

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.

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

LPWAN	LoraWAN™
Operating Zones	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)
LoraWan Class	On-board LoRaWAN™ Class A protocol stack
Power	Built-in Lithium batteries (3.6V)
Antenna	Internal included
Detection	RADAR and Magnetometer
RADAR	60 GHz low power Pulsed Coherent Radar (PCR)
MAGNETOMETER	Ultra-low-power high- performance three-axis magnetic sensor
Mounting	Surface/Flush
Dust & Water Protection	IP68
Operating temperature	-40 to +85 °C
Body Material	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.
Firmware Update	Over the air upgrade of firmware. No need to unmount and remount.
CPU	ARM® Cortex®-M4 32-bit processor with FPU, 64 MHz
Battery Life	See section 2
Dimensions (Surface version)	Version 1 - 219mm diameter, 30mm height, Version 2 - 209mm diameter, 30mm height
Dimensions (Flush version)	150mm diameter, 33mm height

SURFACE VERSION 1



Model # TEKZ-LORA-X¹-PKSUF1

SURFACE VERSION 2



Model # TEKZ-LORA-X¹-PKSUF2

FLUSH VERSION



Model # TEKZ-LORA-X¹-PKFLS

⁽¹⁾X is the operating zone

X=1-> EU868

X=2-> US902

X=3-> AS923

X=4-> AU915



2. BATTERY SPECIFICATION

Applicable for SURFACE VERSION 1 & FLUSH VERSION

Battery Rating (Ah)	18
<i>2 Class C batteries used each with a capacity of 9Ah</i>	
Battery Qty.	2
(Battery Life)	
10 parking events per day(years)	15
12 parking events per day(years)	13
24 parking events per day(years)	7.4

Applicable for SURFACE VERSION 2

Battery Rating (Ah)	9.6
<i>4 Class AA batteries used each with a capacity of 2.4Ah</i>	
Battery Qty.	4
(Battery Life)	
10 parking events per day(years)	8.8
12 parking events per day(years)	7.6
24 parking events per day(years)	4.2

A parking event consists of 2 transmissions, one for Occupied and one for Vacant.

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