

# TEKZIPARK RADAR SPECIFICATIONS

## Abstract

This document details the specifications related to the TEKZIPARK RADAR NODE.



## TEKZIPARK RADAR Terms of Usage

The device is designed to be used for detecting parking space occupancy states. This product is not intended for incorporation into finished appliances that are made commercially available as single functional units to end users.

This product uses the WISOL Sigfox module which is SIGFOX verified.

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



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# 1. DEVICE SPECIFICATION

<b>LPWAN</b>	LoraWAN™
<b>Operating Zones</b>	EU 863-870 MHz ISM Band (Europe) AU 915-928 MHz ISM Band (Australia) US 902-928 MHz ISM Band (United States) AS 923 MHz ISM Band (Asia and ASEAN region)
<b>LoraWan Class</b>	On-board LoRaWAN™ Class A protocol stack
<b>Power</b>	Built-in Lithium batteries (3.6V)
<b>Antenna</b>	Internal included
<b>Detection</b>	RADAR and Magnetometer
<b>RADAR</b>	60 GHz low power Pulsed Coherent Radar (PCR)
<b>MAGNETOMETER</b>	Ultra-low-power high- performance three-axis magnetic sensor
<b>Mounting</b>	Surface/Flush
<b>Dust &amp; Water Protection</b>	IP68
<b>Operating temperature</b>	-40 to +85 °C
<b>Body Material</b>	Polycarbonate. Makrolon FR7087 from Bayer. Flame retardant and UV stabilized that enhances impact strength and retains mechanical properties even under prolonged UV exposure. Suitable for high temperature conditions.
<b>Firmware Update</b>	Over the air upgrade of firmware. No need to unmount and remount.
<b>CPU</b>	ARM® Cortex®-M4 32-bit processor with FPU, 64 MHz
<b>Battery Life</b>	Expected lifetime of up to 9.5 years**
<b>Dimensions (Surface version)</b>	219mm diameter, 30mm height
<b>Dimensions (Flush version)</b>	150mm diameter, 33mm height

\*\* Under estimated number of transmissions per day @ 24. This also includes the scanning for vehicular identity.

## SURFACE VERSION



**Model # TEKZ-LORA-X1-PKSUF**

## FLUSH VERSION



**Model # TEKZ-LORA-X1-PKFLS**

<sup>(1)</sup>X is the operating zone

X=1-> EU868

X=2-> US902

X=3-> AS923

X=4-> AU915



## 2. BATTERY SPECIFICATION

Battery Rating (Ah) <i>2 Class C batteries used each with a capacity of 9Ah</i>	18
Battery Qty.	2
<b>(Battery Life)</b>	
10 parking events per day(years)	<b>10</b>
12 parking events per day(years)	<b>9.5</b>
24 parking events per day(years)	<b>6</b>

*A parking event consists of 2 transmissions, one for Occupied and one for Vacant. This also includes the scanning for beacons.*

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