

WE-RA210-O Product Specification Sheet

1 brief introduction

The WE-RA210-O is an IEEE 802.15.4a positioning base station designed by Hainan Shidian Technology Co., Ltd., supporting both ToF and TDoA positioning methods. It is primarily used for long-range, high-precision positioning applications and can be deployed in scenarios such as factories, tunnels, and utility tunnels.

This device uses a wired backhaul connection and can be linked to the computing engine via a switch.

This device is powered via an Ethernet port and supports standard IEEE 802.3af/at PoE power delivery; it can be centrally managed using a PoE switch. The device supports two installation methods: wall-mounting or pole-mounting.

2 leading feature

- IEEE 802.15.4a UWB Wireless
- IEEE 802.3 AF/AT PoE power supply
- External omnidirectional high-gain antenna

3 product picture



4 size of product

project	description
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summary

product name	WE-RA210-O
Related Specifications	IEEE 802.15.4a
	IEEE 802.3 af/at
Interface	RJ45 10/100Mbps × 1
	N-type × 1 (UWB)
input voltage	48~57V
Average power consumption	< 5W
way to install	Wall-mounted; Pole-mounted

RF Specifications (UWB)

Operating frequency band	3.24GHz ~ 3.74GHz (channel1)
	3.77GHz ~ 4.24GHz (channel2)
	6.24GHz ~ 6.74GHz (channel5)
Physical Rate	110 kbps
	850 kbps
	6.8 Mbps
Output power (25 °C)	-41 dBm/MHz (typical value)
	-13 dBm/MHz (maximum value)

channel width	500MHz
antenna gain	4.5 dBi

Software Specifications

UWBwork pattern	TDoA
	TOF
time lock	Wireless Time Synchronization
Configuration	Server Configuration
Method	Web page configuration
configuration management	Web-based User Management Interface (Remote/Local Management)
	TFTP/HTTP Software Upgrade
networking protocol	DHCPclient
Uplink interface	Interface B

Physical Specifications

size	190×190×60mm
weight	650 g (excluding packaging)

environmental specification

temperature	Operating temperature: -40°C to 75°C
	Storage temperature: -40°C to 85°C
humidity	Operating humidity: 0%–90% (no condensation)
waterproof and dustproof	IP67

RoHs

compatible

5 Delivery Content

name	Specifications Summary	quantity	number of order
WE-RA210-O	UWB Outdoor Positioning Base Station	1	AA01UA210O00
antenna	UWBfibre-glass epoxy antenna	1	/
PoEmodule	PoE Module (Accessory)	1	/
Power adapter	48V 0.5A (Accessories)	1	/
mounting bracket	L-shaped support bracket and U-shaped clamp combination installation bracket (accessory)	1	/