VT-HMI-156-TEL User's Manual

Chengdu Vantron Technology, Ltd.

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Contents

Revision History

No.	Version	Description	Date
1	V1.0	First release	2019/12/15

1 **Foreword**

1.1 **Copyright Notice**

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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 f or la tent d amage to s ystem o r h arm to personnel

1.3 Statement

It is recommended to read and comply with this manual before operating 15.6-inch Computer 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.

1.9 Product Usage Environment:

15.6-inch Computer could be mounted into a metal casing station and then mounted on the wall or other place. The highest installation height is less than 2 meters.

Pic1. 15.6-inch Computer
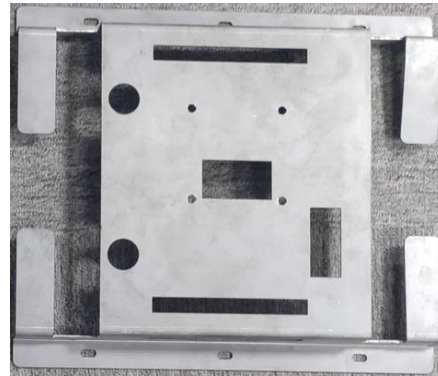
Pic2. VESA
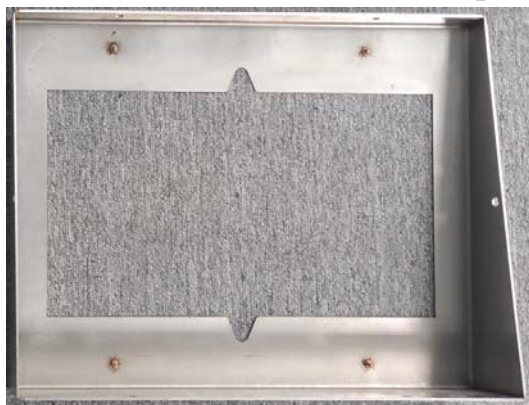
Pic3. Front metal

Pic4. Mount assembly

Installation diagram is as follows:

Step1. Mount the 15.6-inch Computer with the VESA;

Step2. Mount the assembly into front metal.

Step3. Installation the whole assembly on the wall or other place.

Pic5. Front view

P ic6. Side view

2 Overview

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.

The HMIenables the interaction between operators/users and applications, connects industrial control products such as wireless, transducer, battery inside, storage, etc. HMI 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, HMI 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's15.6-inch 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 Ordering Information

VT-HMI-156-TEL	15.6' TFT LCD, 1920*1080 16:9, RK3399, Qaud-Core2.0GHz, USB OTG Type C,USB2.0+USB3.0 HOST, A udio J ack,Speaker a nd MIC,WIFI/BT4.2

3 VT-HMI-156-TELHardware Instructions

3.1 Product Appearance

Front View

Back View

3.2 Specifications

Function	VT-HMI-156-TEL
CPU	RockchipRK3399 Qaud-Core Cotex-A72 2.0GHz+Daul-core-A53 1.4GHz
Display	15.6"LCD,1920x1080 Brightness :250cd/㎡
Touch	CAP TP, support 10 points touch, and 3.0mm cover glass.
System Memory	DDR32GB Standard
Storage	16GB eMMC Flash
Camera	Front 5MP, 25fps
LocalNetwork	WLAN 802.11 b/g/n/ac& Bluetooth 4.2 External Antenna
IOs	1xUSB Type C (5V 1.4A) Host USB2.0(5V 0.5A)+Host USB3.0(Type-A,5V 0.8A), USB2.0(Internal Connector for touch panel) 1x1000M Ethernet(with POE)
Audio	1xHeadphone output,3.5mm Audio Jack, Support 4 section.
RTC	RTC with back up coin battery
Debug	1x Debug COM port (RS232), 3.5mm Audio Jack.
Power	DC 12V/3A and POE 802.3af/at(48V/0.7A)
Product Weight	Unit: 5.35Kg
OS	Android 7.1
Temperature	Operation: 0~50℃, Storage -20-60℃
Humidity	Operation: 20% ~80%, Storage: 10% ~90%
Certification	TBD

3.3 Interface Instructions

3.3.1 Front View

Front Camera

Reset button
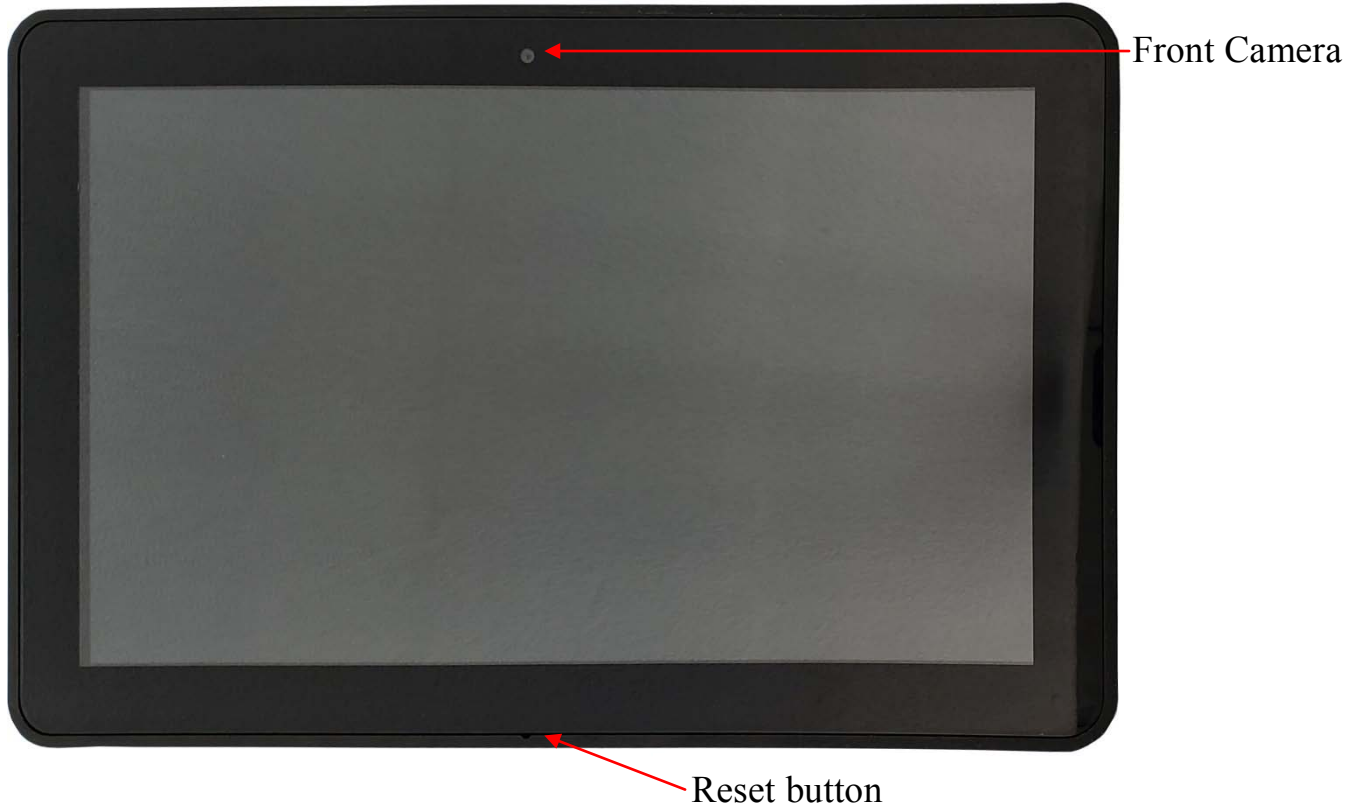
3.3.2 Port View

3.4 Dimension

Outline dimension: 395*250*35mm Metal Cover

3.5 Interface Description

3.5.1 USBOTG (Type C)

One hand, with a standard type-c USB port, customer can connect the HMI to the host machine for example a PC, then manage it like all other android devices. On the other hand, if the HMI is connected through a USB OTG cable, it can be a host machine to operate the device that is connected to it.

3.5.2 USB Host

The HMI owns a USB 2.0 and a USB3.0 host so that we can connect a keyboard or a mouse to it. Besides, other devices like U disk also can be connected to it.

3.5.3 Audio Jack

A headphone can be connected to the HMIthrough the standard audio jack so that we can experience the more wonderful music and not disturb people around you.

3.5.4 Debug

A3.5mm Audio Jack, customer can be connected to the HMIthrough the customized serial line.(RS232).

3.5.5 POE

This HMI supports the POE feature, customer can use the standard POE power supply terminal to supply power and connect to the network.

3.5.6 Wireless(WIFI and BLE)

The HMI supports 802.11a/b/g/n/ac WIFI and low energy BLE 4.2. With a good spec internal antenna, both WIFI and BLE can achieve better performance.

3.5.7 Front Camera

The HMI has the ability to take beautiful photo and record the high resolution video.

3.5.8 RTC

The HMI has internal RTC so the system time can keep a long time if we didn't turn it on.

3.6 Packing List

No	Part Description	Quantity	Type
1	BPAG38RTE1	1 PCS	VT-HMI-156-TEL
2	YAA003R043	1 PCS	Antenna

4 Software Instructions

4.1 Brief Introduction

VT-HMI-156-TEL has been pre-loaded with Android image, so that the system can run Android tool to update the system image, please reference to SW-UM.

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 conform to all

safety tips for operation environment.

Notice

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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 generate, 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.

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