UG-230 Datasheet

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1 Introduction

UG-230 is an IoT gateway developed by Nanjing Woxu Communication based on UWB technology. It supports IEEE 802.15.4a UWB physical layer. It is mainly used in various IoT applications. It has the characteristics of high wireless ranging accuracy, long distance and good stability and integrate two relays on the gateway, which can be designed as a distance-sensitive gateway according to the configuration needs, and can complete some auxiliary functions through Sub-G and BLE. Typical applications can be automotive tags, collision avoidance applications for people and vehicles. At the same time, short-distance low-power auxiliary positioning technology has been added to the short distance.

2 Main festure

- ■ IEEE 802.15.4a UWB wireless

- ■ High power, line-of-sight transmission 1500 meters (@110Kbps)

- ■ 485 interface

- ■ Two independent relays (active, passive)

- ■ Sub-G&BLE（optional）

3 Product picture

4 Specification

Item	Description	
Overview		
Model	UG-230	
Specification	IEEE 802.15.4a	
	IEEE 802.15.1	
Interface	Aviation plug (left)	Power supply、RS485
	Aviation plug (right)	Active relay, passive relay
Input voltage	DC 12 ~48V	
Power consumption	<5 W	
Ranging refresh rate	0.1~20Hz(adjustable)	
RF Spec. (UWB)		
Working frequency	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℃)	-41dBm/MHz（typical）, -13dBm/MHz（maximum）
Channel bandwidth	500MHz
Antenna gain	1dBi

RF Spec.(BLE optional)

Working channel	2400MHz ~2483.5MHz	
Physical rate	500Kbps	
	1Mbps	
	2Mbps	
Output power	4dBm	
Antenna gain	2dBi	

RF Spec. (Sub-G optional)

Working frequency	470-510MHz
Physical rate	110Kbps
Channel bandwidth	850KHz
Output power	17dBm（Max）
Antenna gain	2 dBi

Software Spec.

UWB working mode	Vehicle tag
	Corner tag
Configuration	CLI, software configuration tool

method	

Relay Spec.

Working voltage/circuit	250V @5A Max
Response time	The fastest is 1 second

Physical Spec.

Size （mm）	125×125×80
Weight (gram)	600 (without accessories, antenna)

Environment Spec.

Temperature	Working temperature -20℃~65℃
	Storage temperature -40ºC to 85ºC
Humidity	Working humidity：0%～90% non-condensing
Protection level	IP65
RoHs	Compatible

5 Delivery content

Model	Specification	Quantity	Order number
UG-230	Vehicle tag	1	AA01UG230P00
Power cord	Double connector, aviation plug to DC and RJ45 power cord	1	/
Relay cable	Double connector, aviation plug to 3.81 3P relay adapter cable	1	

UWB antenna		1	

Accessory (not including in the scope delivery，if you have any requirements, please contact WOXU in advance)

Model	Specification	Order number
Power adapter	12V，1.5A power adapter, black	AD0201120000