1 Overview

This is a quickstart guide intended for use with a small demo system.

This guide assumes that the user has the following available:

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

> For first time users, Ciholas recommends using tripods for the initial installation to avoid needing to permanently modify building infrastructure.

2 Anchor Array Setup

1. Determine Anchor Locations
   - Anchors require line-of-sight (LoS) visibility to multiple adjacent anchors.
   - Tags require line of sight visibility to four or more anchors.
   - Anchor location selection should initially prioritize the perimeter of the intended tracking area. Fill in the interior area with additional anchors if possible.
   - Installing anchors directly above tracking areas where Z performance is desired will improve performance in those areas.
2. Determine coordinate axis orientation and origin.
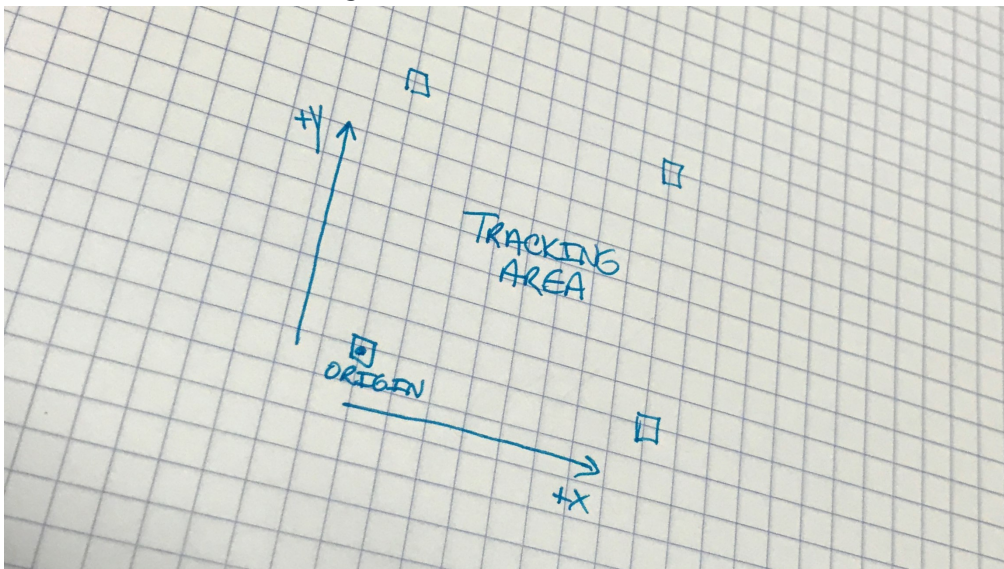
3. Connect Anchors to your network infrastructure and provide them with power.
   - Anchors should be powered per the specification in their respective datasheets.
4. Survey and record anchor locations relative to the origin and desired coordinate axes.
   - Measurements should be in meters.
   - Survey is a critical component to system performance, visit the Anchor Survey in the installation guide for information regarding proper system survey.

3 Software Installation

3.1 CUWB Manager Package System Requirements

- OS: Ubuntu 22.04
- CPU: 64-bit, 4-core or better
- Network: Two NICs or VLANs - one for the production network and one for the isolated anchor network
- RAM: 8 GB or more
- Storage: 32 GB or more

3.2 PPA Setup and Software Install

Follow the instructions below for CUWB Manager Package installation. When prompted in the 'CUWB Applications Selection', ensure that CUWB Network and CUWB Viewer are selected for installation. Following successful installation, the CUWB Manager will be available on all of the host PC's network interfaces on port 5000.

1. Follow best practices and review the install.sh script.
2. Paste into an Ubuntu 22.04/24.04 terminal and press Enter:

```
bash <(wget -qO- https://cuwb.io/install.sh)
```

3.3 CUWB Manager Walkthrough

The CUWB Manager is the user control point for the CUWB RTLS. After successful installation access the CUWB Manager by opening a web browser and going to the following url:

```
http://localhost:5000
```

> Note: If installing on a computer without a desktop environment, you can open a browser on another computer and use the IP address of the computer you installed instead of localhost.

> Upon your first visit to the CUWB Manager, you will be asked if you want to take the tutorial walk-through. The walk-through will provide you with the basic steps needed to configure your devices and start up your CUWB Configuration.

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.

> Note: When creating a new CUWB Configuration, the CUWB Manager will default to MultiRange mode. This can be swapped to MultiTime mode in the configuration settings. For additional detail on MultiTime and MultiRange modes, see CUWB Operational Modes.

4 Tracking & Use

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1. Enter serial numbers for anchors and tags, anchor survey information, and network configuration information into the CUWB Manager.
2. Run the CUWB Configuration from the CUWB Manager
3. Attach the tags to your subjects of interest and track.

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5 Revision

Version	Date	Change Description
5.0.0	2025-09-15	Initial Preliminary Release