

1 Overview

The instructions below are intended to help new users set up a small starter system. They are not intended to cover all aspects of systems installation and configuration. It is recommended that users start with a small setup in order to become familiar with system setup and settings before moving to larger installations.

This guide assumes that the user has the following:

- 6 or more anchors
- 2 or more tags
- Anchor mounting hardware appropriate for the system location
- Ethernet cables of appropriate lengths
- PoE switch
- A Host PC for the CUWB Manager Package

For first time users, it is recommended using tripods for the initial installation to avoid permanently modifying building infrastructure.

2 Preparation

Successful operation of any CUWB system takes careful setup and planning. It may be helpful to have these other documents available:

Document	Description
Installation Guide	Detailed information regarding CUWB Hardware Installation
CUWB Manager Manual	Specific settings, page, and system descriptions
System Architecture Overview	Describes overall CUWB System Architecture and Integration
Deployment Considerations	Detailed overview of system level considerations necessary to operate a UWB RTLS

3 Hardware Installation

1. Determine **Anchor Locations**
 - Identify area or room for setup and testing
 - Consider anchor placement
 - Consider tag tracking area
 - Identify survey method for the anchors
2. Determine **coordinate axis orientation and origin**.
3. Connect Anchors to your network infrastructure and provide them with power.
 - The installation guide has brief sections on **network** and **cable** considerations.
4. Survey and record anchor locations relative to the origin and desired coordinate axes.
 - Measurements should be in meters.
 - Survey is a critical component to system performance, visit the **Anchor Survey** in the installation guide for information regarding proper system survey.
5. Place tags on charge to bring them out of shipment mode and charge the batteries for use.

Survey data and device serial numbers from the hardware installation will be needed later during the CUWB Configuration setup in the CUWB Manager.

4 Software Installation

4.1 CUWB Manager Package System Requirements

- OS: Ubuntu 22.04 Jammy or Ubuntu 24.04 Noble
- CPU: 64-bit, 2.5GHz, dual core or better
- GPU: Integrated graphics or dedicated graphics card with Vulkan 1.3+¹
- WAN: Must be able to reach ppa.cuwb.io via port 443²
- Network: Two NICs or VLANs - one for the User network and one for the isolated Anchor Network
- RAM: 8 GB or more
- Storage: 32 GB or more³

1. Only required if running the **CUWB Viewer** on the Host PC.

2. Only required if using the Online PPA installation.

3. Additional space is required for **CDP logging**.

4.2 CUWB Manager Package Installation

1. Configure the Host PC with link-local IP address range for the Anchor Network by following the **Networking Guide**.
2. Follow these steps below to install the CUWB Manager⁴:
 - i. Follow best practices and review **the install.sh script**.
 - ii. `bash <(wget -qO- https://cuwb.io/docs/v5.0/assets/install.sh)`
 - iii. Paste into an Ubuntu 22.04/24.04 terminal and press Enter
3. On the CUWB Applications selection screen, select at least⁵ **CUWB Manager** and **CUWB Firmware**.
4. Once the software package is installed, the CUWB Manager can be used to configure a CUWB Configuration to run the system.

4. Offline installation instructions are available on the software downloads page for Host PC's not connected to a User LAN.

5. The other applications are optional.

5 System Setup

5.1 CUWB Manager Setup

The CUWB Manager is the user control point for the CUWB RTLS. Along with setting up the CUWB Configuration, the CUWB Manager can also be used for monitoring various status information. For additional details, refer to the **CUWB Manager Manual**.

1. Access the CUWB Manager by opening a web browser⁶ and going to the following url: <http://localhost:5000>
2. Create a **CUWB Configuration**.
3. Select the CUWB Configuration and navigate to the Devices page. Enter serial number and survey information for anchors Enter serial numbers for tag
4. Navigate to the General tab and enter network configuration information.
 - A detailed walkthrough of the web interface is available in the **CUWB Manager Manual**.
5. **Run** the CUWB Configuration from the CUWB Manager.
6. Attach the tags to the subjects or objects of interest and move the tags into tracking area.
7. Navigate to the Status tab and verify that your tags and anchors are visible.

6. If installing on a Host PC without a desktop environment, you can open a browser on another computer and use the IP address of the Host PC instead of localhost.

5.2 Other Tools

Other CUWB tools are available for use and consideration:

- **CUWB Viewer** to model in the tracking area and observe tracking in 3D
- **CDP Logging** for data collection
- **CUWB Manager API** to control the system from an custom application

5.3 Troubleshooting

- For issues relating to the CUWB Manager, see **Troubleshooting** in the Feature Reference or **Logging** for common CUWB Manager log messages.
- For issues relating to networking, see **Troubleshooting** in the Networking Guide.

6 Revision

Version	Date	Change Description
v5.0.2	2025-11-14	Restructuring instructions for ease of use; Updating Host PC requirements;
v5.0.1	2025-10-31	Updating installation instructions
v5.0.0	2025-09-15	Initial Preliminary Release