

# Vantron

VT-HMI-101NC-TPK12-4

## VT-HMI-101NC-TPK12-4 User's Manual



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**Chengdu Vantron Technology Ltd. Co.**  
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## Revision History:

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## 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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## 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 VT-HMI-101NC-TPK12-4 which provides important guidance and helps decreasing the danger of injury, electric shock, fire, or any damage to the device.

## 1.4 FCC compliance statement

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### 1.4.1 Exposure to radio frequency energy:

The radiated output power of this device meets the limits of FCC radio frequency exposure limits. This device should be operated with a minimum separation distance of 20 cm (8 inches) between the equipment and a person's body.

**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.

## 1.5 Disclaimer

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

## 1.6 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.

The VT-HMI-101NC-TPK12-4 should be installed, debugged and maintained by professional people.

The outside antennas are not permitted to be installed or to be

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changed by non-professional people. To run the device normally, only specify antennas are approved to be assembled together by professional people.

Unit shall be used with indoor-use antenna only. No antenna for this unit can be installed outdoor.

## 1.7 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.

Operations and Service instructions are provided with the equipment.

Unit shall be used with indoor-use antenna only. No antenna for this unit can be installed outdoor.

The maximum operation temperature is 61°C.

## 1.8 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

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standard.

## 1.9 Safety Instructions for Power Cables and Accessories



Proper power source onlyStart 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.



## 1.10 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:

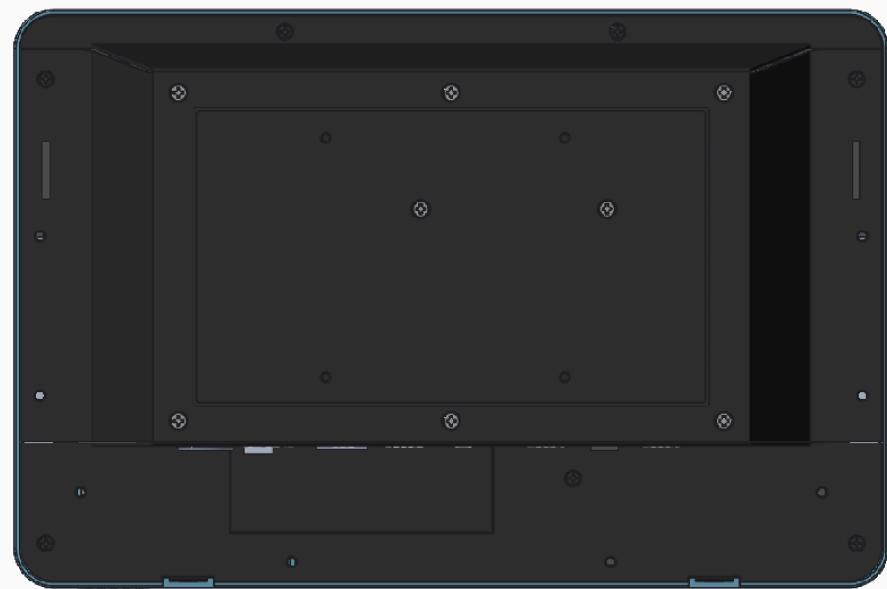
- The device is damaged.
- The temperature is excessively high.
- Fault is still not solved after the operation according to the manual.

## 2 VT-HMI-101NC-TPK12-4 Hardware Instructions

### 2.1 Product Appearance



Front Side View



Back Side View

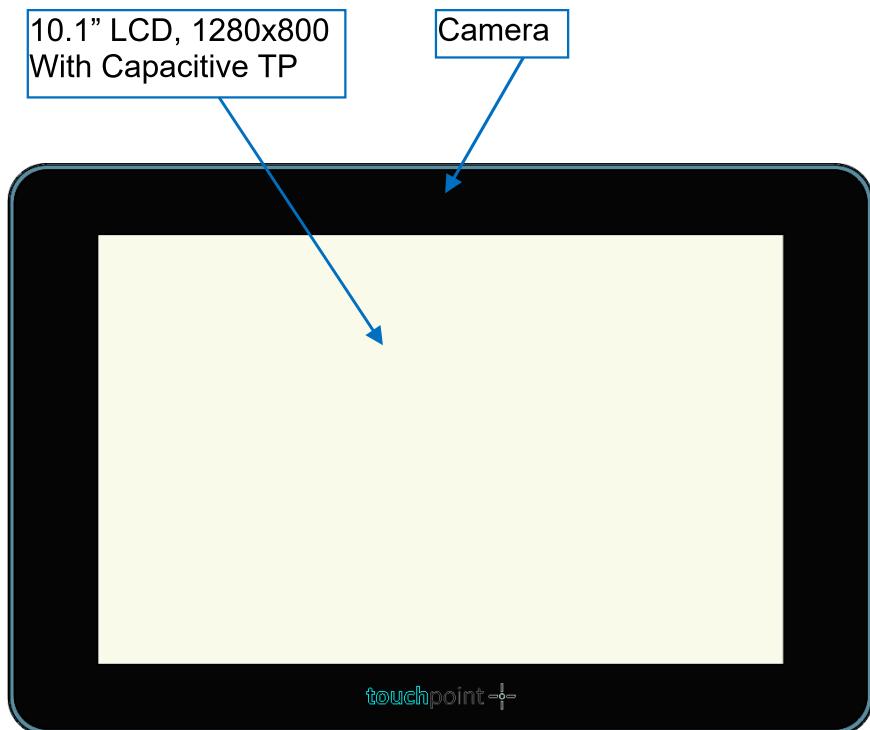


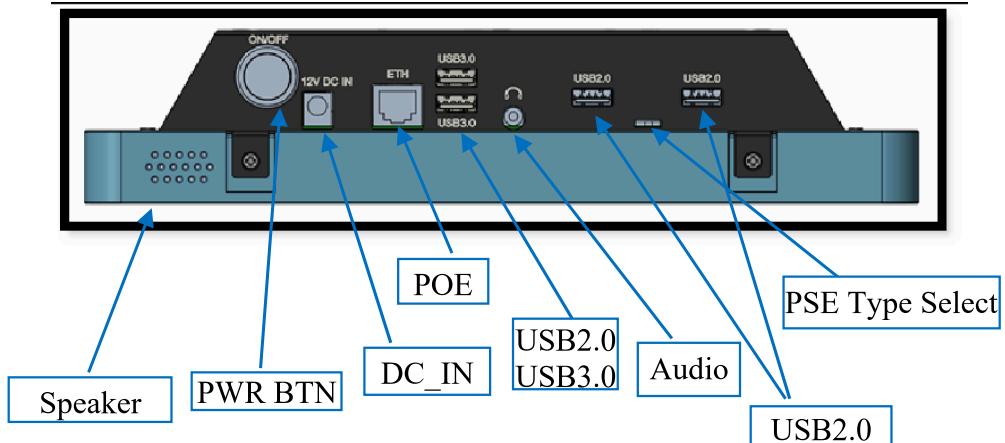
Front Side

## 2.2 Specifications

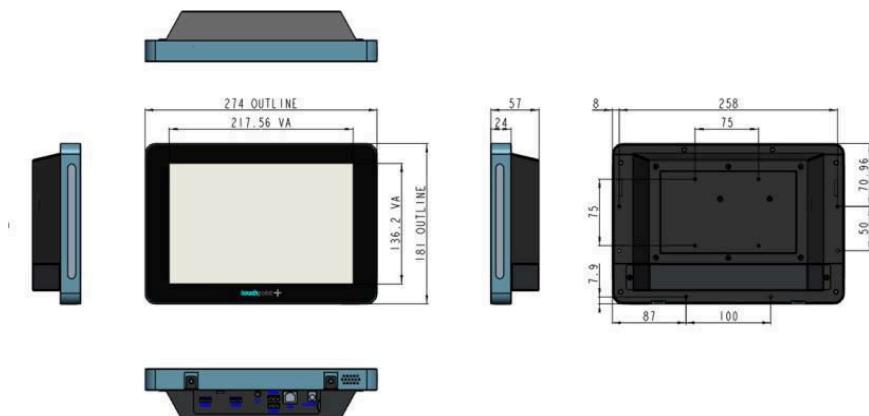
Specifications		
<b>CPU</b>	Processor	Intel® ATOM™, E3845/1.91Ghz,E3827/1.75Ghz, E3815/1.46GHz, 512KB L2 cache per core
<b>Memory</b>	On Board RAM	On Board DDR3L 1333MT/s/ 1066MT/s E3845/E3827 up to 4GB E3815 up to 2GB
	ROM Internal	mSATA half size(128GB)
<b>Display</b>	Interface	1xLVDS internal/1xVGA (DB15)
<b>Peripheral Interfaces</b>	Ethernet	1x10/100/1000-BaseT(POE)
	USB	3xUSB2.0 Host (Type A),1xUSB3.0 Host (Type A)
	Audio	HD Audio, 1xline Out 3.5mm, 1xSpeaker
	WIFI	Intel 9260 PCIE WiFi
	Nano RFID	Optional
	RTC	Supported
<b>Security</b>	Security	TPM module
<b>Software</b>	OS	Windows10, Ubuntu16.04
	Applications	SDK Available
<b>Power</b>	Input	DC19V/POE Power Supply
<b>Mechanical</b>	Dimensions	274.00 x 178.00 x 57.00
	Weight	1.78Kg
<b>Environment Condition</b>	Temperature	Operating:0°C ~ +50°C
		Storage:-10°C ~ +70°C
	Humidity	5-95%RH at 25-35 (Non-Condensation)
	Cooling Mode	Fan less, Heat Sink
<b>Certification</b>	Approvals	RoHS
	FCC	

## 2.3 Interface Instructions





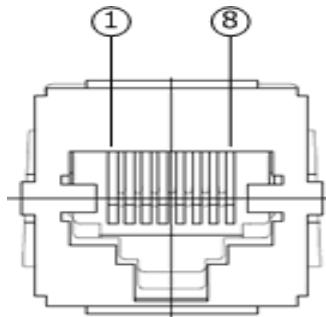
## 2.4 Dimensions



## 2.5 Interface Description

### 3.5.1 Ethernet Interface (POE)

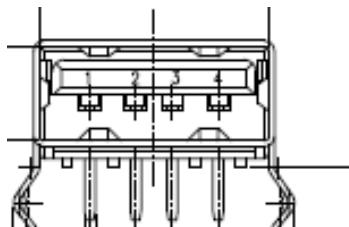
Standard RJ45 interface, supporting 10M/100M/1000M self-adaptation, support POE power supply.



Pin	Name	Type	Description
1	RJ45_MDI_0P	IO	Ethernet MDI0+ Signal
2	RJ45_MDI_0N	IO	Ethernet MDI0- Signal
3	RJ45_MDI_1P	IO	Ethernet MDI1+ Signal
4	RJ45_MDI_2P	IO	Ethernet MDI2+ Signal
5	RJ45_MDI_2N	IO	Ethernet MDI2- Signal
6	RJ45_MDI_1N	IO	Ethernet MDI1- Signal
7	RJ45_MDI_3P	IO	Ethernet MDI3+ Signal
8	RJ45_MDI_3N	IO	Ethernet MDI3- Signal

## 3.5.2 USB2.0 Interface

Standard USB TYPE-A connector



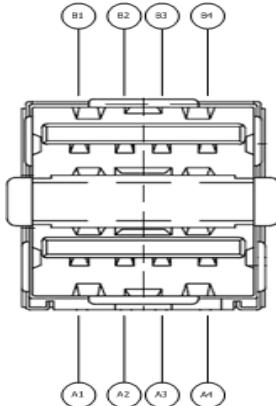
Pin	Name	Type	Description
1	USB_VCC	P	+5VDC
2	USB_DN	I	USB Data- Signal
3	USB_DP	O	USB Data+Signal
4	USB_GND	P	Ground

## 3.5.3 USB Host Connector

Dual vertical USB A type interface, supporting 1xUSB3.0(Top),1xUSB2.0(down).

Upper USB port is USB3.0 port.

Under USB port is USB2.0 port.



Pin	Name	Type	Description
A1	AUSB_VCC	P	+5VDC
A2	AUSB_DN	IO	USB Data1- Signal
A3	AUSB_DP	IO	USB Data1+ Signal
A4	AUSB_GND	P	Ground
A5	AUSB3.0_RXN	IO	USB3.0 RECEIVE DATA -Signal
A6	AUSB3.0_RXP	IO	USB3.0 RECEIVE DATA +Signal
A7	AUSB3.0_GND	P	Ground
A8	AUSB3.0_TXN	IO	USB3.0 TRANSFER DATA -Signal
A9	AUSB3.0_TXP	IO	USB3.0 TRANSFER DATA +Signal
B1	BUSB2_VCC	P	+5VDC
B2	BUSB2_DN	I	USB Data2- Signal
B3	BUSB2_DP	O	USB Data2+Signal

B4	BUSB2_GND	P	Ground
B5	NC	IO	Not Connect
B6	NC	IO	Not Connect
B7	BUSB3.0_GND	P	Ground
B8	NC	IO	Not Connect
B9	NC	IO	Not Connect

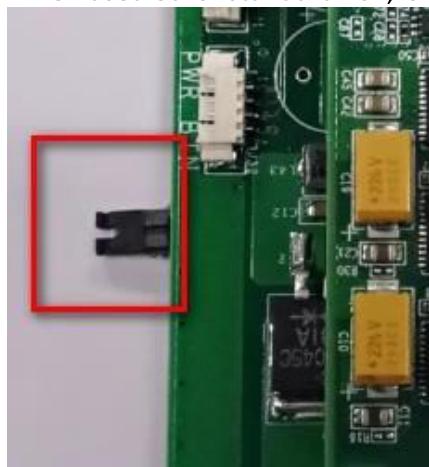
## 3.6 Operation Notice

### 3.6.1 Power Supply

Please make sure using adapter in the accessory, or the power is not reversed when powered by other adapter.

### 3.6.2 POE Power Sourcing Equipment (PSE) type select

When used Phihong POE80U or POE60U PSE, add the CONN jumper,  
When used other standard PSE,remove the CONN jumper.



## 4 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

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.

Vantron reserves the right to make necessary changes to this manual without prior notice. No part of this manual may be reprinted or publicly released in forms of photocopy, tape, broadcast, e-document, etc.



## IC statement

### Disclaimer:

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Warning ! This class B digital apparatus complies with Canadian ICES-003.

Industry Canada ICES-003 Compliance Label:

CAN ICES-3 (B)/NMB-3(B)



## RF exposure warning

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 provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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