

KWU-O100WA datasheet

Description: 802.15.4a UWB High power anchor

KWU-O100WA 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-O100WA 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-O100WA supports 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.

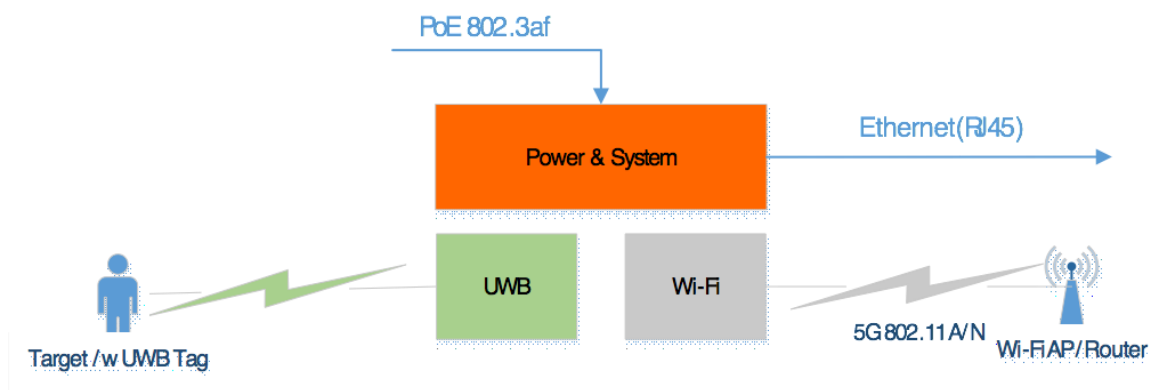
Main feature:

- 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 N Jack x 1(UWB) N Jack x 1 Wi-Fi 5G |
| Power voltage | 802.3af PoE |
| Average consumption power | < 5w |
| Enclosure | Matel IP 68 |
| Installation | Wall / Pole 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 | External (Optional) |

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 width frequency | 20MHz/40MHz |
| Antenna | External (Optional) |

Software specification

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|---------------------------|---|
| 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

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|-----------|--------------------------------------|
| Interface | RJ45 N Jack x 2 Default button |
| Size(mm) | 259 x 250 x 75 mm |
| Weight(g) | 1.8 kg |

Environmental specifications

| | |
|-------------|--|
| Temperature | Working temperature : -20°C ~80°C Storage temperature : -40°C to 90°C |
| Humidity | Working Humidity : 0% ~90% NO Condensation Storage Humidity : 0% ~90% NO Condensation |
| RoHS | Compatible |