Ultra Wide Band ANCHOR   WA02

Key features:
- Tracking up to 300m range UWB (anchor to tag)
- Operates outside congested wifi bands
- Qorvo DW1000 UWB Radio, 3-7GHz, IEEE 802.15.4a
- +8dBM BLe 5.3
- Firmware upgrade over the air (AES security, unique ID)
- 1000mAh LiPo backup battery up to 9hrs (optional)
- IP67

Indoor localisation < 20cm accuracy[1]
Typical indoor range in buildings for UWB equipment is 30m at 6.8MBps passing through 3 brick walls. For open halls or outdoor LOS (ligh of sight) range is up to 300m Anchor to tag. Special electronics to increase sensitivity and selectivity of the radio transceiver enable long range tracking. UWB radio signals travel through walls and concrete floors, enabling a true 3D tracking environment. The ultrawideband radio guarantees a reliable connection as a data backhaul for bi-directional secured communication. UWB operates outside the WiFi bands using worldwide allowed frequencies.
Standard UWB channels: 4.5 and 6.5 GHz

Connector 1   : M12   5 pin   4.5 to 30VDC
                          USB pins integrated in M12 connector

Connector 2   : Ethernet 10/100

Secure access & control

UWB indoor & outdoor tracking

Energy efficient: 0.5 Watt

Network to all IOT devices

visualisation app

Infiniscale® , wireless scaleable

42000 trackers per zone (200x200m)[2]

2800 locates per second in 3D
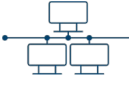
Low latency, collect data every 40ms

Optional features
- WiFi   : 802.11 b/g/n
- Ethernet   : PoE
- Backup Battery   : 1000mAh
- 8GHz UWB (Japan, China)

Dimensions	100 x 100 x 27 mm
Operational temperature	-15 to +70 °C
Weight	200g
Power consumption	0.5Watt (WiFi off)
Radio	UWB 4-9GHz Ble 5.3 2.4GHz

[1]: Accuracy range from sub cm accurate in line of sight condition in calibrated environement to few decimeter accuracy in standard commercial building environment with brick or concrete walls
[2]: Standard firmware supports 20822 trackers at 40ms latency in data collection per typical zone of 200x200m, per UWB channel. 2 UWB channels can be active. High Capacity firmware support 84000 1Hz trackers at a higher latency.

V 1.2

WA02 LEDS

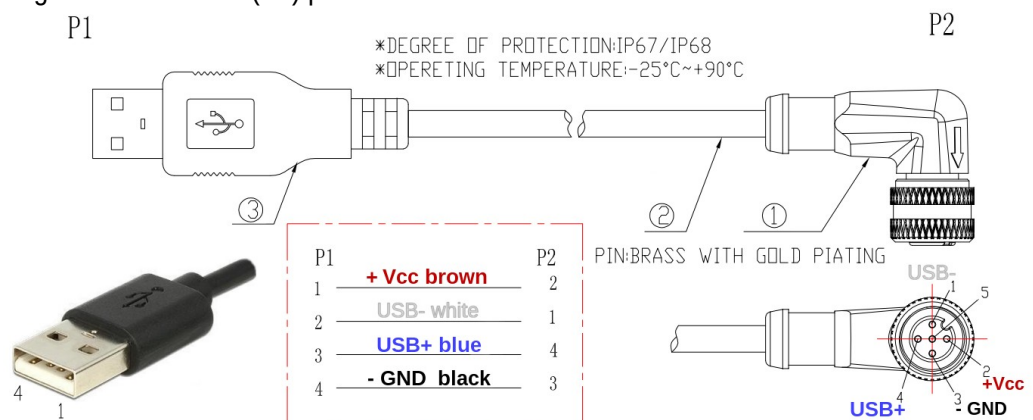|	Function	LED	Description
⚙	SYSTEM	RED/GREEN/BLUE	Blue blink : Uwb network sync Red : Blink 500ms system error Blink 1750ms battery low Green : Sign-on received
	Ble 5.3	RED/GREEN	Red : Advertise Green : Blink 500ms 1MBps Blink 250ms 2MBps
UWB	UWB	RED/GREEN	Red blinking: TX transmit Green blinking: RX receive
🔋1	BATTERY 1	GREEN	Green on : Charging Green blinking : Ethernet data transfer
🔋2	BATTERY 2	GREEN	Green on : Charging
🖧	NETWORK	RED/GREEN/BLUE	Red : Link active Green : Ethernet data transfer Blue : ON 100Mbps, OFF 10 Mbps
	WiFi	RED/GREEN	Red blinking: TX transmit Green blinking: RX receive

USB, Power cable

USB 5V.   Input voltage range M12 connector (P2) pin **2**: 4.5 to 30VDC
P1: USB-A
P2: M12 5pin IP67

P1

P2

*DEGREE OF PROTECTION:IP67/IP68
*OPERETING TEMPERATURE:-25°C~+90°C

PIN:BRASS WITH GOLD PIATING

P1		P2
1	**+ Vcc brown**	2
2	USB- white	1
3	**USB+ blue**	4
4	**- GND black**	3

USB-
5
2 +Vcc
USB+ 3 GND

For industrial and building automation a star topology using T-cable-splitters of 24VDC power supply is recommended. The standard M12 cables have molded IP67 connectors on both sides (Male, Female)

For data offloading a M12 to USB cable can be used or offload data via ethernet (10/100) IP67 rated connector.

DIMENSIONS
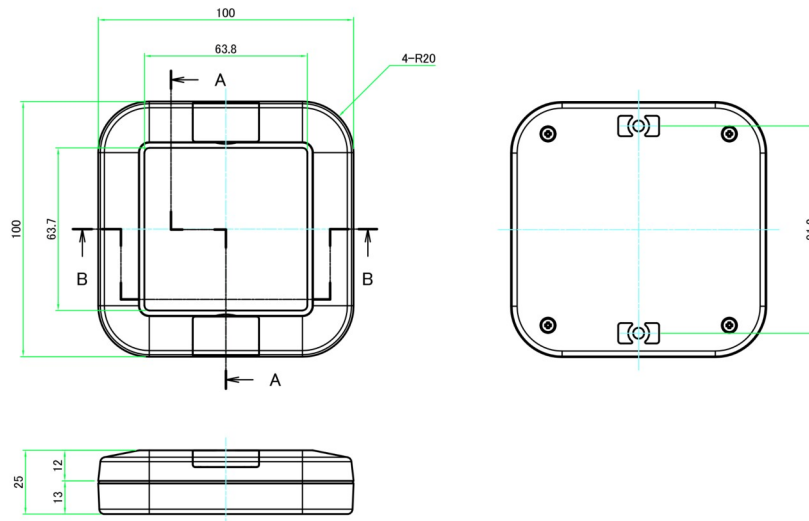
OPTIONAL:
3/8 UNC Mounting bracket

I-beam Mounting flange (100 to 250mm wide flanges). (M12 IP67 T-splitter-cable attached)