

TRK-Zon®

TRK-Zon® is the backbone of INEO-SENSE RTLS solution. Placed in judicious locations, it sends periodic beacons dedicated to TRK-Tracer®. More than location identification, it sends information to make the TRK-Tracer react in different ways: zoning logged only, spontaneous alarm or even check-in process.

Embedding Clover-Net® protocol with short range and long range RF technologies, its beacons can cover restricted areas and be monitored and managed remotely at the same time. Moreover, it can be switched to operate on LoRaWAN networks to send periodic status and events from any location.

Thanks to its rugged IP66 casing, it can be installed in constrained environments for a long time.



Withstand field constraints

A complete set of configuration with cursors allows a wide scalability for a deployment adapted to each use case.

Deployment tools make the device setup easy and able to be confided without fear to technicians on the field.

Thanks to complex zoning mechanism, it insures a robust detection of zones even in challenging environments.

Check-in process trigger

Real Time Tracking system is addressed by involving smart and flexible RF communication capable to cover small or larger areas.

To transfer TRK-Tracer® devices to check-in process, the TRK-Zon® is configured in a particular mode which allows the tag device to know in which RF setting the collection is processed.

Zoning capabilities

As the backbone of the Ineo-Sense RTLS solution, its beacon sends information to the TRK-Tracer in order for it to react in different ways:

- Standalone zoning:
Indicates an isolated area. The location is logged and timestamped in TRK-Tracer® for delayed data recovery.
- Multi-zoning:
For larger areas and highly constrained environments. Several TRK-Zon® devices propagate the same zoning identification code with complex non-collision beacons.

These two use cases also support spontaneous alarms sending specific RF settings given by the TRK-Zon®.

More than a device which pushes simple periodic messages, full 2-way mechanism with smart communication settings management allows remote configuration and monitoring.



Example
Incoming/Outgoing detection

- X TRK-Tracer
- INS-Gate
- 📶 TRK-Zon

Hardware features

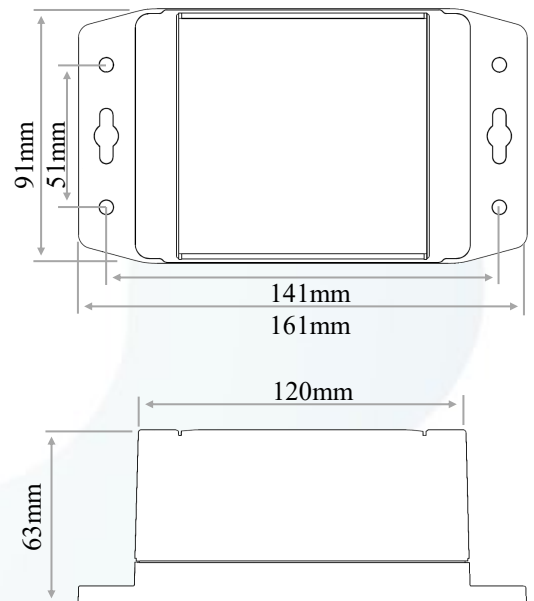
- ABS Grey rugged casing
- IP 66 protection
- Sealing by gasket
- Removable battery
- Average weight : 300g
- Led for activity & event alerts
- Tampering detection by tilt sensor
- Operating temperature :-20° to +60° C (-4° to 158° F)
- Highly optimized for long battery life (> 3 years)
- Optional external power supply
- Optional directional antenna for selective outdoor/open space detection



Advanced capabilities

- Adjustable range detection (2-300 m)
- Range test mode for fine tuning area
- Multi zoning detection
- Periodic status frame (Battery level, status...)
- Daily scheduler allowing automatic behavior adaptation
- Full bidirectional communication by Clover-Net or by LoRaWAN for remote configuration
- Able to trig different use cases:
 - Real time entering detection
 - Stay in zone management
 - Localization historic
 - Check-in inventory (group detection)

Dimensions



Order references

Order #	Description
TRK-ZON-MAIR-X8X-630	TRK-Zon - 868 Standard - IP66
TRK-ZON-MAIR-X8X-640	TRK-Zon - 868 Long life - IP66
TRK-ZON-MAIR-XX9-630	TRK-Zon - 915 - Standard - IP66
TRK-ZON-MAIR-XX9-640	TRK-Zon - 915 - Long life - IP66

Clover-Net® generic features

- Transmission range up to 5,000m line of sight, up 500m indoor.
- Real-time 2-way communications: Scheduled transmission, automatic alarms and on-demand reading.
- Robust against physical and electronic interferences.
- Fast event reactivity, huge coexistence ability.
- Low cost for mass deployment
- Auto RTC propagation
- Native triband compatibility (433, 868 and 915Mhz)
- CE & EN 300-220 & FCC 15-247 compliant
- LoRaWAN compatible
- Uses Multi-channel frequencies to avoid collision.
- Dedicated alarm frequency channel.
- Data Encryption by AES 128 with dynamic key mixt
- Includes Full networks services (Broadcast, Repeater, Mesh, ...)