KINEXON MESH ANCHOR

Position references for precise location and IIoT mesh data transmission

The KINEXON Mesh Anchors are the reference points for all KINEXON Tags deployed at the facility.

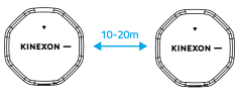
They send and receive signals to/from the sensors and transmit the position measurements wirelessly through the BLE mesh to gateways that are connected to the cloud backend.

The Mesh Anchors are part of the KINEXON Mesh solution. For reliable tracking, a 10-20 meter distance from anchor-to-anchor is required. A higher density of anchors renders more robust positioning results.

The Mesh Anchors are fully battery-powered and last between 3-6 years, depending on the position update rate.

ANCHOR DEPLOYMENT

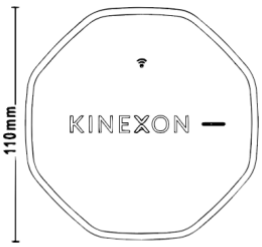
Depending on accuracy requirements and characteristics of the facility

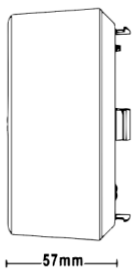


Typical anchor deployment every 10-20 m

Increased anchor density in non-Line-of-Sight conditions required

DIMENSIONS IN [mm]





KINEXON

KEY FACTS

RF SPECIFICATIONS

Positioning Principle	Radio-based, Ultra-Wideband (UWB)
Positioning Methods	Time Difference of Arrival (TDoA)
Frequency range	UWB (IEEE 802.15.4a): 4.25 – 4.75 GHz, 6.25 – 6.75 GHz BLE5 (IEEE 802.15.4): 2.4 GHz

INTERFACES & POWER SUPPLY

Data interface	BLE5 (IEEE 802.15.4): 2.4 GHz
Battery power	Internal battery ER34615H – 19Ah Li-SOCl2 battery (replaceable) Battery lifetime: 3-6 years (position update rate dependent)

PHYSICAL SPECIFICATIONS

Indicators	RGB front LED
Weight	320 g
Dimensions	110 x 110 x 57 mm
Mounting options	Wall-mounted

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +55 °C
Protection Class (cert. ongoing)	IP54
Regulatory Compliance	US: FCC Part 15 subpart F 15.517 (for indoor use only) 15.519 (for outdoor use only) European Union: ETSI EN 302065-1 (HF) ETSI EN 303883 (HF) ETSI TS 103361 (HF) Draft EN 301 489 -1, -17, -33 (EMC) EN 55032 Class B (EMC) EN 61000 -3-2, -3-3, -4-2, -4-4, --4-5, -4-6, -4-11 (EMC) EN 62311 (Human Exposure) 1999/519/EC (Human Exposure) – in progress