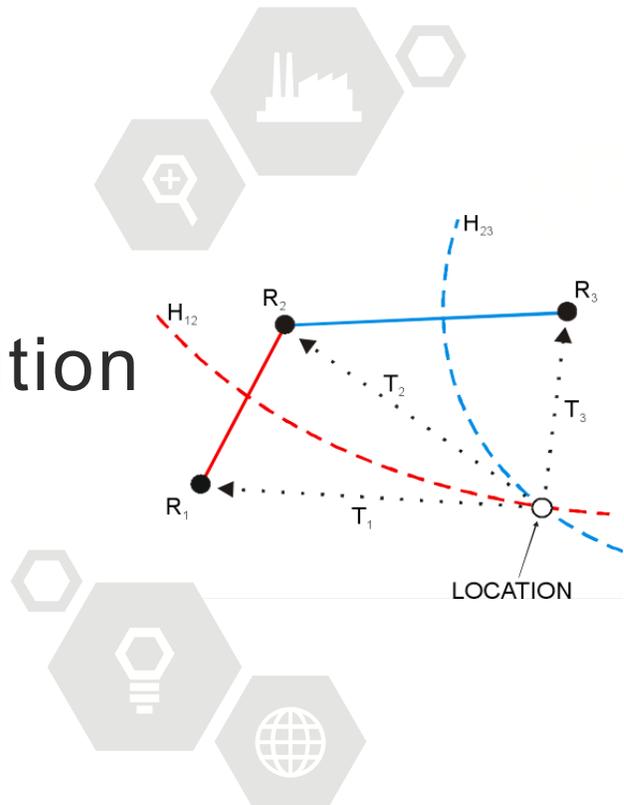


OMT RTLS

Technology of the 4th Industrial Revolution

At OMT we have designed a platform for real-time localization and industrial grade wireless communication that uses ultra wide band (UWB) wireless technology. OMT RTLS is a unique design of this platform specifically for industrial tracking, data acquisition and controlling applications.



How does it work?

OMT RTLS can provide real time position information of small battery powered radio transmitters, called tag. The tag's position is calculated from high precision time of flight measurement of UWB radio signals. This measurement is done by the OMT RTLS Wall Units, from which you will need atleast four in an area. You will also need a OMT RTLS Central Unit, that is capable of powering and managing up to eight Wall Units. Measurement data is then sent to OMT's IoT backend that calculates the position information. This information is then accessible by a standard HTTP interface.



HIGH ACCURACY

OMT RTLS hardware and software solutions are unique in the RTLS industry. Due to this technological advantage over competitors we can provide cutting edge performance down to 5-10 cm accuracy.



HIGH DENSITY

The system is designed in a way to be able to track very high number of tags in a single zone. Hundreds of active devices can be tracked with position refresh rate of seconds.



ROBUST CONNECTIVITY

OMT RTLS infrastructure can also be used as a high availability wireless network. We provide hardware for wireless linking RS-232/RS-422/RS-485 connections via our network, and also an OEM UWB radio module with a complete WSN stack.

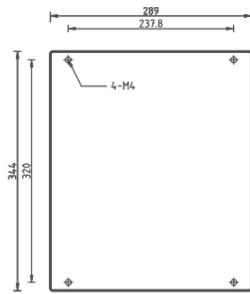


REAL TIME CONTROL

The location of each tag is calculated with a total processing time of a few milliseconds, that enables very fast controlling responses based on the location.



Central Unit



The central unit is the hearth of OMT RTLS. It has wired connections up to 8 wall units. Together they make up one RTLS zone, that enables accurate positioning of hundreds of tags in a 2000 - 3000 m² area.



POWER

110-230 AC power source required. The unit can be order with Type C, A or G connectors. Typical power consumption is 10-26 W based on the number of wall units.



COMMUNICATIONS

Maximum 8 wall units can be attached via Cat6 FTP cable with a maximum length of 50 m. Positioning and sensor data is accessible via TCP/IP that requires a 100Mbit Ethernet connection.



PROCESSOR

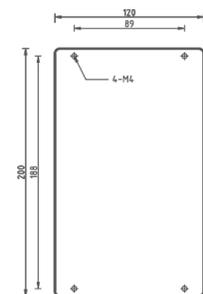
Central unit has an embedded 4 core ARM® Cortex™ A53 CPU that is enough to calculate the position of a few dozens of tags. Optionally a more powerful server can serve hundreds of tags and multiple zones.



CASING

Shining ABS casing provides IP-65 protection. No cooling required.

Wall Unit



Wall units are the anchors of the OMT RTLS system. Atleast four of them requires to be mounted on the edge of each RTLS zone at a fixed position. These wall units also work as distributed antenna system providing unmatched reliability for wireless communications.



POWER

12-24V DC from Central Unit via a standard Cat6 FTP cable. Typical power consumption is around 2W.



WIRELESS COMMUNICATIONS

Ultra Wide Band impulse radio compliant with UWB PHY IEEE 802.15.4-2011 and optionally Bluetooth Low Energy 4.2.



CHIPSET

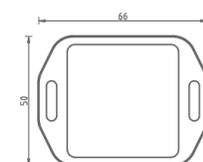
Decawave DW1000 for UWB and Nordic nRF52832 for Bluetooth 4.2



CASING

Shining ABS casing provides IP-65 protection. No cooling required.

Minitag



OMT RTLS unique design enables to track hundreds of low cost battery powered tags in real time.



POWER

400 mAh LiPo battery rechargeable via microUSB. Several months recharging periods in typical applications.



WIRELESS COMMUNICATIONS

Ultra Wide Band impulse radio compliant with UWB PHY IEEE 802.15.4-2011 and optionally Bluetooth Low Energy 4.2.



CHIPSET

Decawave DW1000 for UWB and Nordic nRF52832 for Bluetooth 4.2 and MEMS accelerometer for motion detection.



CASING

Grey or black ABS casing provides IP-54 protection.

