

alTRAN
Part of Capgemini 

Mobile ERT Reader



Challenges

A leading industrial automation company wanted a partner to conceptualize and develop a mobile smart meter reader and also automate the entire process. Altran took complete ownership of the product and hardware development, mechanical design and software development.

An ERT reader is aimed at helping utility providers save the expense of periodic trips to each physical location to read a meter. It also enables billing based on near real-time consumption rather than on estimates based on past or predicted consumption. This timely information, coupled with analysis, can help both utility providers and customers' control the use of electric energy, gas and water. The ERT reader is also an important element in any Smart City project.

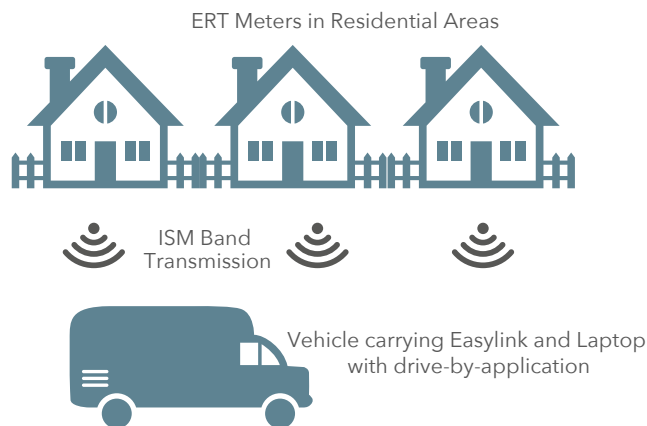
- Non-availability of standard protocol specification to work with the ERT reader
- Availability of limited time period to develop the solution

Solution

This case study demonstrates how Altran using platforms such as TI Sitara based customized Hardware SoC platform running Linux, x86 based PC running windows and technologies like wireless - Sub 1 GHz RF, developed an effective mobile ERT reader beyond many challenges, including a very short span of time.

The specifications included LNA antenna support with HW filters, RF dividers, components for RX chain, SD memory card interface for an easy software upgrade, USB connectivity available for configuration, control and fetch data for logging, UART interface available for debugging and analysis.

- Altran took complete ownership of the product development
- Hardware development - Circuit design, PCB layout, component engineering
- Mechanical design and development
- Hardware board bring-up, BSP device drivers
- Embedded software development for mobile meter reader hardware
- Application development for logging data for post-analysis
- System verification- Functional, hardware-software integration
- Interoperability testing with customer meters
- Range and field testing support



Results

- Single vendor with skills for hardware, software and mechanical
- Short time to market
- Offshore development cost advantage