RA Ecosystem Partner Solution
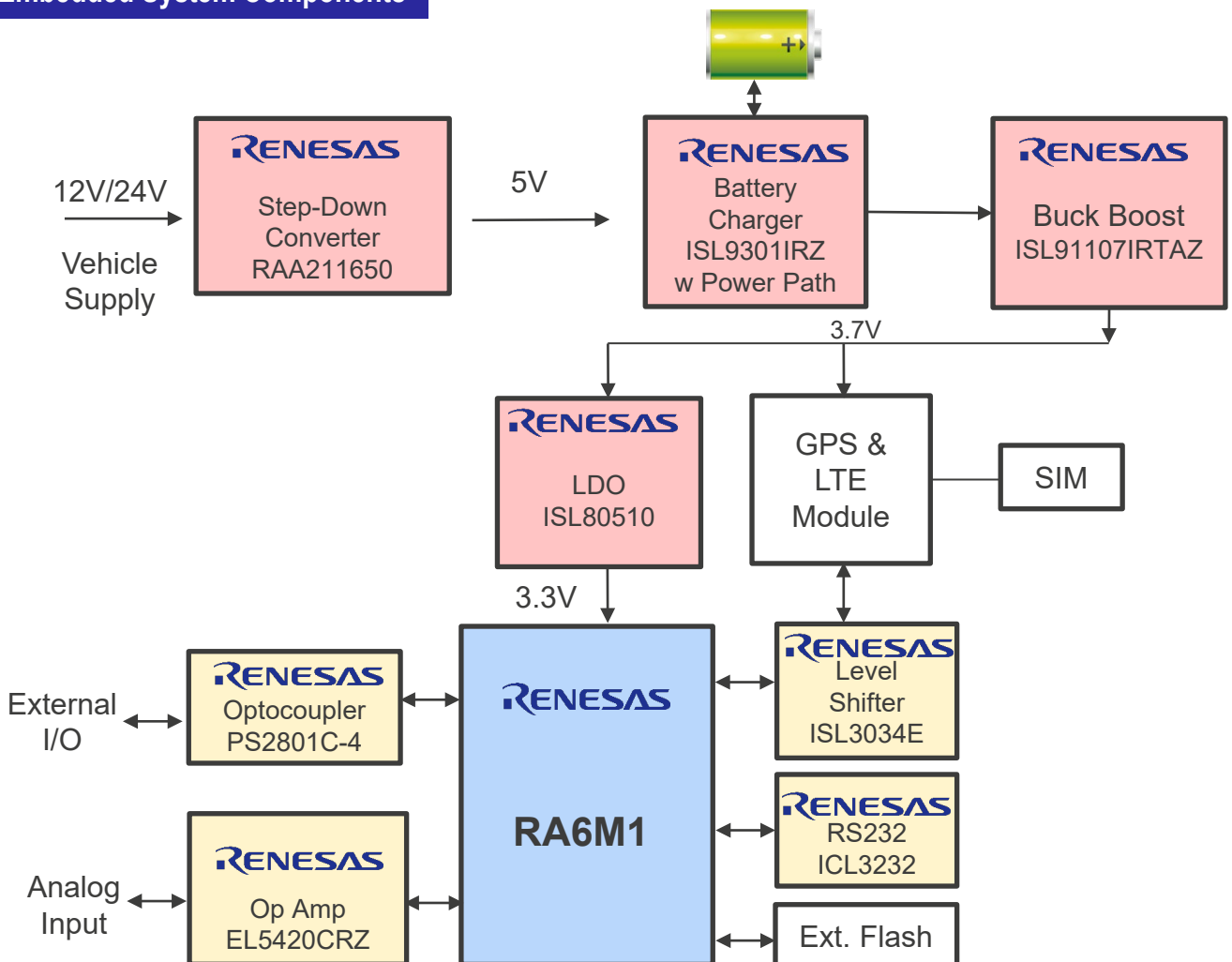# EdgeLinx IOT Telematics Unit (Model: ELT-X10)

Solution Summary

IOT device suitable for Sensor-based and Asset-monitoring applications in IOT, Telematics, Transportation and Logistics markets. Part of the CAD-IT's family of IOT products and technologies. Incorporates Renesas' latest RA power-saving MCU and power-based technologies for product features, reliability and protection from dirty power sources.

Diagrams/Graphics

Embedded System Components

2021.07

RA Ecosystem Partner Solution

CAD-IT's Telematics & IOT Intelligence Platform (CTIP)

Solution Summary

The CAD-IT Telematics & IOT Intelligence Platform (**CTIP**) is a modular suite of software libraries within CAD-IT's architecture for IOT applications and related devices. It offers integrate-able engines and modules in the development of server and cloud applications, and embedded IOT devices.

The server and cloud-based modules of CTIP support Microsoft Azure services, MS SQL Server and some open-source technologies and can be provisioned to run on virtual machines on any cloud offerings.

Separately, the CAD-IT Telematics & IOT Embedded Framework (**CTEF**) and associated libraries simplify the development of software and firmware for IOT devices. The CTEF software library is suitable for the Renesas RA6 MCUs and targets primarily FreeRTOS. It encapsulates the technical and domain experiences from CAD-IT's experience in designing and deploying its own IOT products. It offers reduced complexity and time-to-market in designing your own products.

Features/Benefits

Market Advantage
- Cloud ready
- Support for general features offered by modules on the market
- Flexible & Portable – OS agnostic
- Easier, faster development
- Benefit from CAD-IT's extensive technical and domain knowledge
- Shorter product development cycle
- Improved product stability and reliability

Technical Features of CTIP (for server and cloud-based applications)
- Runs on MS SQL Server
- Support Microsoft Azure
- Supports https, MQTT 5.0 and web technologies
- Functionality is accessible through JSON-based APIs

Technical Features of CTEF (for embedded devices)
- Based on Renesas' RA6 microcontroller family using Renesas e2studio and FreeRTOS.
- Support for other toolchains and other RTOS.
- Architected to support multi-tasking applications written in C for FreeRTOS, for stability and ease of functionality management.
- Support various GPS, 4G, WiFi, Bluetooth, serial flash, SD Card, SIM and sensor-based features and technologies, depending on hardware modules selected. Please ask.
- Used in CAD-IT's hardware product suite, which is the EdgeLinx IOT family of devices

Target Markets and Applications

- Industrial & Factory 4.0, IoT, Smart Building, Enterprise Appliances & Sensors, Transportation & Telematics