

Svendborg Brakes Gateway

Multi Purpose IoT Gateway



Image: Svendborg Brakes Gateway

HARDWARE UNIT

A multi-purpose IoT gateway designed to monitor environments, processes, or position(s) as well as IoT gateway for connecting external sensors. Unit can transfer any data from various sources and interfaces through the fastest growing LPWAN Narrowband IoT, GPRS, Wi-Fi or Ethernet.

Can be used when SOBO iQ is not available.

INDUSTRIAL DESIGN

All the HW components are strictly designed and prepared for industrial environment, so their function shouldn't be affected by strong interference, high voltage, high alternating/direct current in nearby equipment, vibrations, etc.

SW WITH OS INSIDE FOR EASY MODIFICATION

HW includes fully programmable part for possible custom modifications based on future needs, using Linux based processor for individual function programming. All changes can be done by external subject or in-house programmers.

CUSTOMIZATION

All the sensors, communication methods and expansion modules are chosen based on Svendborg Brakes needs and needs of the individual projects.

REMOTE SETUP

All important parameters can be set remotely via active connection.

STRONG SECURITY

Data sent to cloud is encrypted and adhering to industry standards.

EDGE COMPUTING

Because of internal computer power, data from sensors can be pre-processed in the unit and only aggregated data or average values will be sent to cloud. This can eliminate sending redundancy data and reduce the data flow.

MODULAR DESIGN

Unit is equipped with MODBUS RTU and this connection can be used for connecting all standard 3rd party sensors and units for future needs.

BASIC FEATURES

- Operating temperature range: -20 °C to +60 °C
- Operating voltage: 24 V DC (20 – 30V)
- Weatherproof IP67 enclosure, individual design (metal, plastic)
- Single red LED for status indication

TECHNICAL PARAMETERS:

- LINUX based system
- Independent separated processor for data sampling with asynchronous data buffer
- 4x 2state digital input - Common minus pole, Galvanic separated input, typical working voltage 24V DC, external interrupt input, event handling in SW
- 5x 2state digital output- Switching Relay, max current 2A, max voltage 60V DC.
 - 4x Analog input 4-20mA - inputs with common negative pole, galvanic separated, sampling 100ms or better
- 4 x 1-Wire bus for digital thermometer DS18B20
- 3 x valve control output, 3A/36V
- 2 x input for encoder, 10kHz, 24V, 100 mA
- 1 x MODBUS RTU standard industrial BUS, RS485
 - Communication – Ethernet, Wi-Fi, with external antenna
 - Internal USB bus for dongle- GPRS/LTE, NB-IoT modem
- Hardware watchdog
- RTC with battery backup
 - Basic setting via Ethernet, Advanced settings via Ethernet, Wi-Fi or GPRS
 - Functions- input sampling rate 10- 100ms, accuracy better than 1ms, buffer for 10 samples retroactively
 - All data will be sent after end of sequence with time stamp, data format JSON
- Heartbeat: can be set to individual interval, typically 1 hour, all input states will be sent
- GPS module for time synchronization and location