VT-Tablet-5101　User's Manual

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Revision History:

No.	Version	Description	Date
1	V1.0	First release	8/22/2013
2	V1.1	Add ordering information	10/15/2013
3	V1.2	Modify Specification description	3/18/2014
4	V1.3	Update the mechanical picture	4/9/ 2014

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 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-Tablet 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 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.

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 VT-Tablet products are based on the most advanced ARM and Intel Atom processors and have low-power consumption and high integration. The products are designed for applications such as industrials, medicals, and transportations etc.

2.2 Product Series

2.2.1   Product Order Coding Rule

VT-Tablet- ABBC-D-E

E：Temperature suffix:

Bank: Normal Temperature

I: Industrial Version

D：Minor version suffix

C：Type suffix:

1: Basic type;

2: Enhanced type or other

BB:Screen size:

07, 10: for LCD in 7, 10inches.

A: Product series:

5：IMX6x multi-core ARM cortex A9 platform 10inches. types
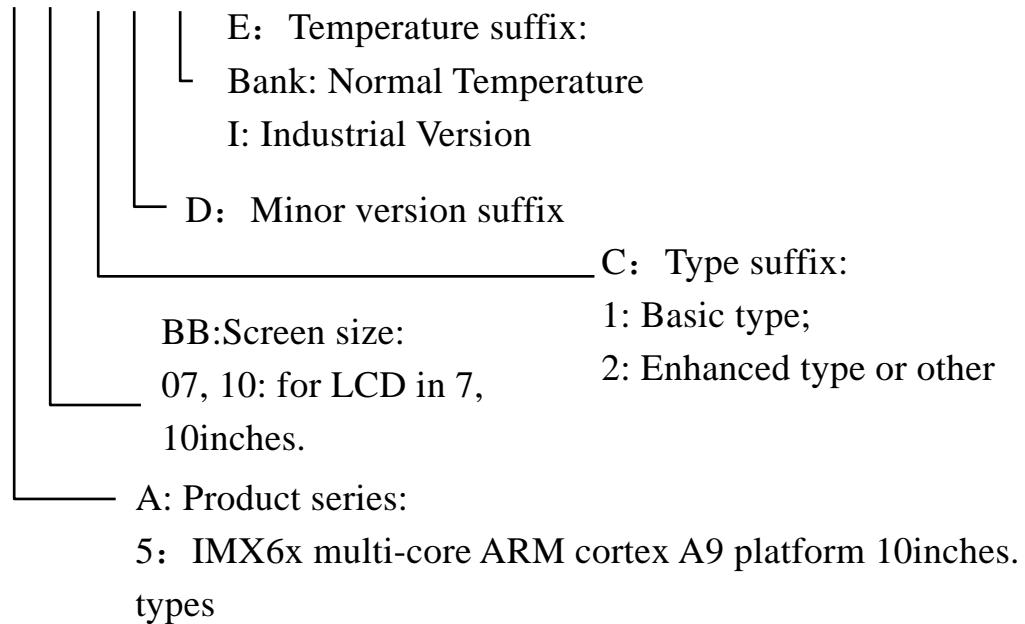
2.2.2   Ordering Information

VT-Tablet-5101	10.1" TFT, 1280x800 16:10 Wide Screen,i.MX6QQuad core 1.2GHz, Ethernet, RS232, USB2.0 OTG, 8000mAH battery inside, Wifi/3G/BT3.0/GPS.

3 VT-Tablet-5101Hardware Instructions

3.1 Product Appearance

FrontView

Back View

3.2   Specifications

Specifications		
CPU	Processor	Freescalei.MX6QQuad core 1.2GHz
Memory	On Board RAM	2GB DDR3
	On Board	16GB EMMC Flash
	External	1x Micro SD, USB 2.0 OTG
Display	LCD	10.1" Wide Screen, TFT LCD, 1280x800
	Resolution	1280x800 24bit Color
	Contrast	600:1
	Brightness	350 cd/m2(Auto brightnessby Light sensor)
	View Angle	89U/89D, 89L/89R
	Touch Screen	Cap-touch, multi-point
Interfaces	Ethernet	10 /100-BaseT, Micro USB type
	External	1xmicro SD
	USB	1X USB OTG
	COM Port	1xDocking port(2xRS232, 1xdebug port, 1xCAN)
	Audio	3.5mm earphone jack with MIC in 1x 1W speaker 1x internal MIC in(onboard)
	SIM	1x SIM card for 3G module
	wireless	1xwifi, 1xbluetooth3.0, 1xmini-pcie(support 3G or 4G LTE Module),
	Sensor	Light sensor, 3-axis Acc sensor, e-COMPASS
	RTC	Supported must attach battery
Software	OS	Android 4.2.2
	Applications	Provide SDK, support google tool
Power	Input	DC5V 3A, Adapter
	Consumption	4.2W
Mechanical	Dimensions	262x184x16mm
	Weight	1.1Kg(Panel)

Environment Condition	Temperature Humidity	Operating:-10℃ ~ +70℃ Storage: -20℃ ~ +70℃
		10-85%RH （Non-Condensation)， operating
	Vibration	2G, 9-26Hz (10 times in X,Y,Z directions)

3.3 Interface Instructions

3.3.1   Top side View

MIC in   USB OTG

DC 5V IN   10/100M ETH Micro HDMI

3.3.2   left side View

3.5mm earphone jack

SIM card slot   Docking port   MicrSD card slot

3.3.3   front side View

Multi-color LED   Light sensor hole   5M Front camera

3.3.4   Back side View

5M Back camera   Vol-   Vol+   On/off

Speaker
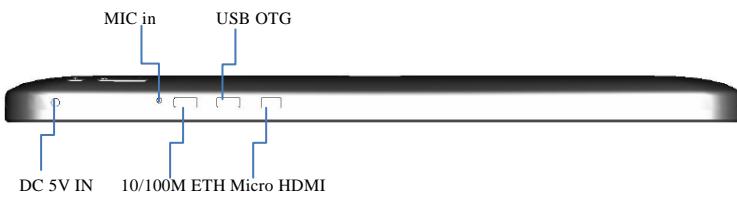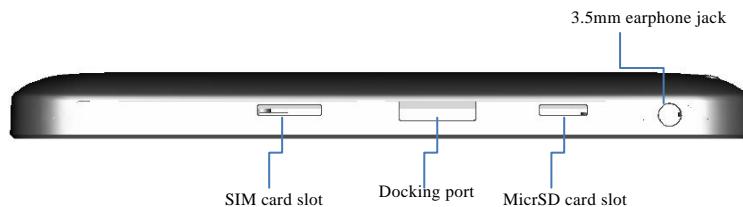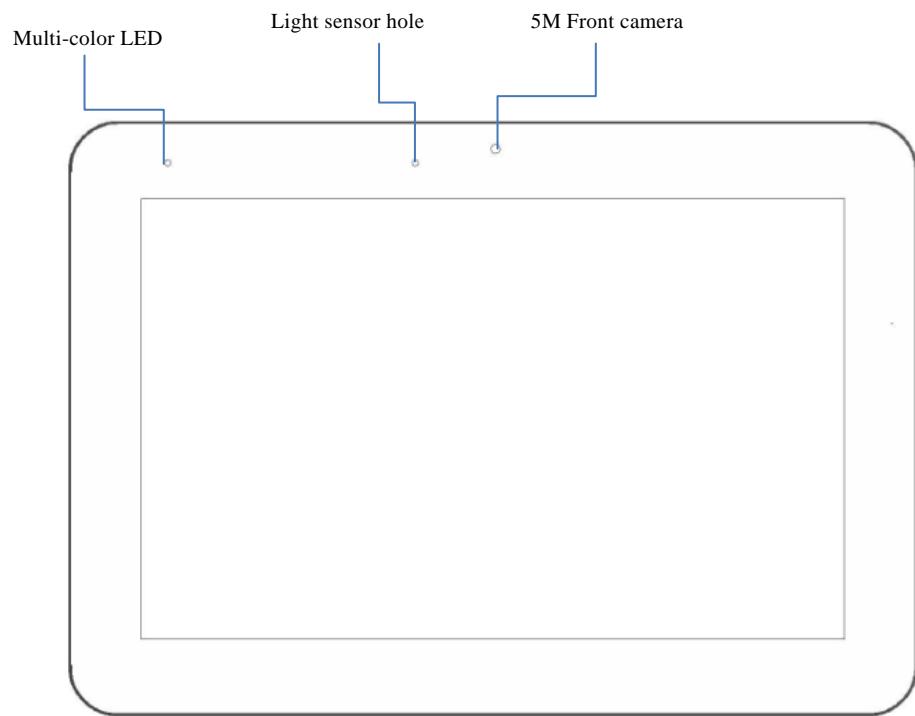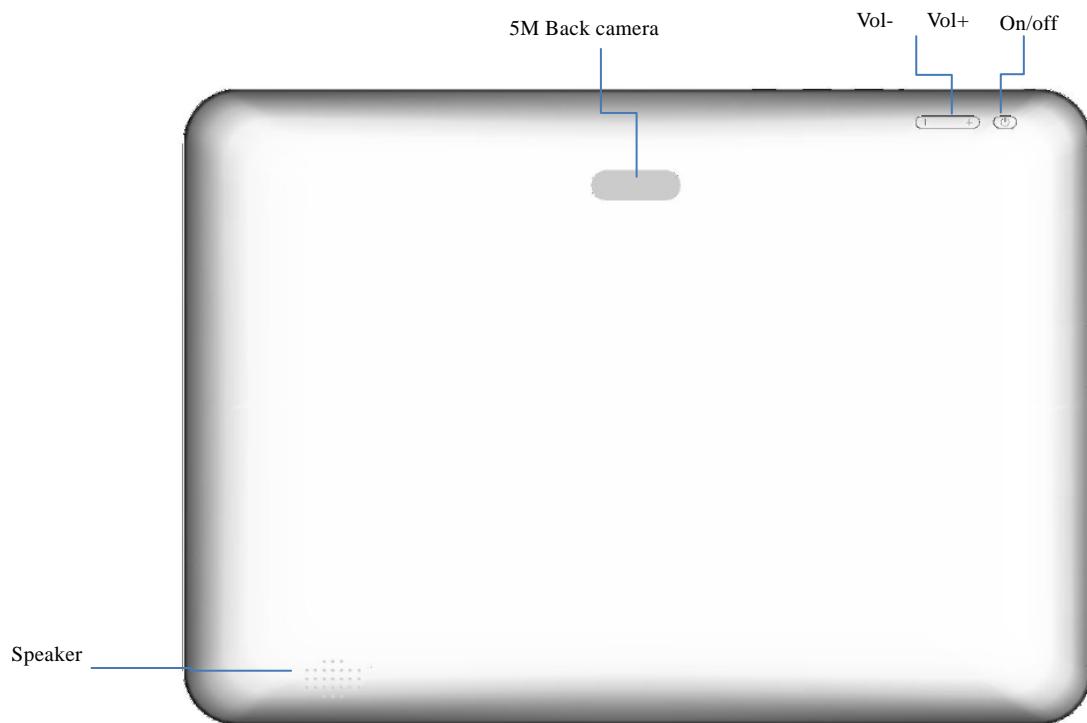
3.4 Dimension

Whole device Size: 262x184x16 mm3

3.5   Interface Description

3.5.1   5Vadapter Input
DC-056 typeadapter power Jack
Structure mark: +5V

Pin	Description
centre	+5V
diameter	Ground

3.5.2   Internal MIC in Interface
Structure mark: MIC.

This hole is used to the onboard MIC in, but this hardware version is not support

3.5.3   10/100M Ethernet Connector (micro USB instead)

Structure mark:

Pin	Description
1	RX+
2	RX-
3	TX+
4	TX-
5	CTX& CRX

3.5.4   USB OTG (micro USB type)

Structure mark:

It is a standard micro USB port, you can connect a PC as USB client to manager the android device. or connect a USB OTG to HOST adapter cable as USB host storage, mouse, keypad.etc

3.5.5   HDMI Connector (micro HDMI type)
Structure mark:HDMI

It is a standard micro HDMI port; you can connect micro-HDMI to HDMI typeA adapter cable, and connect to display.

3.5.6   3.5mm earphone Jack with external MIC in

Structure mark:

It is a standard 4-pole 3.5mm earphone Jack with external MIC in , every pole signal define is below
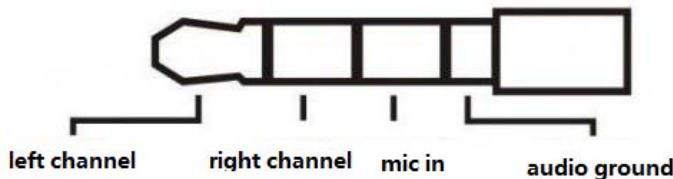

3.5.7   Micro SD card slot

Structure mark:

It is a standard micro SD card slot. You can insert a micro sd card to increase external storage.

3.5.8   Expand docking port
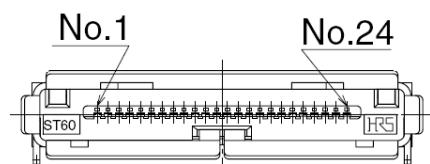
Pin	Description	Pin	Description
1	Ground	13	CTSB
2	CAN1_HIGH	14	Debug_TX
3	CAN1_LOW	15	Debug_RX
4	Ground	16	Ground
5	TXDA	17	USER_UI1
6	RXDA	18	USER_UI2
7	RTSA	19	USER_UI3
8	CTSA	20	USER_UI4
9	Ground	21	USER_UI5
10	TXDB	22	Ground
11	RXDB	23	GEN_3V3
12	RTSB	24	GEN_3V3

3.5.9   Standard SIM card slot

Structure mark:

It is a standardSIM card slot. It is used to the 3G or 4G LTE module.1

3.6 Packing List

No	Part Description	Quantity	Type
1	CD_ROM	1pc	
2	5V power adapter	1pc	
3	Charge cable	1pc	
4	USB client cable	1pc	

4 Software Instructions

4.1 Brief Introduction

VT-Tablet-5101 has been pre-loaded with Android image, so that the system can run mfg tool method to updates 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.

$\mathbf{i}$ ▷ Notice

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