

Ultra Wide Band Radar, Energy Switch & Air quality sensor

World smallest UWB anchor

Key benefits for next generation smart building

- Fast installation time. Re-using existing mains power wallsocket/outlets
- Person and asset tracking using long range radar
- Airquality measurement CO₂, VOX
- Completely invisible for users/visitors
- Infinite wireless scalable for large buildings.
- Operates outside congested wifi bands
- Decawave UWB Radio, 3-7GHz, IEEE 802.15.4a Worldwide allowed
- AES level data security



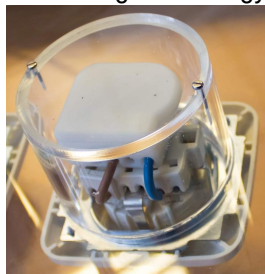
Indoor localisation < 20cm accuracy¹.

Typical indoor range in commercial buildings for the UWB equipment is 30m at 6.8MBps by using special electronics to increase sensitivity and selectivity of the radio transceiver. Radio signals travel through walls enabling a true 3D tracking environment of the whole building. The ultrawideband radio guarantees a reliable connection as a data backhaul for bi-directional secured communication. UWB operates outside the WiFi bands, using worldwide allowed 'unoccupied' frequencies.

LINO anchor enables true smart buildings.

Providing all smart building functions for its users in commercial and residential buildings.

- For users, tag localisation helps retrieving valued objects.
- Presence detection and tracking of persons via the build in long range radar. Providing input for 24/7 security services and building automation. Users can override building automation decisions by means of voice commands.
- A healthy environment for occupants is guarded by 4 way measurement of air quality (CO₂, temperature, humidity, VOX)
- Mains-power switching and energy measurement



LINO inside mains powered wallsocket

Partnumber	UWB	Energy	Switching	Air Quality	Radar	Voice	Available
LINO1000	v						
LINO1001	v	v	v	v			Nov 2023
LINO1011	v	v	v	v	v	v	Dec 2023



Security radar & access control



UWB indoor tracking of tags



Switching mains power 85-250VAC



Energy monitoring



Air Quality: CO₂ (NDIR), VOX



Temperature & Humidity



Voice commands



Network to all IOT devices: openHAB



3D html5 visualisation



Infiniscale[®], wireless auto scaleable



Backup battery (1hr without mains)

Dimensions	41 x 37 x 14.8 mm
Radar	Person tracking + Presence
Power switch	2000 Watt, 1.000.000 times
CO ₂	300-10000 ppm
Humidity	0 to 100% relative humidity
Temperature	±0.5 °C, -15 to +70 °C
Microphone	64 dB SNR
Radio	UWB 3-7GHz, Bluetooth 2.4GHz

¹: Accuracy range from sub cm accurate in line of sight condition up to 300 meter in calibrated environment to few decimeter accuracy in standard commercial building environment with brick or concrete walls. Drywall does not have a significant effect (<2mm).

Factsheet



SMART BUILDING DISRUPTIVE INNOVATION

Put Radar, Power switching & Air sensors in your wall sockets

3 Key problems solved for true SMART BUILDINGS: **awareness, integration, cost**

Problem	Solution using LINO	Current market solution	User & financial effect
user awareness inside buildings	Radar hidden inside wall power sockets (easy to retrofit in any building)	Install camera or ultrasonic sensor at spots with a good field of view of the area. Most of the time very problematic to do. Only pre-programmed power switching can be done by the user (not 'smart').	At present the smartness for buildings comes from the user programming the system. With user awareness detected by the system itself, behaviour and proactive action is now finally possible. Operating as a true smart building
integration	multi function - radar for security & control - air quality + ndir-CO2 sensor - power switching - energy metering - voice commands - active tracking of UWB tags	Install a variety of sensors. New solution: NeYo delivers 1 sensor for all functions	- alarm/security \$1500/house - air quality sensors \$400/house - power switching \$50/point - energy metering \$350/house - 2x alexa or similar \$300/house - camera/ultrasonic \$450/house With 20 switches: \$3950/house With 20 LINO switches only \$1400
cost	Use existing power outlets to install, no cabling required, cutting installation cost. Note: Ultrawideband radio connections are very reliable	A labour intensive cable mess. The LINO solves this issue by being fully wireless, high bandwidth and operating outside the WiFi bands	For \$75 the LINO adds metering, tracking, sensing and radar (3 x the value)

