

WE-UG230 Product Specification

1 brief introduction

WE-UG230 is an IoT gateway developed by Hainan Shidian Technology Co., Ltd. based on UWB technology, supporting the IEEE 802.15.4a UWB physical layer. It is primarily used for various IoT applications, featuring high wireless ranging accuracy, long range, and good stability. The gateway integrates two relays, allowing it to be configured as a distance-sensitive gateway according to needs. It can also perform auxiliary functions through Sub-G and BLE. Typical applications include vehicle tags and human-vehicle collision prevention. Additionally, it adds short-range low-power auxiliary positioning technology for short distances.

2 leading feature

- IEEE 802.15.4a UWB wireless
- High power, 1500m line-of-sight transmission (@110Kbps)
- 485 interface
- Two independent relays (active and passive)
- Sub-G&BLE (Optional)

3 product picture





4 size of product

project	description	
summary		
product name	WE-UG230	
Related regulations	IEEE 802.15.4a	
	IEEE 802.15.1	
joggle	Aircraft plug (left)	Power Supply, RS485
	air plug (right)	Active relay, passive relay
input voltage	DC 12 ~48V	
power dissipation	<5 W	

range refresh rate	0.1~20Hz (adjustable)
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UWB radio frequency specifications

operating frequency band	3.25GHz~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)	-41dBm/MHz (typical), -13dBm/MHz (maximum)
channel width	500MHz
antenna gain	1dBi

Radio frequency specifications (BLE optional)

service frequency	2400MHz ~2483.5MHz
physical rate	500Kbps
	1Mbps
	2Mbps
output power	4dBm
antenna gain	2dBi

Radio frequency specifications (Sub-G optional)

operating frequency band	470-510MHz
physical rate	110Kbps

channel width	850KHz
output power	17dBm (Max)
antenna gain	2 dBi

Software specifications

UWB work pattern	vehicle-mounted tag
	Corner Label
Configuration	CLI, software configuration tool

Relay specifications

working voltage/circuit	250V @5A Max
response time	As fast as 1 second

physical specification

Size (mm)	125×125×80
Weight (g)	600 (excluding ear hooks and antennas)

environmental specification

temperature	Operating temperature: -20°C~65°C
	Storage temperature: -40°C to 85°C
humidity	Working humidity: 0% ~ 90% no condensation
levels of protection	IP65
RoHs	compatible

5 Delivery content

name	Brief specification	quantity	number of order
WE-UG230	vehicle-mounted tag	1	AA01UG230P00
power line	1.2-inch aviation plug adapter for DC and RJ45 power cables	1	/
relay wire	A 3.81 3P Relay Transfer Wire for Second Aviation	1	
UWB antenna		1	

Attachment (not included in the delivery scope. Please contact Shidian Business in advance if required)

name	Brief specification	number of order
power adapter	12V,1.5A Power adapter, black	AD0201120000