TESLONIX IoT SmartKick™

A groundbreaking IoT system delivering affordable and scalable item-level intelligence using current RAIN RFID tags and sensors.

TECHNOLOGICAL CHALLENGE

Until recently, the physical infrastructure and processes required to capture and deliver item intelligence from large areas have been nonexistent or labour intensive. As an example, retail companies resorted to infrequent and labour intensive manual item counts and realized only 40% to 65% accuracy levels. This resulted in:

- Increased item (inventory) carrying costs;
- Reduced sales from not locating items;
- Lower sales margins from increased markdowns and shrinkage; and
- Higher operational costs from manual item (inventory) counts and overall inefficiencies.

With the advent of the UHF RFID technology, branded as RAIN RFID, businesses can improve their operational performance through the use of RFID enabled systems. However, most of these solutions rely on handheld RFID scanners (readers) and fixed perimeter portals. These products provide only a snapshot of information, still require significant labour and cannot address the omnichannel problems facing retailers today. Some of the existing fixed overhead RFID reader products have short range, limited accuracy, high installation costs and are not economically viable.

DEVELOPED SOLUTION

Addressing the challenge businesses face in streamlining their inventory management and operations processes, Teslonix delivers a groundbreaking solution that enables item-level intelligence on a level and scale not possible with current technology. Incorporating several key innovations, the Teslonix system delivers total area coverage with significantly reduced infrastructure requirements compared to other technologies.

The Teslonix solution is a standard based fixed infrastructure stationary UHF RFID scanner/reader system that is fully compatible with any EPC Gen2 compliant RAIN RFID tag. The system is designed to plug into any enterprise application with minimal configuration by a system integrator, making it an attractive and easy to use component in RFID solutions. Working with low cost RAIN RFID tags allows for affordable inventory management all while improving performance and improved inventory accuracy.

GOALS

- Develop an indirect distribution channel comprising application specific system integrators to incorporate our readers as an important part of a broader fully functioning RFID system comprising end-points (RFID tags and sensors), gateways and end-user software (MRP/ERP systems)
- License our reference design to value added resellers to manufacture readers specific for the physical characteristics/ operating environments of certain applications
- Outsource the complete manufacturing and logistics of our readers to a contract manufacturer, thereby relieving us of low cost high quality manufacturing and inventory management
- License our IP to chip companies to incorporate our IP into their reader chips to dramatically reduce the cost of readers in the future
- Concentrate on the technology of our product by adding real time location service and consumer/ customer facing applications for the applications our readers address.

IMPACTS OF THE PROJECT 2016-2017

$ Funded amount
50K

Job created person-year/5 years
57

Projected revenues/5 years
2.2M$

Capital investments /5 years
6.8M$

──── **THIS PROJECT IS AN ACTIVE** ────
COLLABORATION BETWEEN

Teslonix is working with key industry players and academic institutions in order to develop and deliver a system with unparalleled performance and capabilities.