

## UCTBWM-15.6

Rockchip ARM Cortex™-A17 RK3288W with Quad ARM Cortex A17 (64bit) @ 1.6GHz high performance processor;

Hardware Manual

Rev 2.0

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Chengdu Vantron Technology, Ltd.

## Revision record

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## Table of Contents

<b>1 FOREWORD .....</b>	<b>4</b>
1.1 COPYRIGHT NOTICE .....	4
1.2 NOTES .....	4
1.3 STATEMENT.....	4
1.4 DISCLAIMER .....	4
1.5 LIMITATION OF LIABILITY/NON-WARRANTY .....	5
1.6 SAFETY INSTRUCTIONS.....	5
1.7 PRECAUTIONS.....	5
1.8 SAFETY INSTRUCTIONS FOR POWER CABLES AND ACCESSORIES.....	5
<b>2 OVER VIEW.....</b>	<b>7</b>
2.1 INTRODUCTION .....	7
2.2 FEATURES.....	8
<b>3 HARDWARE INSTRUCTIONS.....</b>	<b>9</b>
3.1 APPEARANCE.....	9
3.2 INTERFACE DESCRIPTION .....	10
3.3 STRUCTURE .....	10
<b>4 HARDWARE DESCRIPTION.....</b>	<b>12</b>
4.1 CONNECTORS DESCRIPTION .....	12
4.1.1 AC Jack.....	13
4.1.2 Recovery button.....	13
4.1.3 Debug interface.....	13
4.1.4 Micro USB.....	13
4.1.5 Ethernet.....	13
4.1.6 USB 2.0 .....	13
4.1.7 Video .....	13
<b>5 TIPS .....</b>	<b>14</b>

## 1 Foreword

### 1.1 Copyright Notice

While all information contained herein have been carefully checked to assure its accuracy in technical details and printing, Vantron assumes no responsibility resulting from any error or features of this manual, or from improper uses of this manual or the software. Please contact our technical department for relevant operation solutions if there is any problem that cannot be solved according to this manual.

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Vantron Technology ( Vantron )

E-mail: [sales@vantrontech.com](mailto:sales@vantrontech.com)

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### 1.2 Notes

Applicable notes are listed in the following table:

Sign	Notice Type	Description
	Notice	Important information and regulations
	Caution	Caution for latent damage to system or harm to personnel

### 1.3 Statement

It is recommended to read and comply with this manual before operating board, which provides important guidance and helps decreasing the danger of injury, electric shock, fire, or any damage to the device.

### 1.4 Disclaimer

Vantron assumes no legal liability of accidents resulting from failure of conforming to the

safety instructions.

## 1.5 Limitation of Liability/Non-warranty

For direct or indirect damage to this device or other devices of Vantron caused by failure of conforming to this manual or the safety instructions on device label, Vantron assumes neither warranty nor legal liability even if the device is still under warranty.

## 1.6 Safety Instructions

- ✧ Keep and comply with all operation instructions, warnings, and information.
- ✧ Pay attention to warnings on this device.
- ✧ Read the following precautions so as to decrease the danger of injury, electric shock, fire, or any damage to the device.

## 1.7 Precautions

- ✧ Pay attention to the product labels/safety instructions printed on silk screens.
- ✧ Do not try repairing this product unless declared in this manual.
- ✧ Keep away from heat source, such as heater, heat dissipater, or engine casing.
- ✧ Do not insert other items into the slot (if any) of this device.
- ✧ Keep the ventilation slot ventilated for cooling.
- ✧ System fault may arise if other items are inserted into this device.
- ✧ Installation: ensure correct installation according to instructions from the manufacturer with recommended installation tools.
- ✧ Ensure ventilation and smoothness according to relevant ventilation standard.

## 1.8 Safety Instructions for Power Cables and Accessories



Proper power source only

Start only with power source that satisfies voltage label and the voltage necessary according to this manual. Please contact technical support personnel of Vantron for any uncertainty about the requirements of necessary power source.



Use tested power source

This product still contains a button lithium battery as a real-time clock after its external power source is removed and therefore should not be short-circuited during transportation or placed under high temperature.



Place cables properly:

Do not place cables at any place with extrusion danger.



## Cleaning Instructions

- ❖ Please power off before cleaning the device.
- ❖ Do not use spray detergent.
- ❖ Clean with a damp cloth.
- ❖ Do not try cleaning exposed electronic components unless with a dust collector.
- ❖ Support for special fault: Power off and contact technical support personnel of Vantron in case of the following faults:
  - The device is damaged.
  - The temperature is excessively high.
  - Fault is still not solved after the operation according to the manual.

## 2 Over View

### 2.1 Introduction

Thank you for choosing Vantron. It is our commitment to provide our valued customers with the embedded devices equipped with the state-of-the-art technology and the best product services.

Tablet enables the interaction between operators/users and applications, connects industrial control products such as wireless, transducer, battery inside, storage, etc. Tablet adopts a display for displaying and input units such as touch screen, keyboard, audio, kind of sensors etc. for writing working parameters or inputting operation commands. As a digital device for realizing information interaction between human and machine, Tablet is composed of hardware and software. Based on its ample function interfaces and powerful user operational interface, it is very suitable for control units such as medical device, intelligent transportation, industrial field, etc.

Vantron's Embedded Computer products are based on the most advanced ARM and Rockchip processors and have low-power consumption and high integration. The products are designed for applications such as industrials, medicals, and transportations etc.

## 2.2 Features

Model NO.	UCTBWM-15.6
Order Part Number	CHA-G08-UWM2
Display	15.6" eDP, 1920x1080, 250cd/m <sup>2</sup> , 1xHDMI Output
CPU	Rockchip RK3288W Quad Core (ARM Cortex-A17 1.6GHz)
Touch	10 Points, 15.6" Capacitive Touch (with 4mm thickness Tempered Glass)
System Memory	DDR3 2GB
Storage	32GBe-MMC Flash (Optional 8GB or 16GB) <b>Optional</b> 1xMicro SD(Internal)
4G Wireless	<b>Optional</b> Mini-PCIe slot for 4G Module or GPRS Module <b>Optional</b> 1xMicro SIM(Internal)
Local Network	WLAN 802.11 a/b/g/n/ac& Bluetooth 5.0 <b>Optional</b> External Antenna
IOs	1xMicro USB OTG inner 2xUSB Host (Type-A) 1xCamera at front upper center area.
Audio	2x 3W Speakers(L/R) inner, Drill hole on frame a lower side. 1xMIC at lower bottom area.
Power	AC Input: 110V/220V (50/60Hz), Support IEC Plug
Mechanical	Outline dimension: 399x 253 x 44.85 mm
Product Weight	Unit: TBD, Package: TBD
OS	Android 6.0.1 SDK Available
Humidity	Operation: 20% ~80%, Storage: 10% ~90%
Temperature	Operation: 0~50°C, Storage -20-60°C

## 3 Hardware Instructions

### 3.1 Appearance



Figure 3-1-1 : Front view

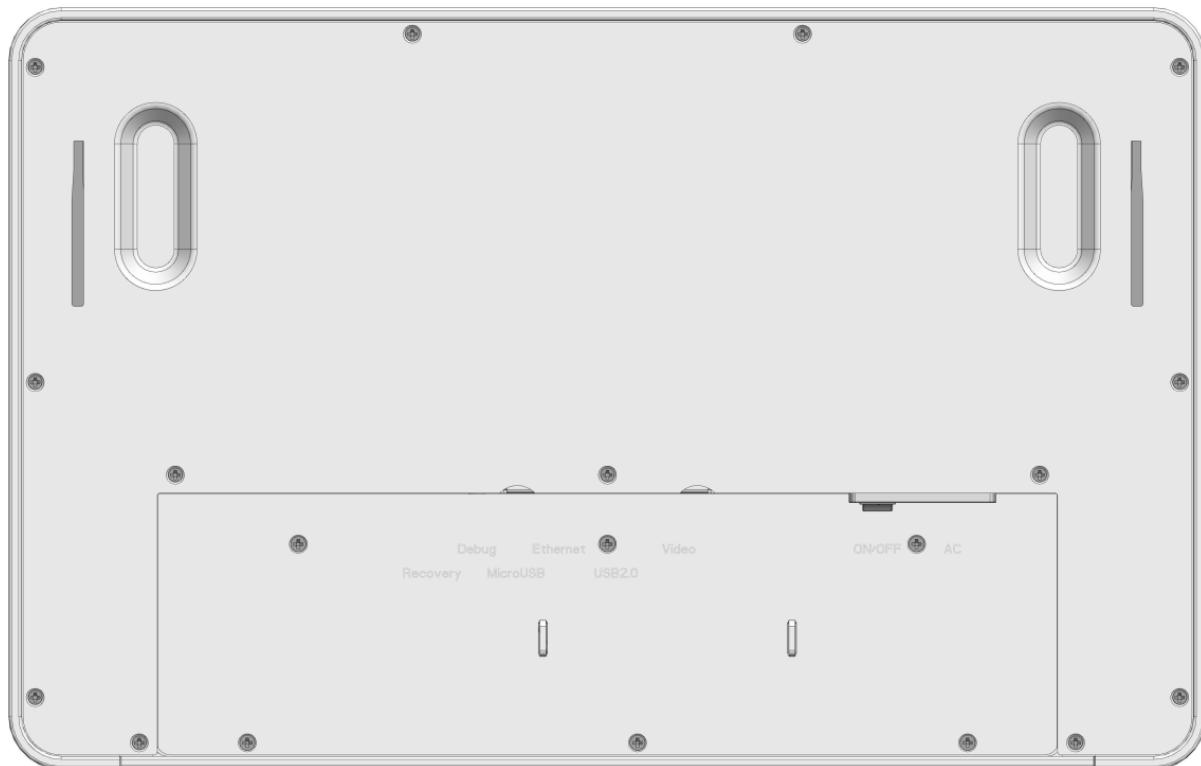


Figure 3-1-2 : Back view

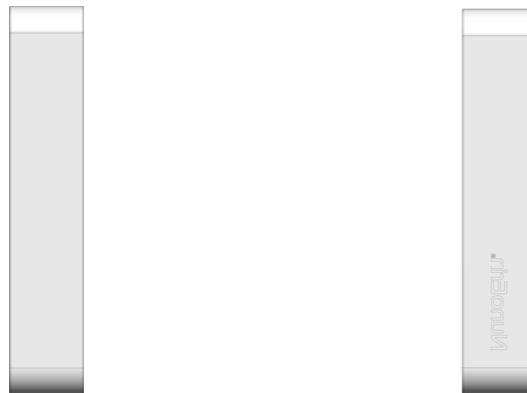


Figure 3-1-3 : side view

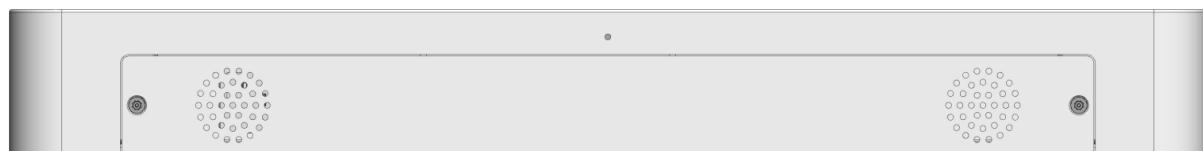


Figure 3-1-4 : bottom view

## 3.2 Interface Description

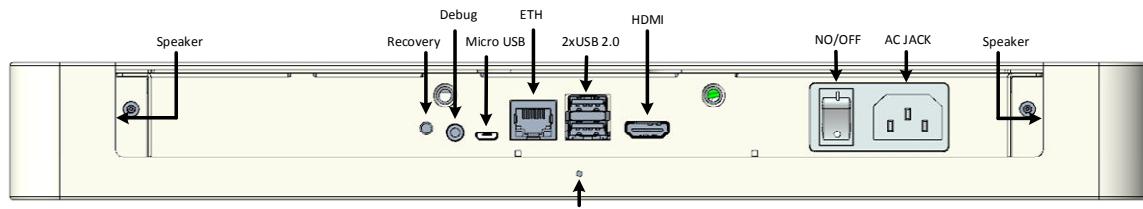


Figure 3-2-1 : Interface



Figure 3-2-2

## 3.3 Structure

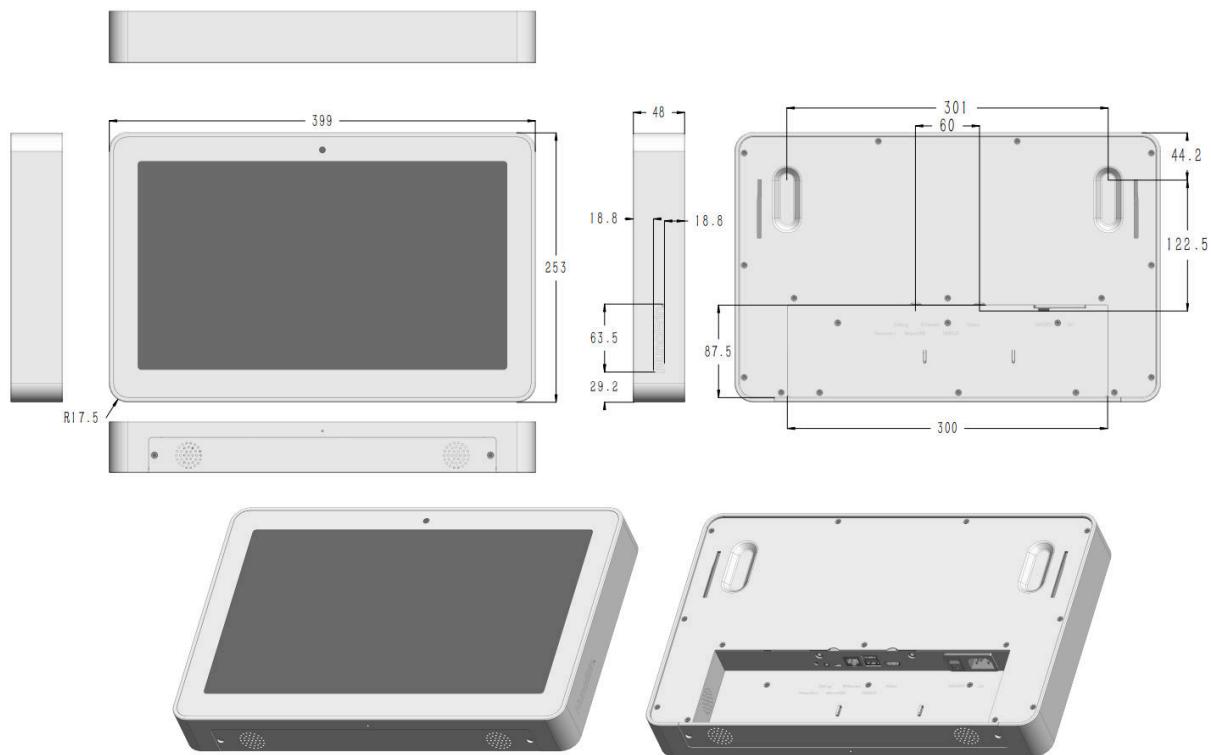


Figure 3-3-1 : Structure

## 4 Hardware Description

This chapter describes the hardware Features, include switch, jumper, connector and PIN function.

The interface description ought to consult the connector sketch map. And attach necessary message such as picture. Indicate the figure, PIN1 and match jack .

### 4.1 Connectors Description

This table is the respective describe valid signal of connector on UCTBWM-15.6 board.

Figure type:

N/C	Not connect
GND	Ground
/	active low signal
+	Positive of difference signal
-	negative of difference signal

Signal type:

I	Input
O	Output
I/O	input/output
P	Power or ground
A	Analog
OD	Open drain
CMOS	3.3 V CMOS
LVCMOS	Low Voltage CMOS
LVTT	Low Voltage TTL
3.3V	3.3 V signal level
5V	5 V signal level
USB	5 V tolerant signal
NC	No Connection

## 4.1.1 AC Jack

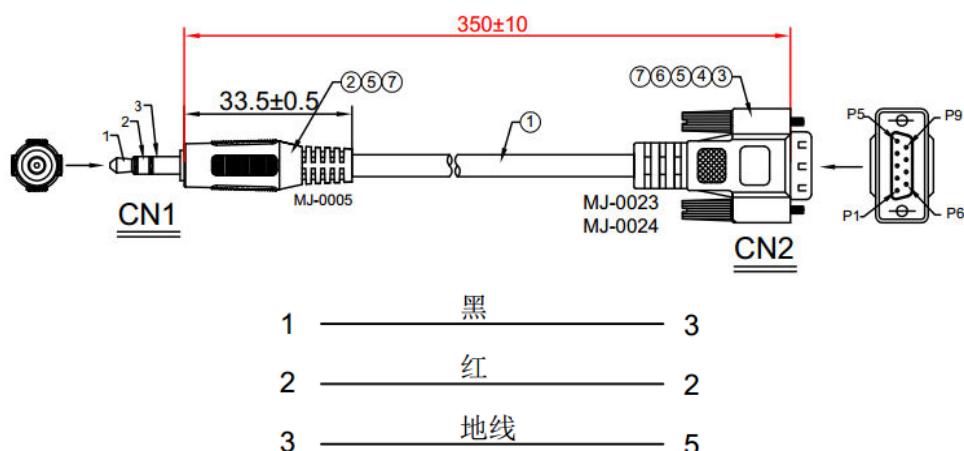
This port plug in a AC100V~240V cable.

## 4.1.2 Recovery button

This button function is for update. While push the recovery button and power on the display plane, it will work at recovery mode. At this time, user can update the display plane with a micro USB-B cable.

## 4.1.3 Debug interface

The debug interface is reserved for UCTBWM-15.6 display the debug information and communicate with PC, use the debug cable.



## 4.1.4 Micro USB

This jack is micro USB-B, used for update.

## 4.1.5 Ethernet

This jack is 1000M Ethernet, communicate with PC or other equipments.

## 4.1.6 USB 2.0

This jack is double TYPE-A USB2.0, both them worked at host mode, can connected USB device.

## 4.1.7 Video

This jack is TYPE-A HDMI, output video and voice.

## 5 Tips



### Waste Disposal

It is recommended to disassemble the device before abandoning it in conformity with local regulations. Please ensure that the abandoned batteries are disposed according to local regulations on waste disposal. Do not throw batteries into fire (explosive) or put in common waste canister. Products or product packages with the sign of “explosive” should not be disposed like household waste but delivered to specialized electrical& electronic waste recycling/disposal center. Proper disposal of this sort of waste helps avoiding harm and adverse effect upon surroundings and people's health. Please contact local organizations or recycling/disposal center for more recycling/disposal methods of related products.

Comply with the following safety tips:



#### Do not use in combustible and explosive environment

Keep away from combustible and explosive environment for fear of danger.



#### Keep away from all energized circuits.

Operators should not remove enclosure from the device. Only the group or person with factory certification is permitted to open the enclosure to adjust and replace the structure and components of the device. Do not change components unless the power cord is removed. In some cases, the device may still have residual voltage even if the power cord is removed. Therefore, it is a must to remove and fully discharge the device before contact so as to avoid injury.



#### Unauthorized changes to this product or its components are prohibited.

In the aim of avoiding accidents as far as possible, it is not allowed to replace the system or change components unless with permission and certification. Please contact the technical department of Vantron or local branches for help.



#### Pay attention to caution signs.

Caution signs in this manual remind of possible danger. Please comply with relevant safety tips below each sign. Meanwhile, you should strictly confirm to all safety tips for operation environment.



## Notice

Considering that reasonable efforts have been made to assure accuracy of this manual, Vantron assumes no responsibility of possible missing contents and information, errors in contents, citations, examples, and source programs.

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## FCC Warning

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any modification to the product is not permitted unless authorized by Vantron. It's not allowed to disassemble the product, it is not allowed to replace the system or change components unless with permission and certification. Please contact the technical support department of Vantron or local branches for help.

## RF Exposure Statement

This equipment must be installed and operated in accordance with provide instructions and the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operation in conjunction with any other antenna or transmitter.

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

# Vantron

US Office: Vantron Technology, Inc.  
Address: Address: 440 Boulder Court,  
Suite 300 Pleasanton, CA 94566  
Tel: 916-202-7042  
Email: [sales@vantrontech.com](mailto:sales@vantrontech.com)

China Office: Chengdu Vantron Technology, Ltd  
Address: 5/6rd floor, 1st building, No.9, 3rd WuKe  
East Street, WuHou District,  
Chengdu, P.R. China 610045  
Tel: 86-28-8512-3930/3931, 8515-7572/6320  
Email: [sales@vantrontech.com.cn](mailto:sales@vantrontech.com.cn)