&D field tests, diagnostics and predictive maintenance.

Software/APIs are free & open source - with no fees or lock-in.

Pro specs CAN logger - at half the cost
The CANedge2 combines innovative design, cutting-edge components - and incredibly low costs:

- Dual high speed CAN/LIN (incl. CAN FD) channels
- Extractable 8-32 GB industrial SD card (months of data)
- Binary MDF4 log file format (extensive tool support)
- Advanced message filtering & transmit functionality
- Start/stop logging triggers based on CAN ID & databytes
- Silent mode, bit rate auto-detection, cyclic logging
- CAN/LIN error frame logging
- Data compression & encryption (e.g. for GDPR, CCPA)
- Fast boot time. Safely disconnect during use

Open source software/API - naturally
All software/APIs for the CANedge is 100% free and open source.

Data is stored in the popular MDF4 standard to enable interoperability across CAN tools and custom systems.

Convert: Simple MDF4 converters let you convert data to e.g. CSV, ASC (Vector), TRC (PEAK) - for use in your favorite tools.

Process: The asammdf GUI lets you process your data incl. DBC conversion (J1939, OBD2, ...) and graphical plots (Windows/Linux).

Automate: Easy-to-use Python APIs let you automate processing of large amounts of data (incl. quickstart library on github).

Visualize: Easily visualize data in customizable dashboards

Technical specs

GENERAL

Safety	CE, FCC, IC certified
Voltage tests	Transients ISO 7637-2:2011 by TÜV SÜD
Warranty	1-year warranty
Support	Free, fast & high quality support
Origin	Denmark
Software	100% free & open source
Documentation	Online/PDF documentation

CAN BUS/LIN BUS

Channels	2 x CAN/CAN FD + 2 x LIN (master/slave)
Protocols	J1939, OBD2, CANopen, NMEA2000, FD, ...
Bit-rate	Auto-detect/simple/advanced customization

DATA LOGGING

SD CARD	8-32 GB extractable industrial micro SDHC
Real-Time Clock	50 us resolution (incl. battery backup)
File format	MDF4 (.MF4) - easily process/convert
Safety	100% power safe
Configuration	Advanced options (filters, prescalers, compression, error frame logging, data encryption, triggers & more)

MECHANICAL/SUPPLY

|	
Connectors	2 x DB9 (adapter cables available)
Input supply	+7V to +32V DC via Channel 1 DB9
Consumption	<1W
Dimensions	52.5 x 81.4 x 24.5 mm (L x W x H) ex ant.
Weight	100 G
LEDs	5 external LEDs (PWR, CH1, CH2, MEM, WFI)
Temperature	-25 degC to +75 degC
IP rating	IP40
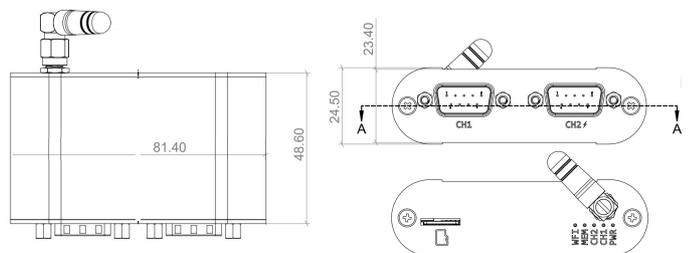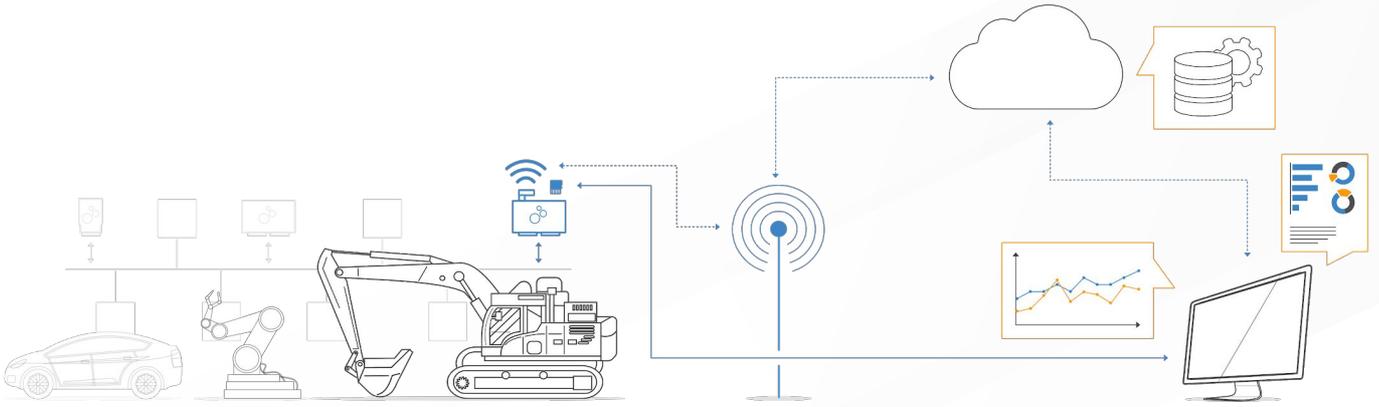
Reinventing telematics

Today, fleet telematics is vital across vehicles and machines.

However, end users face challenges: Expensive subscriptions. No data ownership. Security concerns. Vendor lock-in.

The CANedge2 provides a modern alternative:

- Upload data to your own local/dedicated/cloud server
- Add WiFi access point & server details to the config
- Log data to the SD. Auto-upload when connected to WiFi
- Configure file splits to control upload frequency
- 100% secure: HTTPS, credential encryption and more
- Manage via over-the-air updates (FW & config)
- Power 3G/4G access point or GPS via 2nd port 'power out'
- Zero fees. Zero lock-in. Interoperable. Open source tools

Technical specs (WiFi/server)

WIFI

Transfer modes	Auto-push data to server from SD
Protocol	HTTP/HTTPS for fast, secure transfer
Access Points	Add 1-5 WiFi prioritized access points
Over-The-Air	Configurable OTA firmware/config updates
WiFi Heartbeat	Device optionally sends periodic status
LAN Standard	IEEE 802.11 b / g / n
Antenna	External (SMA, 2400 Mhz, <2 dBi gain)
Server Interface	S3 REST - Use with MinIO, AWS, Azure, ...

SECURITY

HTTPS	Data + OTA updates optionally via TLS 1.2
WPA/WPA2	Supports WPA/WPA2
Credentials	Optionally encrypt WiFi/S3 passwords
Firmware	All firmware updates are digitally signed
User Access	Manage user access via S3 policies

The CANedge2 can also connect to a 3G/4G USB router to upload on-the-road. The hotspot can optionally be powered via the device

Easily manage data/devices on your server

The CANedge2 uploads data to an S3 server - which makes it easy to manage your server files via any S3-compatible tools or SDKs.

Further, the 100% optional CANcloud tool lets you manage your S3 server devices & data via your browser:

- Host yourself - or simply log into your server via our link
- Monitor device status across your fleet via dashboard
- Browse, download, share & delete uploaded log files
- Easily update config/firmware over-the-air
- Browser based (works on all OS & devices)
- 100% free and open source - easy to customize

The CANcloud status dashboard lets you monitor device data upload and their status (SD %left, firmware version, config status)

CANedge software/API tools

100% free and open source, naturally

config editor

CANedge

Easily configure your device

The CANedge/CANmod JSON config can be modified via a GUI editor - either online via browser or offline (e.g. from the SD).

- GUI editor for user-friendly configuration
- Optionally edit your config directly in e.g. Notepad++
- Batch tool available for large-scale configuration OTA

Learn more

Load data in your favorite tools

Simple MDF4 converters let you convert data to e.g. CSV, ASC (Vector), TRC (PEAK) - for use in your favorite tools.

- Drag & drop files/folders onto the converter to process
- Optionally use via the CLI or in scripts for automation
- Decompress/decrypt as part of conversion
- Works on both Windows/Linux

Learn more

MDF4 converters

CANedge

asammdf

MDF4 software/API
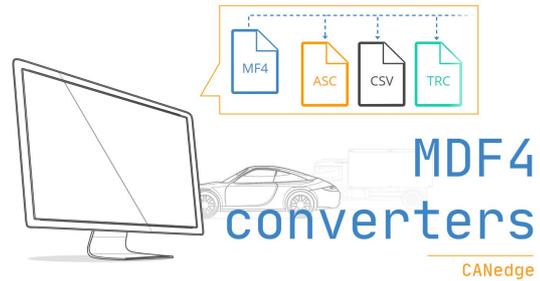
DBC convert & plot your data via GUI/API

The free asammdf GUI/API lets you process your data:

- DBC convert data to physical values (incl. J1939, OBD2)
- Easily create advanced graphical plots
- Resample or concatenate your data
- GUI executable for Windows/Linux (no installation)
- Powerful Python API for big data automation

Learn more

Manage your server devices & data

CANcloud is a simple browser tool that lets you manage your S3 server devices & data from any PC/tablet with no installation.

- Host yourself - or simply log into your server here
- Monitor device status across your entire fleet
- Browse, download, share & delete uploaded log files
- Easily update config/firmware over-the-air
- Browser based (works on all OS & devices)

Learn more

CANcloud

CANedge software
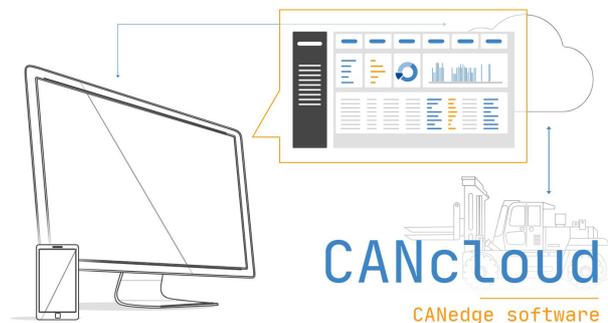
Trusted by engineers at leading OEMs
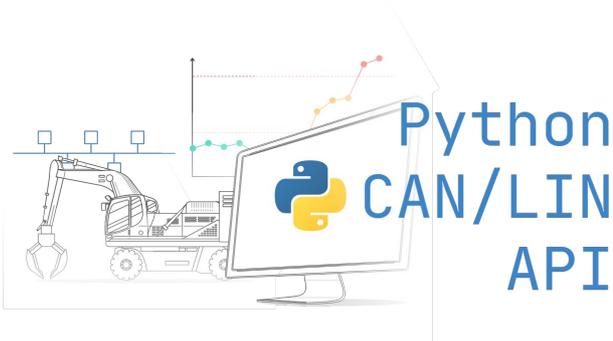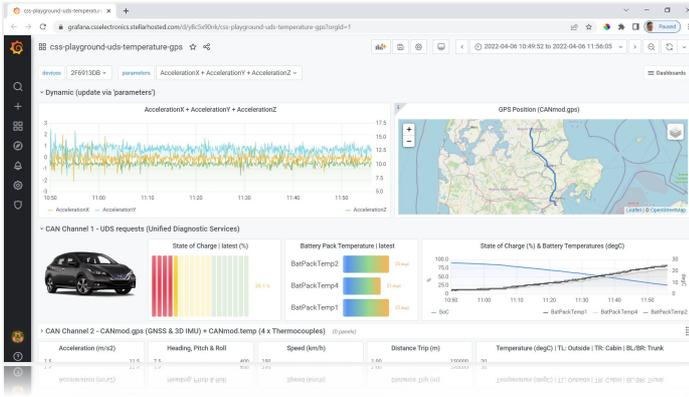
Automate your data processing

Need to automate your CAN bus data processing via Python? The free Python API enables easy listing, loading and DBC decoding of your data - from local disk or your server.

Learn more

Visualize your data in dashboards

With our plug & play dashboard integrations, you can quickly get your CAN/LIN data integrated with custom Grafana dashboards.

Perfect for presenting specific views e.g. for internal sharing, diagnostics - or as services towards clients.

Learn more
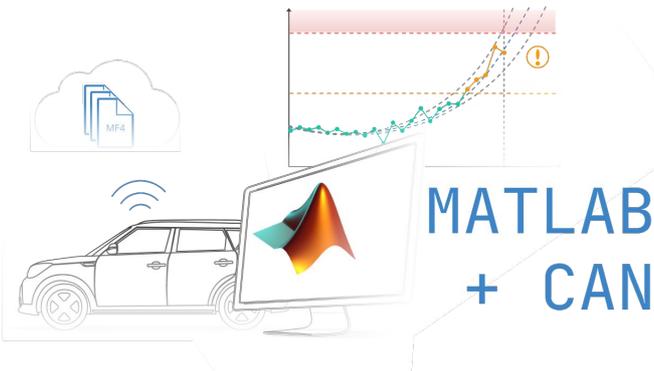
Easily load data in MATLAB

MF4 data from the CANedge can be natively loaded via MATLAB's Vehicle Network Toolbox - or converted to compatible MAT/CSV.

This makes it simple to continue using MATLAB for end users that are familiar with this tool from other projects.

Learn more