



IoT Gateway

General Description

The Continental Engineering Services (CES) Internet of Things (IoT) Gateway is vital for connecting sensors, devices, and other components to the internet. With updates Over-the-Air (OTA), you can easily enhance your functionality by updating the software on your devices and sensor firmware. Our CES IoT Gateway enhances the future scope of your product with features such as predictive maintenance, performance tuning, and condition monitoring, remote setup, geofencing, and much more. Our IoT platform is based on an automotive standard operating system that is compatible with most development strategies. Our IoT solution also comes with a robust library of software functions that enables rapid implementation.

The IoT software development kit (SDK) allows you to experiment with your sensors, actuators, clouds, and frontends. You can perform remote control functions, receive early warnings based on triggers set by your specifications, and monitor operation or functionality. CES also offers cellular access agreements to support this activity globally.

Technical Information

- › NXP Calypso Microcontroller
- › LTE Cat M1 / NB IoT with GPRS fallback
- › GNSS Module supporting GPS, GLONASS, Galileo, Baidoo
- › Bluetooth Low Energy v4.2 (v5 ready)
- › 1x 100BASE-T1 - IEEE 802.3bw Compliant Ethernet
- › 2x High Speed CAN (ISO11898-2) / CAN FD
- › 6x General Purpose Input / Output (Analogue, digital or PWM)
- › 2x High Current Output (up to 1 Ampere each)
- › 1x Serial (RS232)
- › Dimensions approx. 127 x 108 x 34 mm (LxWxH)

Benefits

- › Meets stringent automotive quality requirements
- › Designed for harsh environments (IP65)
- › IoT Gateway with **worldwide** LTE connectivity
- › Can be added aftermarket to extend the functionality of products already in the field
- › Directly retrieve your sensor data via industry-standard MQTT protocol
- › Secure and encrypted data transfer to the cloud of your choice



CES IoT Platform

Cloud Integration

The CES IoT solution offers scalable infrastructure based on microservice architecture. Based on our vast experience in the automotive space, you can be sure that CES EE architecture also takes into consideration the latest functional safety and security industry-standards and best practices. The data can also be sent to your preferred cloud to interact with your backend seamlessly using our generic interface.

Please allow us to introduce an example of a modern backend solution we call ContiConnect: ContiConnect provides fleet managers with real-time tire pressure and temperature data from wireless sensors. Consequently, maintenance services can be initiated only as required reducing administrative effort. Fleet mobility and efficiency increases, while the total cost of ownership decreases.

Benefits

- › Integrated device and account management
- › Scalable backend solution (load-balancing)
- › Generic interface via REST and MQTT
- › Supports AWS, MS Azure, Conti Server
- › Backend to backend communication
- › Visualization of the data

Device Management features

- › Device authentication
- › Software version handling
- › Software configuration management
- › Device control (mute/ sleep/ SW update)
- › Load balancing for MQTT brokers
- › User management

