Node sensors

Vitro secure IoT stack

ℹ Description:

This demo presents the **Vitro IoT** stack.

The **Shard** (edge device) is mounted on the carrier board. A carrier board can be customized per project. The Shard can gather data from one or **multiple** sensors.

The **gateway** can gather data from one or multiple Shards. In this demo the data from one edge device are gathered via **CAN** bus. Data from shards is published via **MQTT** to the **AWS**. The MQTT connection is **securely** established using the Microchip ECC secure element. Then, data is being dropped to the TSDB via **AWS Lambda**. Data from the TSDB is presented in the **dashboard** (in this example Grafana).

Although the usual use-cases of this setup are more industrial sensors (e.g. Modbus), for the demo purpose simple well-known senors (such as DHT22) are presented.

⚙ Elements:

- Vitro Crystal board
- Vitro Shard Carrier board
- DHT22 sensor (**temperature and humidity**)
- LM393 sensor (**light level**)
- monitor with Graphana Dashboard output

Visit vitro.io for more details.