PRODUCT BRIEF

CoreRTLS Gen4 Evaluation Kit

CoreRTLS-EVK4 v1.2

KEY FEATURES

- CoreRTLS Gen4 Evaluation Kit (EVK4) is based on Bluetooth® Angle-of-Arrival (AoA) technology.
- Includes a complete CoreRTLS system:
- Four CoreRTLS Locators (CHW-LOC4000)
- Two CoreRTLS Tags: a Wrist Tag (CHW-TAG4001) and a Lanyard Tag (CHW-TAG4002)
- CoreRTLS Software running on a Linux MiniPC that computes the position estimates.
- Power-over-Ethernet (PoE) switch and cables
- CoreRTLS software provides three different usage scenarios and the tools for further development:
- Interactive testing with WebUI for live positioning of Tags
- Real-time data collection via MQTT for in-depth analysis and monitoring
- System integration via REST API for customer RTLS proof of concept

APPLICATIONS

- Testing the capabilities and accuracy of the CoreRTLS system
- Evaluation of AoA positioning within difficult multipath environments
- Integration testing for customer system compatibility

DESCRIPTION

CoreRTLS system provides a HW & SW platform for an AoA-based indoor positioning system. Tags transmit location packets, while Locators listen for these packets and forward the location data to the CoreRTLS software, which calculates precise location estimates. These estimates can then be used in applications such as people or asset tracking.

CoreRTLS Tags are designed to be used in multiple scenarios: wearable tags in this EVK4 are for tracking people in, e.g., healthcare applications. They include a button and an indicator LED. Tags come with a CR2450 battery pre-installed and have a lifetime up to 3 years. Both tags have a IP67 protection rating.

CoreRTLS Locators come with VESA mounting adapter for flexible installation and have IP44 protection rating. Locators are connected to the CoreRTLS and powered via Ethernet (PoE).



Figure 1. CoreHW Locators and Tags included in evaluation kit.

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CoreRTLS INTRODUCTION

CoreRTLS is a system consisting of CoreRTLS Tags, CoreRTLS Locators, CoreRTLS Software, and the needed services (MQTT & REST API) for system integration. Additionally, a graphical user interface (WebUI) is included in this EVK4. CoreRTLS SW runs on a Linux MiniPC Server that is included in the EVK4. PoE network switch and cabling are included for a complete system, ready to operate in a indoor pilot testing arena. Figure 2 presents the connections and components of the CoreRTLS Gen4 Evaluation Kit.

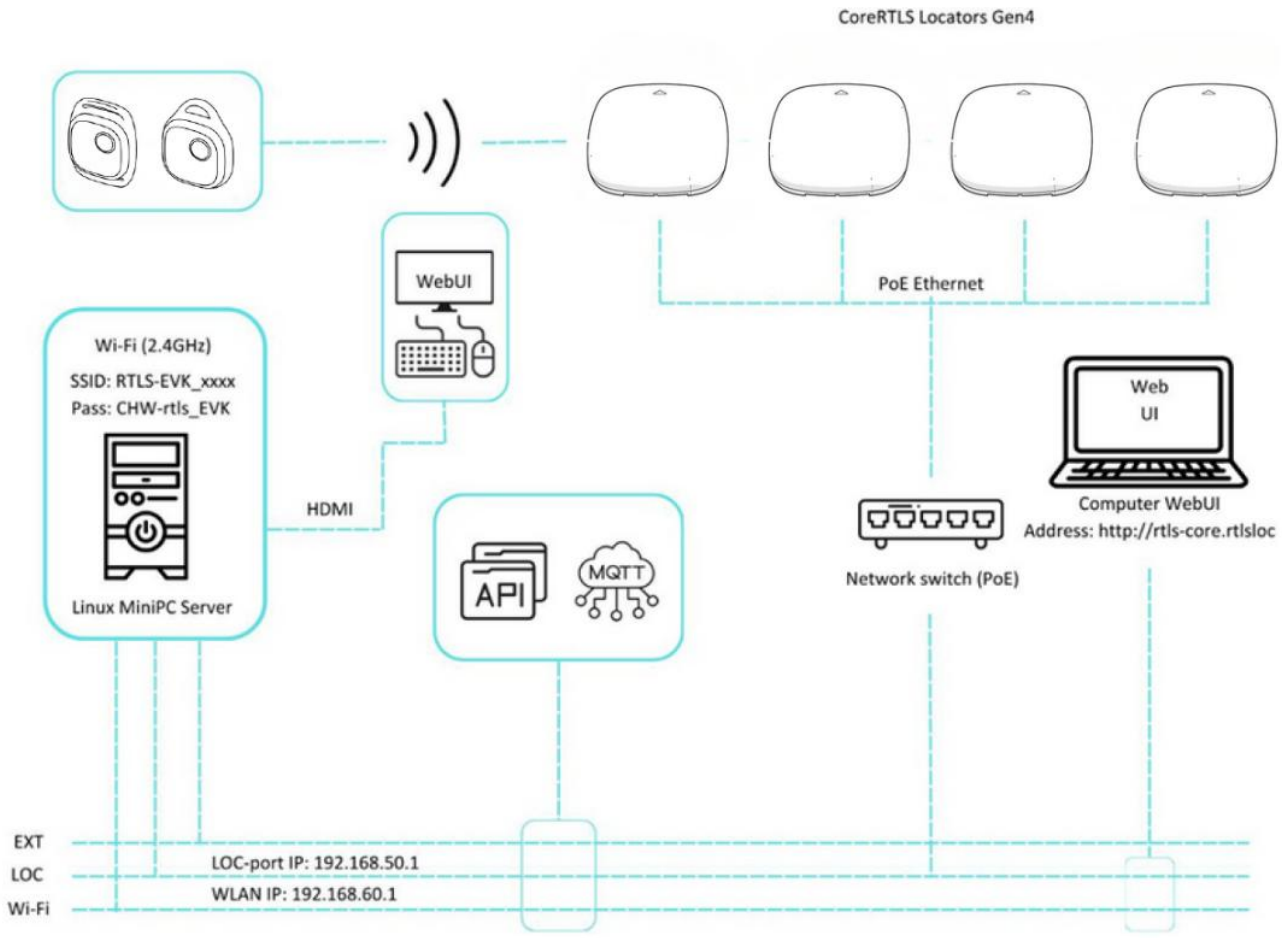


Figure 2. CoreRTLS Gen4 Evaluation Kit connections

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WebUI FOR INTERACTIVE TESTING

EVK4 comes with a graphical user interface (WebUI) which is an end-user web application where Locators are configured for the system. The interface also supports uploading a custom floorplan. In this interface the real time location of Tags can be visually observed. Figure 3 shows an installation where the EVK4 Locators are placed in a grid with their coordinates and orientation configured via the WebUI, and a Tag location calculated by the CoreRTLS can be seen between them.



Figure 3. WebUI 2D view of the evaluation kit.

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Contact us

We're based in Tampere, Finland, complemented with offices located in Helsinki, Oulu, and Turku.
From the northern corner of the world, we serve customers worldwide.

CoreHW Semiconductor Oy
Tampere (HQ)

Visiokatu 1
33720 Tampere
FINLAND

Email:
sales@corehw.com
product.support@corehw.com

For more information visit:

www.corehw.com
linkedin.com/company/corehw

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