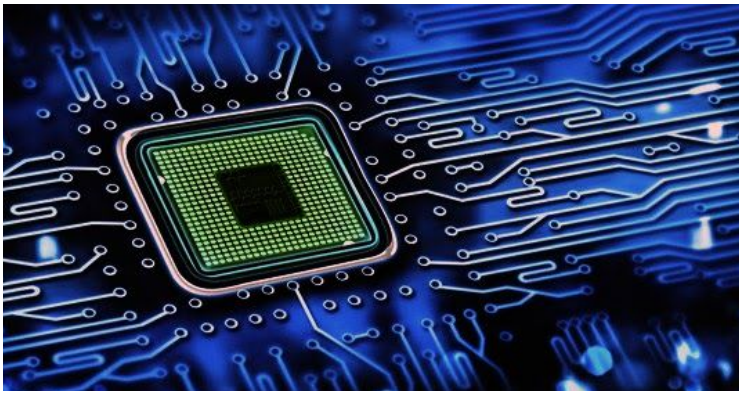
# Embedded System LoRaWAN™ technology

euristiq

A Client is a Canadian provider of globally distributed, best-in-class IoT gateway sensors and applications.



## Challenge

The client produces wireless IoT devices for home, industrial, agricultural, automotive and other solutions. These devices apply the LoRaWAN™ technology.

In this case, the client needed to improve and test their existing device's firmware.

We had some difficulty with the big difference in time zones between our team and the client. Also, the project required exploring a lot of information about the LoRaWAN™ technology and how the client implements it in their devices.

## Solution

The cooperation is in progress. We have already developed a GPS tracker that can receive the actual coordinates, time, date, number of satellites, etc. and send the data to the server using LoRa.

On other devices, new features were added: motion detection, the low power consumption function, discontinuous work mode, self-test functions and more.

The issue with the time difference was easy to resolve by implementing efficient agile approaches in management.

## Tools and technologies

- Embedded C
- LoRaWAN™ technology
- RS232 protocol
- RS422 protocol
- RS485 protocol
- logic analyzer
- JTAG and SWD debugger for MCU
- USB to RS interface adapters

## Scope of work

- Decision on the technical stack
- Architectural engineering
- Technical consulting
- Requirements elaboration
- Quality assurance

## Results

- Our team is well integrated into the client's team and collaborating on the development of the client's hardware and firmware.
- Successfully delivered new products as well as improved the client's existing devices.
- The development is insured with by regular quality control protocols.