

## KWU-100WA datasheet

### Description: 802.15.4a UWB High power anchor

KWU-100WA UWB is based on the development of Formosa Wireless Systems Corp., Based on UWB (Ultra Wide Band).It is location anchor. Products integrated advanced UWB RF module, WiFi module, and work with positioning tags and calculation engine can achieve high precision positioning, the highest positioning accuracy of 30 cm, ahead of other wireless technology positioning products. The anchor point of high precision, high power, with a very high cost performance. Supports TDoA and ToF two kinds of positioning methods, can also be used for individual ranging.

KWU-100WA is in addition to the integration of the UWB module, but also integration of the 5G high power Wi-Fi RF unit. In addition to wired backhaul data, also support Wi-Fi return data, Wi-Fi also work as an AP to do Wi-Fi coverage. KWU-100WA supports 12~56V DC and PoE 802.3af remote power supply, which greatly facilitates the installation and maintenance of equipment, but also to solve the problem of Wi-Fi wireless coverage.

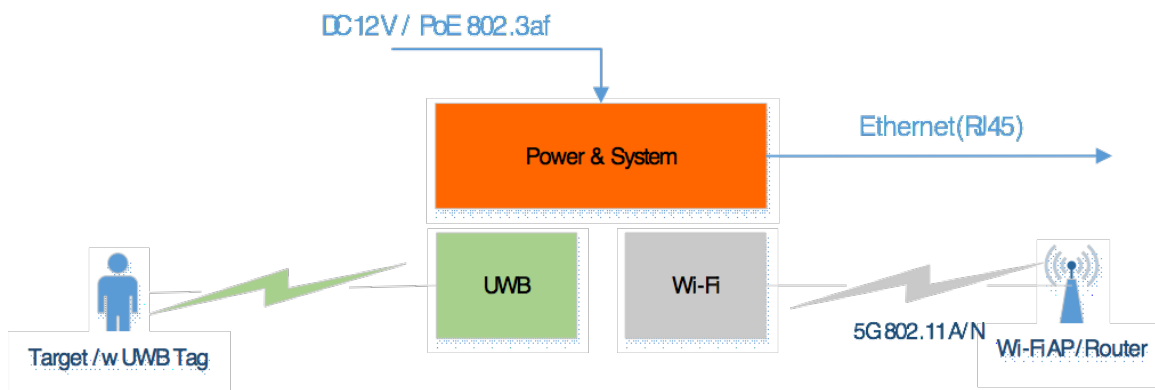
Main feature:

- 802.15.4a UWB
- High precision , Range: 30cm
- High power, Line of sight: 300m
- High power : 802.11A/N 1 x 1 Wi-Fi
- 802.3af PoE power supply
- 10/100 Ethernet

## Picture



## Application block diagram



## Specification

Item	Description
------	-------------

### Outline

Product description	802.15.4a UWB location anchor
standard	802.15.4a 802.11 A/ N
Interface	DC Power RJ45 10/100Mbps SMA x 1(UWB) SMA x 1 Wi-Fi 5G
Power voltage	DC 12V / 802.3af PoE
Average power consumption	< 5w
Installation	Wall Mount

### (UWB)

Working frequency	3.25GHz ~6.75GHz(Channel 1/2/3/5)
physical rate	110 kbps
	850 Kbps
	6.8 Mbps
Output power 25°C)	-24dBm/MHz (Adjustable )
Channel frequency width	500MHz
Antenna gain	Omni-direction 1dBi

### RF Specification (5G Wi-Fi)

Working frequency	802.11 A/N 5.725GHz-5.845GHz
modulation technique	OFDM:BPSK@6/9Mbps, QPSK@12/18Mbps , 16-QAM@24Mbps, 64-QAM@48/54Mbps MIMO-OFDM : BPSK , QPSK , 16QAM , 64QAM , 256QAM

Transmit power ( Single way 25°C )	21dBm@MCS7 23dBm@54Mbps 24dBm@11Mbps
Receiving sensitivity	-71dBm@MCS7 -75dBm@54MHz -95dBm@1MHz
Channel frequency width	20MHz/40MHz
omni-directional antenna gain	5dBi

### Software specification

UWB working mode	TDoA
	TWR
UWB effective distance	> 300 m@6.8Mbps without obstacle
ranging precision	< 30cm
Time synchronization mode	wireless synchronization
networking mode	router bridge
WLAN working mode	AP Station Repeater
networking protocol	DHCP client DHCP server
Security	Support 64/128 WEP WPA-PSK WPA2-PSK
Configuration management	User management interface based on Web (remote management / local management) SNMP TFTP/HTTP software upgrade
Backup IP	back up IP
Computing engine	Wide area network IP or domain name automatic discovery

### physical specification

Interface	DC power RJ45 SMA x 2 Default button
Size(mm)	126mm×101mm×31mm
Weight(g)	400g

### Environmental specifications

Temperature	Working temperature: -10°C~65°C Storage temperature : -40°C to 90°C
Humidity	Working Humidity : 0%~90% NO Condensation Storage Humidity : 0%~90% NO Condensation
RoHs	Compatible