

# HLD.10

## IoT Device Hardware High Level Design and Project Plan



Service name:

### HLD.10 IoT Device Hardware High Level Design and Project Plan

#### Deliverables:

- Detailed Product Requirements Document
- Product Architecture Document
- Solution Security Review Document
- Estimate Project Plan for POC to Production (If applicable)
- Initial Bill of Material and Costings

#### Duration:

3 Weeks

#### What is the problem or concern we are addressing?

You want to build a connected hardware product that has some form of short range (BLE, Wi-fi, RFID UWB) or long range (Cellular, GNSS, LoRa, Sigfox) wireless radio technology onboard. Every product with a radio or multiple radios in it tends to have slightly different system level needs. Factors like performance, cost, weight, size, power, certifications, manufacturing complexity and physical reliability all contribute to determining the starting point or the hardware selection.

#### The Process:

Taoglas will review your product details with you to understand your design priorities. Once we understand your product use case and high-level requirements then we'll need to meet with you and your team to discuss detailed requirements.

We'll help you define clear detailed requirements to produce a product requirements document:

- Product Overview
- Environmental Requirements
- Electrical Requirements
- Power Requirements
- Security requirements

- Mechanical Requirements
- User Requirements
- Regulatory Requirements
- Certification Requirements
- Processor/Memory/Flash Requirements
- Safety Requirements
- Manufacturing Test Requirements
- Design for Manufacture and Manufacturing Guidelines

#### If applicable:

- Cellular technology analysis and impact (NB-IoT, LTE-M, LTE, GSM)
- SIM card options, Dual SIM or Multi-IMSI or eSIM
- Regional and global service availability

On completion of the product requirements document, our team will work on an initial project plan and a draft bill of materials. We'll define a set of antenna options relevant to each radio in your product. We'll then discuss the pros and cons of the choices we've made and work with you to help you decide on the best options for your device.

#### What does Taoglas need?

Mostly we will need to spend time discussing your product requirements and the collateral/artefacts required depend on where you are in the design. It depends on a greenfield or brownfield design situation and how much work has already been done. Taoglas will NOT perform hands-on integration as part of this service.

If you do have a schematic, BOM, layout and mechanical files done, having these will help us understand your product implementation path. PDF format copies of your schematics for each board in the design. If you happen to use Altium then native Altium files would also be helpful.

#### Service Delivery Objectives

- A. High Level Requirements Review
- B. Hardware Requirements Analysis
- C. Component Selection Options
- D. Hardware Development and Validation Estimates
- E. Preliminary BOM costings