UB-A200

ARTEMIS Anchor

Quick Reference Guide

1st Ed – 11 January 2022

Copyright Notice

Copyright © 2022 Avalue Technology Inc., ALL RIGHTS RESERVED.

Part No. E2017UBA2A0R

FCC Statement

THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTATLLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at:
http://www.avalue.com.tw/

Content

1. Getting Started 4
1.1 Safety Precautions 4
1.2 Packing List 4
1.3 System Specifications 5
1.4 System Overview 8
1.4.1 Rear View 8
1.4.2 Rear/Top View 8
1.5 System Dimensions 9

1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1 x UB-A200
- 1 x Bracket

If any of the above items is damaged or missing, contact your retailer.

1.3 System Specifications

Component	
Mother Board	Leverage PCBA of UB-A100 (E9697UBA1E0R)
MCU	ARM®Cortex®-M4 32-bit RISC core, 168 MHz (STM32F407VGT6)
UWB RF Specifications	
Chip	DECAWAVE DW1000
Frequency	Channel 1 : 3.25~3.75 GHz for USA Channel 2 : 3.75~4.25 GHz for USA, Europe Channel 3 : 4.25~4.75 GHz for USA, Europe, Taiwan Channel 5 : 6.25~6.75 GHz for China
Physical rate	110K bps 850K bps 6.8 Mbps
Power output (25℃)	-41.3 dBm
Antenna peak gain	5dBi
2.4 Wi-Fi RF Specifications	
Chip	AI7688H
Protocol	802.11b/g/n
Antenna	1.5dBi
Software	
UWB operating mode	TDoA
Network mode	Bridge mode
WLAN operating mode	AP Station AP + Station
Protocol	DHCP
Security	WPA WPA2
External I/O	
LAN Port	1 x RJ-45 (10/100Mbps), support Powered LAN (802.3af/at)
Indicator Light	All LEDs color is GREEN Power When power on, LED indicator remains lit. LAN When the data of Ethernet is transmitted, the LED indicator flashes. UWB When UWB work normally, the LED indicator flashes.

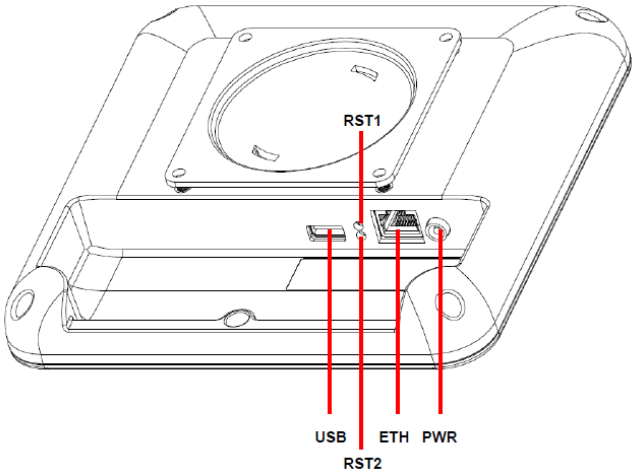
	Wi-Fi When the data is transmitted, the LED indicator flashes.
Others	1 x Reboot button 1 x Function button
Mechanical	
Power Type	AT (*whcih means no power switch or button on chassis)
Power Connector Type	1 x DC-in
Power Requirement	+12V DC-in or Powered LAN (802.3af/at)
Mounting	Wall mount
Dimension	182 x 182 x 38mm
Weight	0.4kg
Color	White
Reliability	
EMI Test	CE/FCC ClassB
Safety	UL/CB design compatible
Vibration Test	Random Vibration Operation 1 Test PSD : 0.00454G²/Hz , 1.5 Grms 2 System condition : operation mode 3 Test frequency : 5~500 Hz 4 Test axis : X,Y and Z axis 5 Test time : 30 minutes per each axis 6 IEC60068-2-64 Test Fh Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep：1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode 7. Reference IEC 60068-2-6 Testing procedures Package Vibration Test 1 Test PSD : 0.026G²/Hz , 2.16 Grms 2 Test frequency : 5~500 Hz 3 Test axis : X,Y and Z axis 4 Test time : 30 minutes per each axis 5 IEC 60068-2-64 Test Fh
Mechanical Shock Test	1. Wave form：Half Sine wave 2. Acceleration Rate：10g for operation mode

	3. Duration Time：11ms 4. No. of Shock：Z axis 300 times 5. Test Axis: Z axis 6. Operation mode 7 Reference IEC 60068-2-27 testing procedures Test Eb : Shock Test
Drop Test	Packing Drop Reference ISTA 2A, Method : IEC-60068-2-32 Test:Ed Test Ea : Drop Test 1 One corner, three edges, six faces 2 ISTA 2A, IEC-60068-2-32 Test:Ed
Operating Temperature	0℃~ 55℃
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Storage Temperature	-40 ~ 75°C

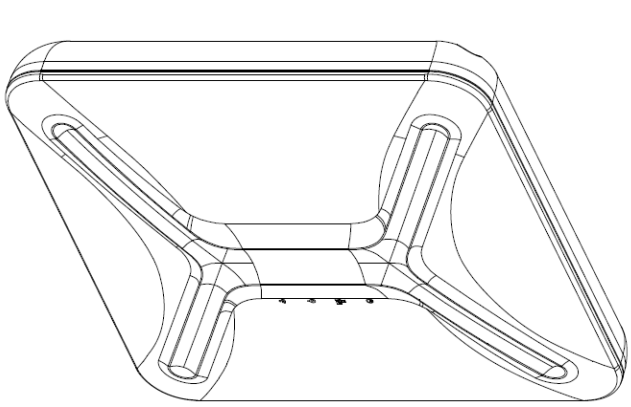
Note: Specifications are subject to change without notice.

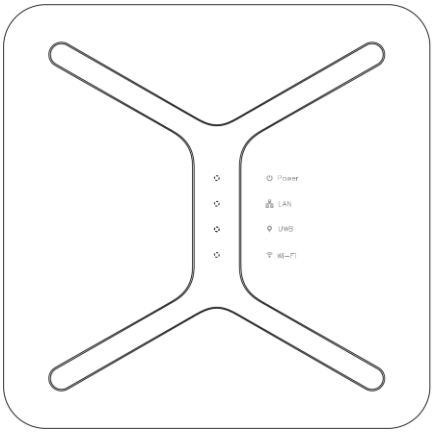
1.4 System Overview

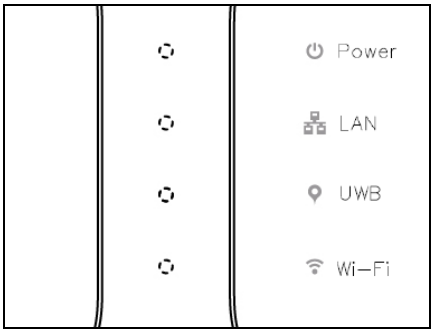
1.4.1 Rear View



1.4.2 Rear/Top View

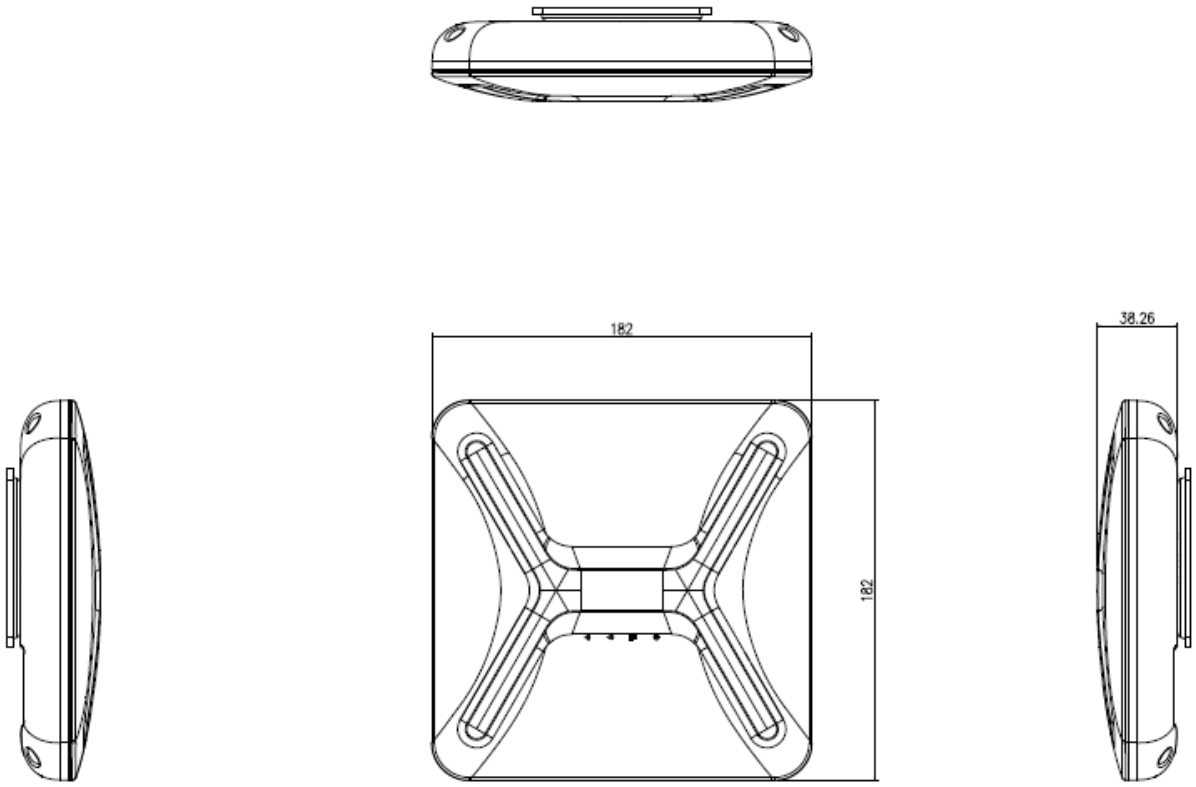


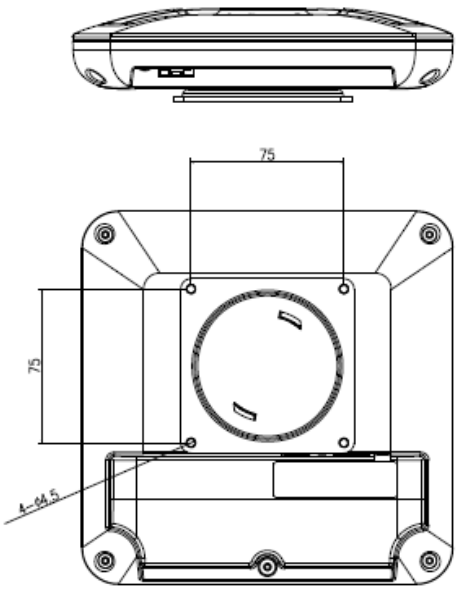




Connector	
Label	**Function**
PWR	DC-IN +12V
ETH	RJ-45 Ethernet (10/100 Mbps)
USB	USB 2.0 connector (for reload firmware only)
RST 1/2	RST1：Reboot button RST2：Combined with RST1 to form a multi-function button

1.5 System Dimensions





(Unit: mm)