



LocoHub Z1U-2 (BLE/UWB)



Product Highlights.

- Easy to install and preconfigured for use
- Internal environmental sensors
- Ethernet or 5V DC powered
- Each hub can support up to 2,000 BLE LocoTags or 1,000 UWB LocoTags
- Loco intelligent localisation engine
- Secure, authenticated communications
- Configured and controlled remotely

How the system works.

The LocoHub works alongside both BLE & UWB LocoTags to provide low cost and intelligent asset, building & personnel management solutions.

The hubs are installed as a UWB mesh network with one LocoHub connected to a Solver, a local computing node that is connected to the internet. In large installations with many hubs, Ethernet or WiFi communications may also be used. The LocoHubs securely report LocoTag data to the Solver which calculates location and reports to our servers.

The hubs can be controlled by the LocoAware web portal or by a 3rd party application via JSON APIs to the Loco server. Typically, hubs are installed such that each tag has an RF line of sight access to four hubs. The locations of the tags, as well as sensor readings from the tags can be viewed on the LocoAware and LocoAssets web portals.

Installation and asset association.

Installation and configuration is simple. A LocoHub is provided pre-configured with default settings, and attachment to the wall or ceiling is completed with 2 screws. Plug in to turn on.

Design considerations.

The system has been developed with end-to-end security in mind and protection against replay and masquerade attacks are provided as standard. Each LocoHub has a unique key programmed at manufacture and all communication is authenticated and restricted to the Loco servers.

The LocoHub can be wall or ceiling mounted and is suitable for hospitals.

The LocoAware servers can be hosted in the cloud or can be hosted locally.



Technical Specifications.

Communication

UWB	Authenticated proprietary protocol
BLE	Authenticated BLE discoverable
Ethernet	Comms to the LocoSolver
WiFi	Comms to the LocoSolver

Positioning

Loco Hybrid Positioning Engine (proprietary)

LocoTag Reporting

Range	80m (LOS)
Number of tags	Up to 2,000 BLE LocoTags per Hub Up to 1,000 UWB LocoTags per Hub

Power Consumption

Reporting	250 mA (average)
------------------	------------------

Sensors

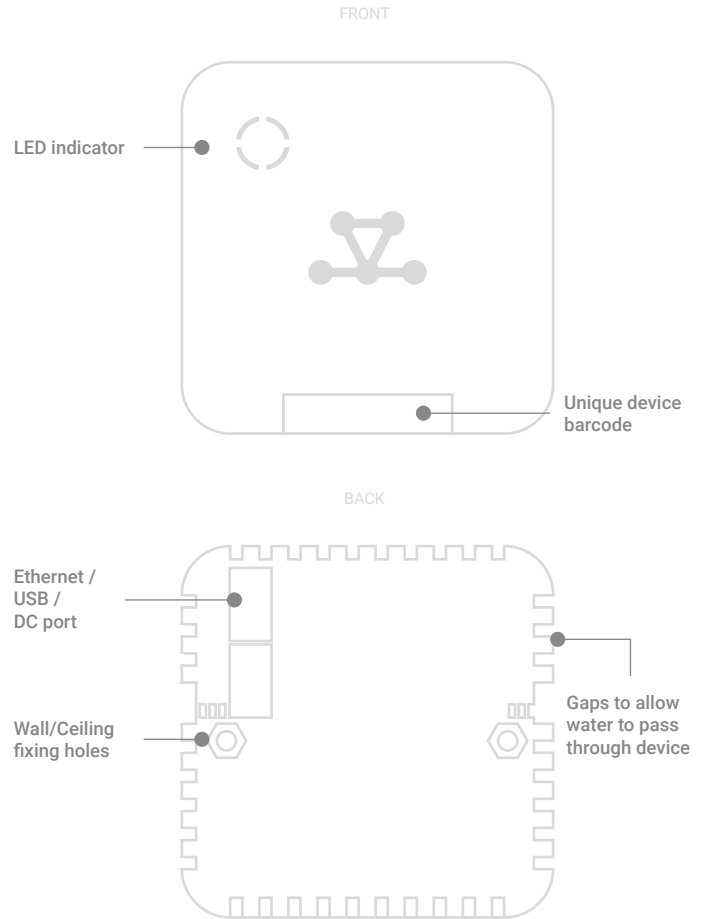
Temperature	Accuracy of sub 1°C (-40 to +125°C) NIST traceable
Humidity	Accuracy of sub 2%
Air quality	Broad range of gases including VOC

Mechanical Charecteristics

Dimensions (LxWxH)	112x112x24 mm
Weight	~200gr
Material	PC+ABS
Colour	Black

Environmental

IP rating	32, drip-through, ventilated enclosure
Storage temperature	-30 to 60°C
Operating temperature	-25 to 60°C



Certifications (PENDING)

CE, ROHS, FCC

Accessories

2m USB-B power cable

2m Ethernet cable

Part Number

Z1U-1-2-0

Works With

LocoSolver, LocoGateway, U4B, P4B, P4P, E4B, E4BL LocoTags