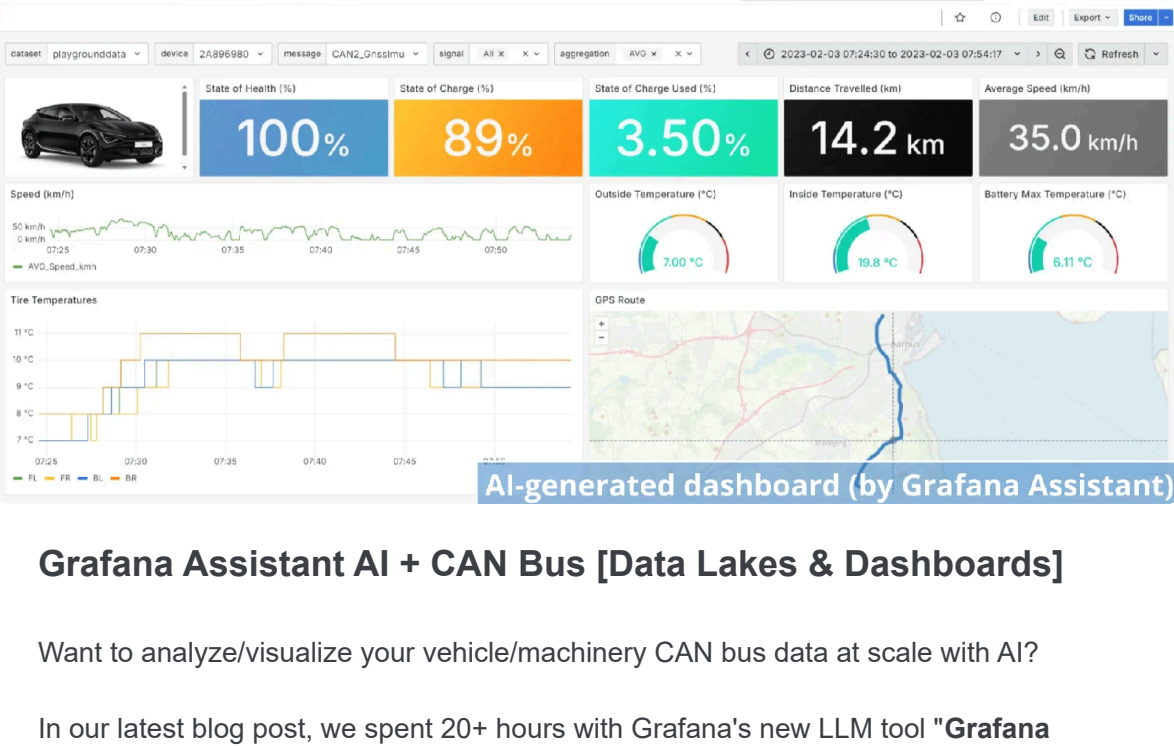


Grafana Assistant: Use AI to explore / visualize your CAN bus data!

CSS Electronics newsletter - November 2025



Grafana Assistant AI + CAN Bus [Data Lakes & Dashboards]

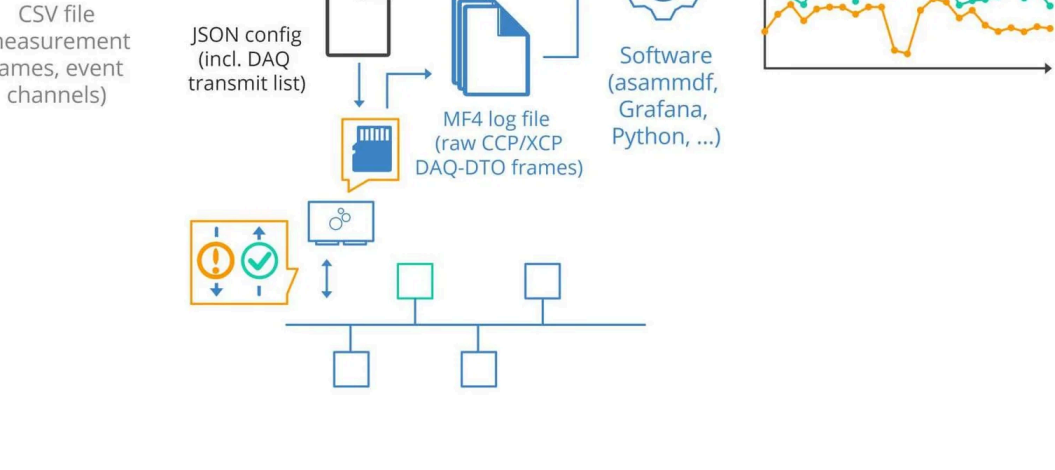
Want to analyze/visualize your vehicle/machinery CAN bus data at scale with AI?

In our latest blog post, we spent 20+ hours with Grafana's new LLM tool "**Grafana Assistant**". This lets you **explore your CAN bus data lake** in Grafana - and **auto-generate custom dashboards in seconds** with zero SQL expertise.

We provide 3 critical 'get started tips' (incl. **our tailored system prompt**) and go through **7 cool showcases** to illustrate the potential (and limitations) of this new tool.

The LLM works out-the-box for both our **Grafana-Athena** and **Grafana-BigQuery** integrations - and it is currently **100% free** in the Grafana Cloud free tier!

[Learn more](#)



Our CANedge XCP Python tool now also supports CCP!

The **canedge-ccp-xcp Python tool** lets you provide your **CCP/XCP A2L** file and a CSV with the measurements/signals you wish to record. Using this, the tool auto-generates a CANedge transmit list JSON file and a DBC file.

This lets you easily log your ECU data with the CANedge and analyze it with e.g. the asammf GUI, Grafana dashboards, python-can, Vector tools, MATLAB and more.

For **CCP**, the tool supports optionally the 'BYTES_ONLY' A2L flag (where initialization of multi-byte signals have to be done 1 byte at a time). For **XCP on CAN**, the tool also supports CAN FD (incl. WRITE_DAQ_MULTIPLE).

The tool also lets you merge your transmit list to an existing CANedge Configuration File (incl. validation) and even lets you create transmit lists for multi-ECU communication.

Today, the canedge-ccp-xcp tool is actively used by OEM engineers for both CCP/XCP data acquisition in prototype vehicles - see e.g. our featured case study with **Bosch eBike Systems** in this newsletter!

[Learn more](#)



New: RP1226-DB9/DB9 Adapter Cable

We have now added an **RP1226-DB9/DB9** to our range of plug & play adapter cables for the CANedge series of CAN bus data loggers!

The RP1226 14-pin connector is increasingly found in modern North American trucks incl. brands like Kenworth, Peterbilt, Freightliner, Mack, Volvo and more.

The connector provides access to J1939 data at either a 250K bit-rate (S-CAN) or 500K bit-rate (K-CAN). With this RP1226-DB9/DB9 adapter cable, you can connect both CH1/CH2 of the CANedge, enabling you to auto-detect the bit-rate on both CAN channels. This enables plug & play J1939 data logging across vehicle models!

[Buy now](#)



"The CANedge is a **very capable XCP on CAN logger** with a **tiny footprint** and **modern toolchain!**"

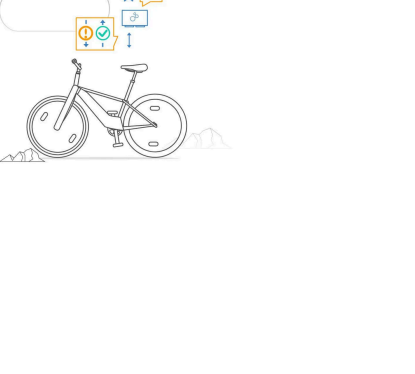


Case study: Bosch eBike XCP on CAN Data Logger with WiFi

In our recent case study, Bosch eBike Systems use the **CANedge2** as an XCP on CAN data logger.

The team at Bosch needed to record everything off their eBike CAN bus - as well as record ECU measurements via **XCP on CAN FD**. Normally, the hardware required for this is very expensive and far too large/heavy for eBikes.

However, the team now solve their use cases with the CANedge2 (8 x 5 x 2 cm, 100G) - probably the most compact & light-weight option for this on the market.

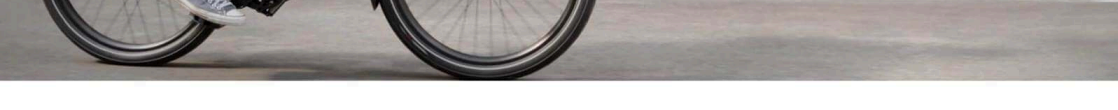


Specifically, they use our 'canedge-ccp-xcp' Python tool to load their A2L file and measurement list. The tool then generates a CANedge config with the transmit list that allows the device to initialize the dynamic DAQ sequences required (and log them).

The team subsequently use the generated DBC file to decode the recorded DAQ-DTO messages in their preferred software tools for analysis and diagnostics.

Check it out - and [contact us](#) for technical sparring for your CCP/XCP use cases!

[Full case study](#)



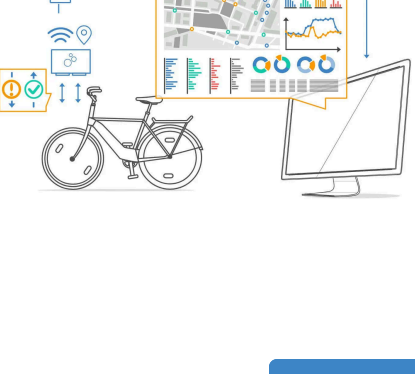
"The CANedge3 delivers a **plug-and-play solution** for CAN logging - while CSS guides you to the **perfect cloud solution**"



Case study: e-Bike CANopen Telematics

In another e-bike case study, learn how Janis Ita from Biketec (FIT E-Bike Systems) uses the CANedge3 to collect e-bike **CANopen** PDO/SDO messages to AWS S3 in near real-time - visualizing the DBC decoded data in Grafana dashboards.

The team deploys the **CANedge3** in waterproof mounting bags, configured to transmit SDO requests (Service Data Object), while also recording PDOs (Process Data Object).



Their AWS automation setup was deployed prior to our Grafana-Athena workflow and instead uses a customized EC2 virtual machine running Python, InfluxDB and Grafana.

Importantly, the team also aggregate their data to trip level summaries with various meta tags - rapidly speeding up their test fleet analyses and diagnostics.

[Full case study](#)

Other updates



J1939 DBC 2025-09 released

The new DBC adds 10+ new PGNs vs. the previous 2024-12 release, including 30+ new SPNs related to EV charging, ELD data, engine fuel and more.

[Learn more](#)

Comments from CSS

The introduction of Grafana Assistant is particularly interesting to us as it combines the flexibility and convenience of LLMs with the ready-to-use data access of Grafana.

Working with e.g. ChatGPT and similar LLMs does offer opportunities for CAN analysis (as per our [2023 ChatGPT article](#)) - but it is limited by the fact that you cannot directly interface with your full data lake (which may be several GBs or TBs of data).

Grafana Assistant solves this by leveraging the existing data source interfaces - including Athena and BigQuery, which allow 95%+ of our CANedge + Grafana users to leverage AI data exploration/visualization out-the-box - with zero setup. Compared to the alternative of e.g. setting up complex MCP servers, this is extremely convenient.

Further, the team behind Grafana Assistant has been highly collaborative - and in particular they fast-tracked support for Athena, in part based on our requests. We've also worked closely with them to test and improve the Athena integration.

We look forward to hearing how you use the tool with your CANedge data!