HT6200 HDBaseT™ Multimedia Player

User Manual

Version: 1.2

Revision History:

No.	Version	Description	Date
1	V1.0	First release	Jan. 27, 2023
2	V1.1	Added a topology for 4K video output	July. 16, 2023
3	V1.2	Added description on using the watchdog timer tool	Dec. 25, 2023

Table of Contents

Foreword

Thank you for purchasing HT6200 HDBaseT™ Multimedia Player ("the Device" or "the Product"). This manual intends to provide guidance and assistance necessary on setting up, operating or maintaining the Product. Please read this manual and make sure you understand the structure and functionality of the Product before putting it into use.

Intended Users

This manual is intended for:

- Operator of the Product
- Technical support engineers
- Other users

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Disclaimer

While all information contained herein has been carefully checked to assure its accuracy in technical details and typography, Vantron does not assume any responsibility resulting from any error or features of this manual, nor from improper uses of this manual or the software.

It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without notice.

Technical Support and Assistance

Should you have any question about the Product that is not covered in this manual, contact your sales representative for solution. Please contain the following information in your question:

- Product name and PO number;
- Complete description of the problem;
- Error message you received, if any.

Vantron Technology, Inc.

Address: 48434 Milmont Drive, Fremont, CA 94538

Tel: (650) 422-3128

Email: sales@vantrontech.com

Regulatory Information

The Product is designed to comply with:

- CE
- FCC
- CCC

Please refer to the Appendix for Regulatory Compliance Statement.

Symbology

This manual uses the following signs to prompt users to pay special attention to relevant information.

	Caution for latent damage to system or harm to personnel
	Attention to important information or regulations

General Safety Instructions

The Product is supposed be installed by knowledgeable, skilled persons familiar with local and/or international electrical codes and regulations. For your safety and prevention of damage to the Product and other equipment connected to it, please read and observe carefully the following safety instructions prior to installation and operation. Keep this manual well for future reference.

- Do not disassemble or otherwise modify the Product. Such action may cause heat generation, ignition, electronic shock, or other damages including human injury, and may void your warranty.
- Keep the Product away from heat source, such as heater, heat dissipater, or engine casing.
- Do not insert foreign materials into any opening of the Product as it may cause the Product to malfunction or burn out.
- To ensure proper functioning and prevent overheating of the Product, do not cover or block the ventilation holes of the Product.
- Follow the installation instructions with the installation tools provided or recommended.
- The use or placement of the operation tools shall comply with the code of practice of such tools to avoid short circuit of the Product.
- Cut off the power before inspection of the Product to avoid human injury or product damage.

Precautions for Power Cables and Accessories

⚠ Use proper power source only. Make sure the supply voltage falls within the specified range. The Product is designed to use 12V~24V DC. Always check whether the Product is DC powered before applying power.

⚠ Place the cables properly at places without extrusion hazards.

⚠ Use only approved antenna(s). Non-approved antenna(s) may produce spurious or excessive RF transmitting power which may violate FCC limits.

⚠ Cleaning instructions:

- Power off before cleaning the Product
- Do not use spray detergent
- Clean with a damp cloth
- Do not try to clean exposed electronic components unless with a dust collector

⚠ Power off and contact Vantron technical support engineer in case of the following faults:

- The Product is damaged
- The temperature is excessively high
- Fault is still not solved after troubleshooting according to this manual

⚠ Do not use in combustible and explosive environment:

- Keep away from combustible and explosive environment
- Keep away from all energized circuits
- Unauthorized removal of the enclosure from the device is not allowed
- Do not replace components unless the power cable is unplugged
- In some cases, the device may still have residual voltage even if the power cable is unplugged. Therefore, it is a must to remove and fully discharge the device before replacement of the components.

CHAPTER 1 INTRODUCTION

1.1 Product Overview

Vantron HT6200 HDBaseT™ multimedia player provides a long-distance data transmission solution over the HDBaseT output jacks that deliver uncompressed video signals with resolutions up to 4K ultra-HD. HT6200 is powered by Intel® Celeron® processor and provides two DDR4 SO-DIMMs for a maximum of 64GB memory and a default 128GB storage.

HT6200 offers a maximum of two HDBaseT output interfaces that support a transmission distance of up to 100 meters without compromising speed or efficiency. The anti-interference design ensures high-quality video and audio signals remain free from interference during transmission, while also maintaining data consistency without latency. It offers Ethernet, Wi-Fi, and Bluetooth for communication, and the USB ports allow for the connection of diverse peripherals for different purposes. Moreover, the VESA pattern on the bottom of the device enables flexible installation at the desired location, making it highly suitable for use in scenarios such as medical imaging, surveillance systems, video walls, and digital signage.

The only difference between the models under HT6200 is the number of the HDBaseT output ports: 1 for HT6201 and 2 for HT6202.

1.2 Product Feature

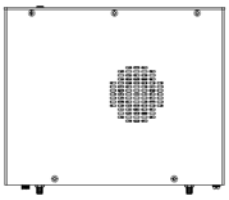
HT6200	
	Intel® Celeron® processor
HDBaseT™	Uncompressed data without latency
4K	4K UHD video output
	Up to 100M transmission distance
	USB 2.0 & USB 3.0
	Wi-Fi/BT/ETH for communication
	Windows 10 IoT system, Linux available
	VESA pattern for flexible installation

1.3 Terminology

Abbreviation	Description
NC	No connection
VCC	Voltage common collector
OC	Open collector
OD	Open Drain
GND	Ground
/	Active low signal
+	Positive of difference signal
-	Negative of difference signal
I	Input
O	Output
I/O	Input/output
P	Power or ground
A	Analog
MDI	Media Dependent Interface
HDBT	HDBaseT
HDSRC	Handwritten digit string recognition
DDC	Digital Drive Controller
USB	Universal Serial Bus
CK/CLK	Clock (Line)
SSRX	Super speed receive signal
SSTX	Super speed transmit signal

1.4 Unpacking

The Product has been carefully packed with special attention to quality. However, should you find any component damaged or missing, please contact your sales representative in due time.

Standard accessories		Optional accessories	
	1 x HT6200		1 x 12V DC Power adapter & power cord
	2 x Wi-Fi & BT antenna	/	/
	1 x Qualified certificate	/	/

Actual accessories might vary slightly from the list above as the customer order might be different from the standard configuration options.

1.5 Specifications

HT6200		
System	CPU	Intel® Celeron® 6305E 2C2T TDP 15W, up to 1.8GHz
	GPU	Intel® UHD Graphics
	Memory	2 x DDR4-3200 SO-DIMM socket, 8GB (up to 64GB)
	Storage	128GB SSD (M.2 M-key 2280)
Communication	Ethernet	1 x RJ45, 10/100/1000Mbps
	Wireless	Wi-Fi 802.11 a/b/g/n/ac + BT 5.0
I/Os	Media	1/2 x RJ45, HDBaseT output (up to 3840 x 2160 @30Hz)
		1 x HDMI 1.4 (up to 3840 x 2160 @30Hz)
		1 x 3.5mm Combo audio jack
	USB	2 x USB 3.0 Type-A 2 x USB 2.0 Type-A
	Antenna	2 x SMA connector
	RTC	Supported
	Watchdog timer	Hardware WDT
System Control	Button	1 x Power button with LED indicator 1 x Reset button
Software	OS	Windows 10 IoT (Optional: Linux)
Power	Input	12V ~ 24V 5A 1 x DC jack
Mechanical	Dimensions	225mm x 180.8mm x 44mm
	Installation	VESA (75mm x 75mm, M3 x 6mm)
	Heat dissipation	Fan
Environment Condition	Temperature	Operating: 0℃ ~ +40℃ Storage: -20℃ ~ +60℃
	Humidity	Operating: 10%~90% RH (non-condensing) Storage: 5%~95% RH (non-condensing)
	Certification	CE, FCC, CCC

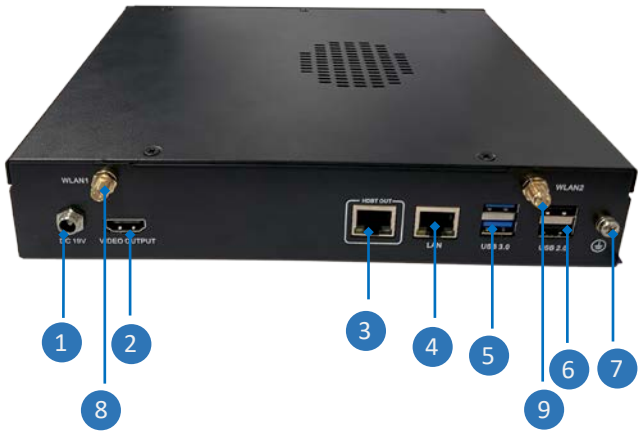
1.6 Product Layout

1.6.1 Front view

Interface description:

No.	Name	Description	
1	Audio jack	3.5mm combo audio jack	
2	Power button	Short press for turning on/off the device when the device is powered up	
	LED indicator	Device powered up	Blue: The device is turned on Red: The device is turned off
		Device not powered up	LED indicator is off
3	Reset button	Restart the device upon a short press	

1.6.2 Back view



Interface description:

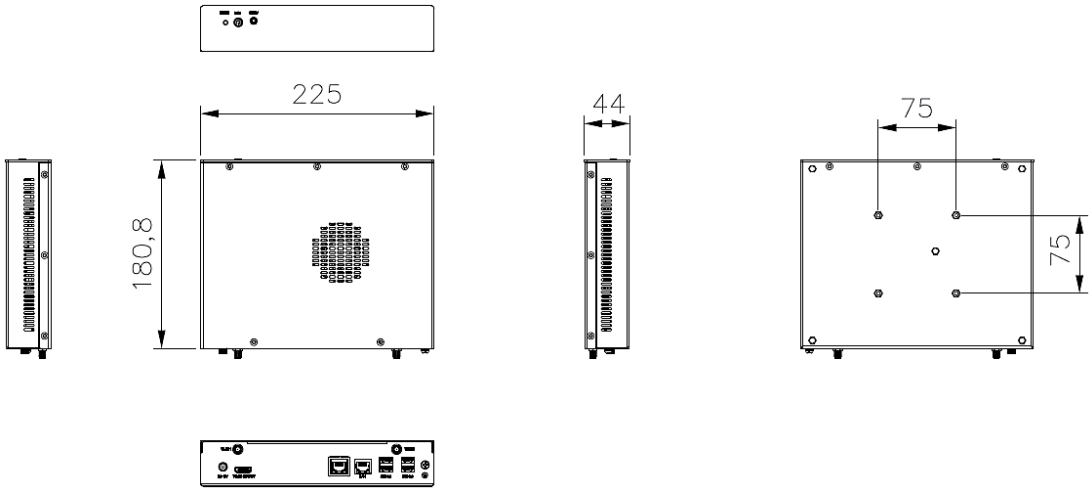
No.	Name	Description
1	DC 19V	Connect a 12V~24V power adapter to this power jack to power up the device
2	Video output interface	Connect the device to a display using an HDMI cable
3	1/2 x HDBaseT output	Connect any of these ports (RJ45) to an HDBaseT compatible receiver using a Cat-5e (or better) cable
4	Ethernet jack	Connect this port to a router or modem to have internet access
5	USB 3.0-A	Connect to peripherals
6	USB 2.0-A	Connect to peripherals
7	Grounding screw	Connect the device to an electrical ground to prevent potential electrical hazards
8	Wi-Fi main antenna	Main antenna for maintaining stable and strong wireless connection
9	Wi-Fi diversity antenna	Diversity antenna for maintaining stable and strong wireless connection

1.7 Operating System

HT6200 runs Windows 10 IoT operating system and users also have the option for Linux distributions.

1.8 Mechanical Dimensions

- 225mm x 180.8mm x 44mm



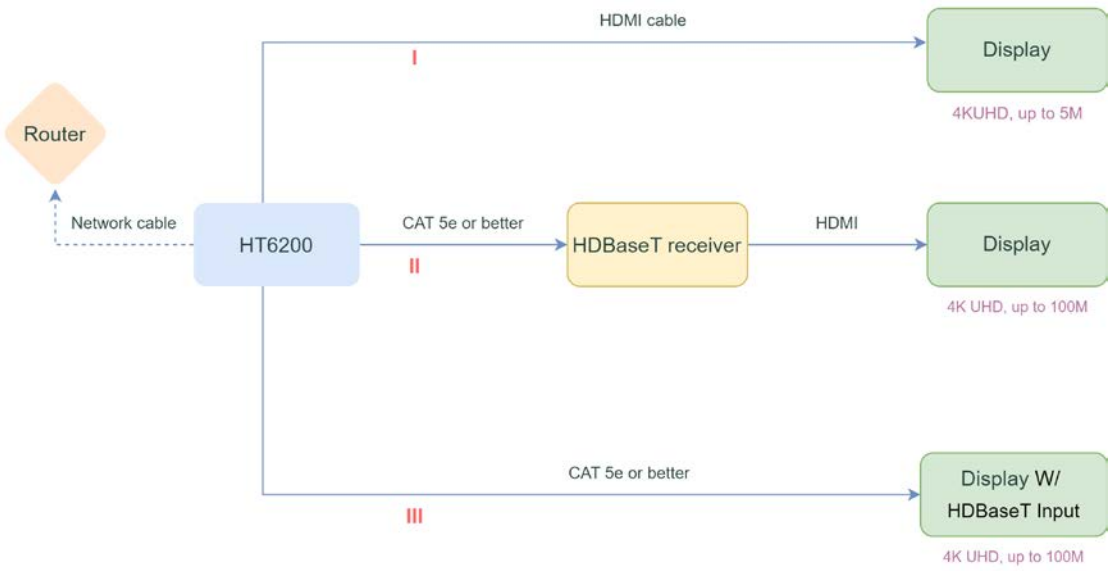
1.9 Power Characteristics

HT6200 is designed to work with 12V ~ 24V DC power input via the power jack on the back of the device, with a recommended current of 5A.

The power consumption of the device is about 65W without connecting peripherals. However, it should be pointed out that the power consumption is largely dependent on the RAM, storage capacity, peripherals connected and other configurations of the device.

CHAPTER 2 GETTING STARTED

2.1 4K UHD Video Output Topology



Scenario 1: Use an HDMI cable to connect HT6200 to a display for 4K UHD output at a maximum distance of 5 meters.

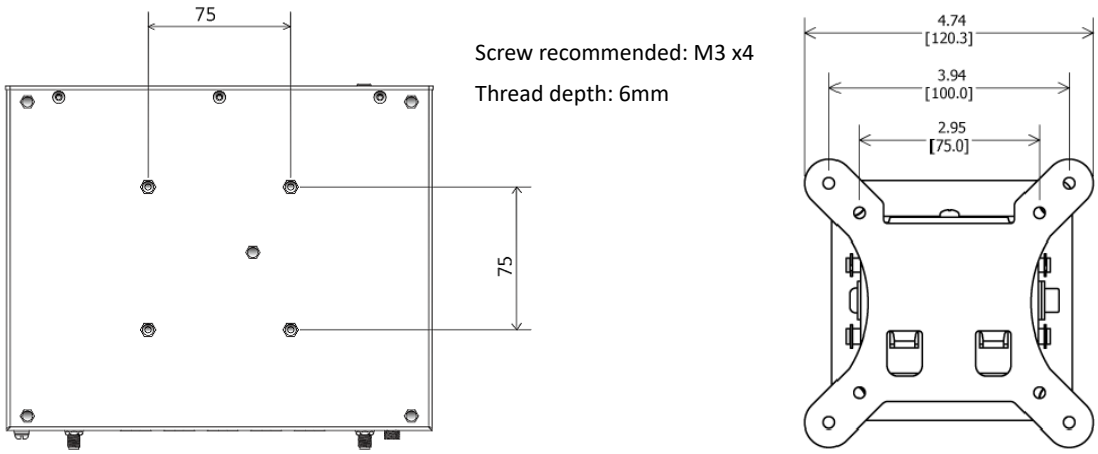
Scenario 2: Use an HDBaseT receiver to connect HT6200 and a display respectively using a CAT 5e or better cable and an HDMI cable for 4K UHD output at a maximum distance of 100 meters.

Scenario 3: Use a CAT 5e or better cable to connect HT6200 to a display that has an HDBaseT input port for 4K UHD output at a maximum distance of 100 meters.

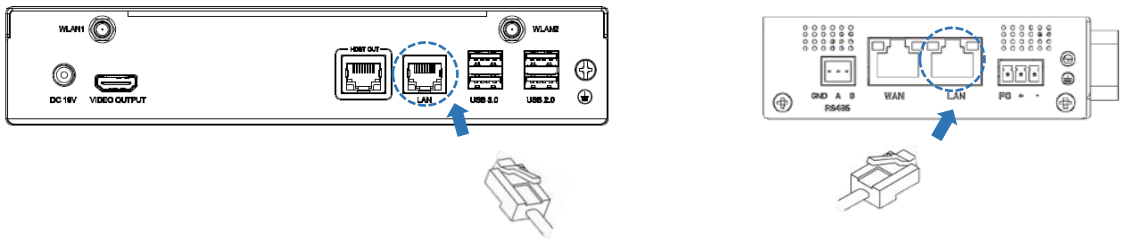
2.2 Setting up the Device

In the following section, the outline drawings of HT6201 are used for illustration of its application in scenario II as set out in 2.1.

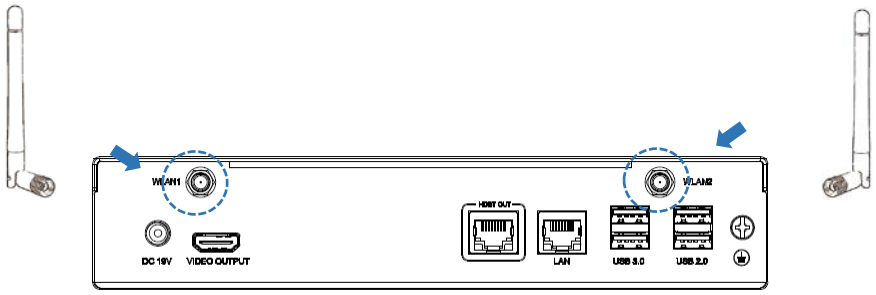
1. Install HT6200 to any appropriate arm or rack with a 75 x 75 VESA pattern;



2. When necessary, connect the LAN port of HT6200 to a router or modem for internet access;

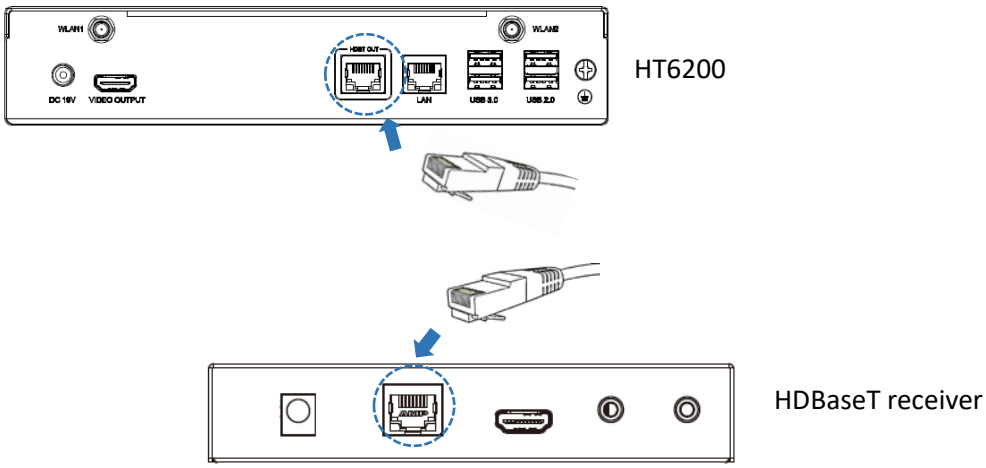


3. If you choose Wi-Fi to connect to the internet, be sure to install the Wi-Fi antennas properly in place and use the GUI of the device to join an access point;

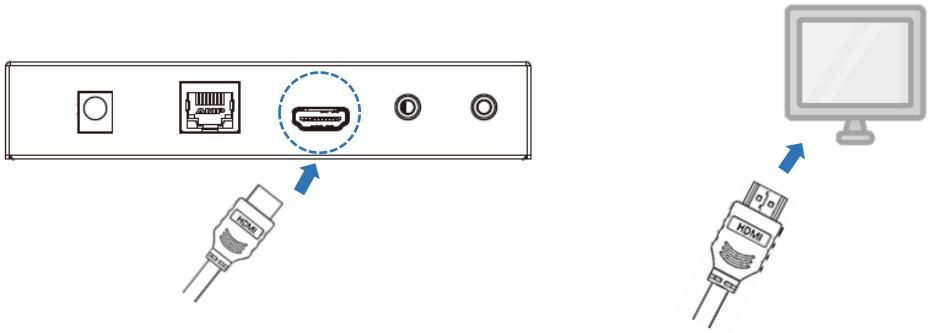


If only one Wi-Fi antenna is shipped, install it to the WLAN1 connector for better signal strength.

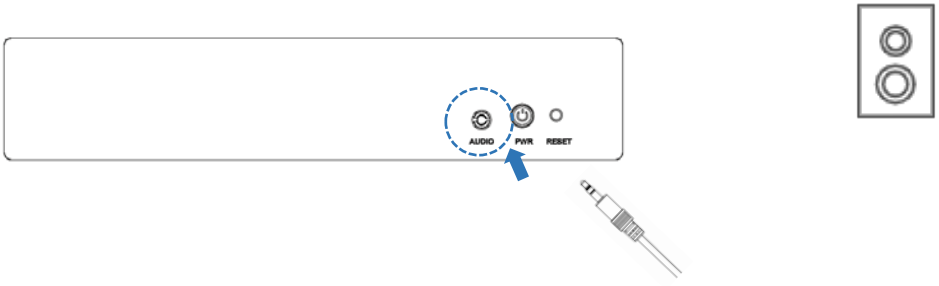
4. Connect any of the HDBaseT output port of HT6200 to an HDBaseT receiver using a CAT 5e or better cable;



5. Connect the HDBaseT receiver with a display using an HDMI cable;



6. When necessary, use a 3.5mm audio cable to connect an amplifier or headphone to the audio jack of HT6200;



7. Connect the power cord to the DC jack of the device and plug the 12V/24V power adapter into a power receptacle to power on the device;
8. The device will beep after powering up.

CHAPTER 3 HARWARE DESCRIPTION

This section briefs on the hardware definition and connector/jumper pinout.

3.1 Power Jack

HT6200 is designed to work with 12V ~ 24V DC power input via the power jack on the back of the device.

Specification of the power jack: 2.5mmd, 5.5mmD, 5A, 24V, Male, Lock, WDT, THR, RoHS

3.2 Ethernet Jack

HT6200 implements one Ethernet jack (LAN), supporting 10M/100M/1000Mbps data rate. The Ethernet jack has two LED indicators (L-Y, R-G.) to indicate the link/activity status of the network. The yellow indicator blinks to indicate that the network is established with a data rate of less than 100Mbps, and the solid green indicator suggests that the data rate is more than 100Mbps.

Pinout description of the Ethernet jack:

Pin	Signal	Type	Description
1	L1_MDI_0P	IO	Ethernet MDI0+ Signal
2	L1_MDI_0N	IO	Ethernet MDI0- Signal
3	L1_MDI_1P	IO	Ethernet MDI1+ Signal
4	L1_MDI_1N	IO	Ethernet MDI1- Signal
5	L1_MDI_2P	IO	Ethernet MDI2+ Signal
6	L1_MDI_2N	IO	Ethernet MDI2- Signal
7	L1_MDI_3P	IO	Ethernet MDI3+ Signal
8	L1_MDI_3N	IO	Ethernet MDI3- Signal

3.3 HDBaseT Output Ports

HT6200 offers one/two HDBaseT output ports intended for connecting different HDBaseT™ technology compatible receives/displays to extend display. HT6201 has one port and HT6202 has two ports.

Specification of the HDBaseT output ports: 10/100/1000, MAG, 2 x LED, SHLD, F, RA, WDT, THR, RoHS, hot pluggable

Pinout description of port A (applicable to HT6201 & HT6202):

Pin	Name	Type	Description
1	HDSRC_P0_R	IO	Ethernet MDI0+ Signal
2	HDSRC_N0_R	IO	Ethernet MDI0- Signal
3	HDSRC_P1_R	IO	Ethernet MDI1+ Signal
4	HDSRC_N1_R	IO	Ethernet MDI1- Signal
5	HDBT_A_+1.8V	P	POWER
6	HDBT_A_+1.8V	P	POWER
7	HDSRC_P2_R	IO	Ethernet MDI2+ Signal
8	HDSRC_N2_R	IO	Ethernet MDI2- Signal
9	HDSRC_P3_R	IO	Ethernet MDI3+ Signal
10	HDSRC_N3_R	IO	Ethernet MDI3- Signal
11	HDBT_A_+3.3V	P	POWER
12	HBTA_HDMI_HDCP_LED	O	LED
13	HDBT_A_+3.3V	P	POWER
14	HBTA_LINK_HDBT_LED	O	LED

Pinout description of port B (applicable to HT6202):

Pin	Name	Type	Description
1	HDSRC_P0_R	IO	Ethernet MDI0+ Signal
2	HDSRC_N0_R	IO	Ethernet MDI0- Signal
3	HDSRC_P1_R	IO	Ethernet MDI1+ Signal
4	HDSRC_N1_R	IO	Ethernet MDI1- Signal
5	HDBT_B_+1.8V	P	POWER
6	HDBT_B_+1.8V	P	POWER
7	HDSRC_P2_R	IO	Ethernet MDI2+ Signal
8	HDSRC_N2_R	IO	Ethernet MDI2- Signal
9	HDSRC_P3_R	IO	Ethernet MDI3+ Signal
10	HDSRC_N3_R	IO	Ethernet MDI3- Signal
11	HDBT_B_+3.3V	P	POWER
12	HBTB_HDMI_HDCP_LED	O	LED
13	HDBT_B_+3.3V	P	POWER
14	HBTB_LINK_HDBT_LED	O	LED

3.4 HDMI (Video output)

HT6200 offers an HDMI 1.4b (Type-A) with resolution up to 3840 x 2160 @30Hz for delivering high-definition video and high-resolution audio.

Specification: Type-A, No FLN, Female, Right Angle, WDT, SMT, RoHS

Pinout description:

Pin	Signal	Type	Description
1	HDMI_DATA2+	O	HDMI DATA
2	GND	P	Ground
3	HDMI_DATA2-	O	HDMI DATA
4	HDMI_DATA1+	O	HDMI DATA
5	GND	P	Ground
6	HDMI_DATA1-	O	HDMI DATA
7	HDMI_DATA0+	O	HDMI DATA
8	GND	P	Ground
9	HDMI_DATA0-	O	HDMI DATA
10	HDMI_CLK+	O	HDMI CLK
11	GND	P	Ground
12	HDMI_CLK-	O	HDMI CLK
13	NC		NC
14	NC		NC
15	HDMI_DDC_SCL	I/O	HDMI DDC I2C CLK
16	HDMI_DDC_SDA	I/O	HDMI DDC I2C DATA
17	GND	P	Ground
18	VCC_HDMI	P	HDMI POWER +5V
19	HDMI_HPD	I	HDMI HOT PLUG DETECTION

3.5 USB 3.0

HT6200 implements two stacked USB 3.0 Type-A ports ideally for connecting USB peripherals such as a keyboard, mouse, scanner, bootable USB device, etc.

Specification: 3.0, Type A, 2 Ports, Female, 17.5mmL, Right Angle, WDT, THR, RoHS

Pinout description:

Pin	Name	Type	Description
1A	VCC1_USB3.0	P	USB POWER
2A	USB2_P2_R_L_DN	O	USB D -
3A	USB2_P2_R_L_DP	O	USB D +
4A	GND	P	Ground
5A	USB31_P1_TYPEA_RX_L_DN	I	SSRX -
6A	USB31_P1_TYPEA_RX_L_DP	I	SSRX +
7A	GND	P	Ground
8A	USB31_P1_TYPEA_TX_C_L_DN	O	SSTX -
9A	USB31_P1_TYPEA_TX_C_L_DP	O	SSTX +
1B	VCC1_USB3.0	P	USB POWER
2B	USB2_P6_L_DN	O	USB D -
3B	USB2_P6_L_DP	O	USB D +
4B	GND	P	Ground
5B	USB31_P2_TYPEA_RX_L_DN	I	SSRX -
6B	USB31_P2_TYPEA_RX_L_DP	I	SSRX +
7B	GND	P	Ground
8B	USB31_P2_TYPEA_TX_C_L_DN	O	SSTX -
9B	USB31_P2_TYPEA_TX_C_L_DP	O	SSTX +

3.6 USB 2.0

HT6200 implements two stacked USB 2.0 Type-A ports ideally for connecting USB peripherals such as a keyboard, mouse, scanner, bootable USB device, etc.

Specification: 2.0, Type A, 2 Ports, Female, 17.5mmL, Right Angle, WDT, THR, RoHS

Pin	Name	Type	Description
A1	VCC1_USB2.0	P	USB POWER
A2	USB2_P4_R_L_DN2	O	USB D -
A3	USB2_P4_R_L_DP2	O	USB D +
A4	GND	P	Ground
B1	VCC1_USB2.0	P	USB POWER
B2	USB2_P5_L_DN	O	USB D -
B3	USB2_P5_L_DP	O	USB D +
B4	GND	P	Ground

3.7 Antenna Connectors

There are two SMA antenna connectors on the enclosure marked as WLAN1 and WLAN2. The antenna connectors are intended for connecting Wi-Fi & Bluetooth antennas for enhanced signal strength.

3.8 ON/OFF Button

The ON/OFF button is designed to turn on/off the device when the device is powered on.

There is an LED indicator on the button to indicate the device status. The LED indicator will turn solid blue after powering on, indicating it is operating properly. A short press of the button will turn off the device and change the LED indicator to solid red.

Indicator color	Description
Red	Shutdown
Blue	Normal operation

3.9 Reset Button

HT6200 provides a reset button for rebooting the device without using the ON/OFF button.

3.10 3.5mm Combo Audio Jack

HT6200 offers a 3.5mm combo audio jack, designed to connect a headphone for immersive gaming, conference experiences or to connect an amplifier for use in such scenarios as digital signages, malls or remote diagnosis.

3.11 Grounding Screw

The grounding screw on the front panel allows users to attach a ground wire to it to protect the device from potential electrical damage.

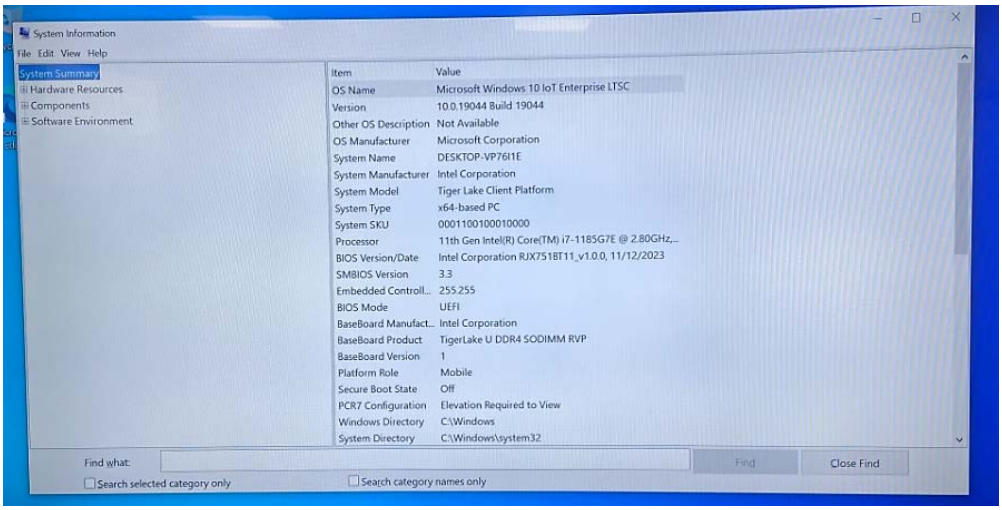
CHAPTER 4 SOFTWARE SETUP

Please connect a mouse, keyboard, and display to the device for easier operation.

4.1 System Information

The device is running Windows operating system. You can check the system information after the device boot up in accordance with the following steps:

1. Press “Win + R” on the keyboard to call the command box;
2. Input msinfo32 in the command box and click “OK” to confirm;



3. You can also access the hardware and software information of the device on this window.

4.2 BIOS Introduction

BIOS initializes hardware like CPU and memory, and saves hardware settings for installation and loading of the operating system (OS).

Users may need to run BIOS Setup program when:

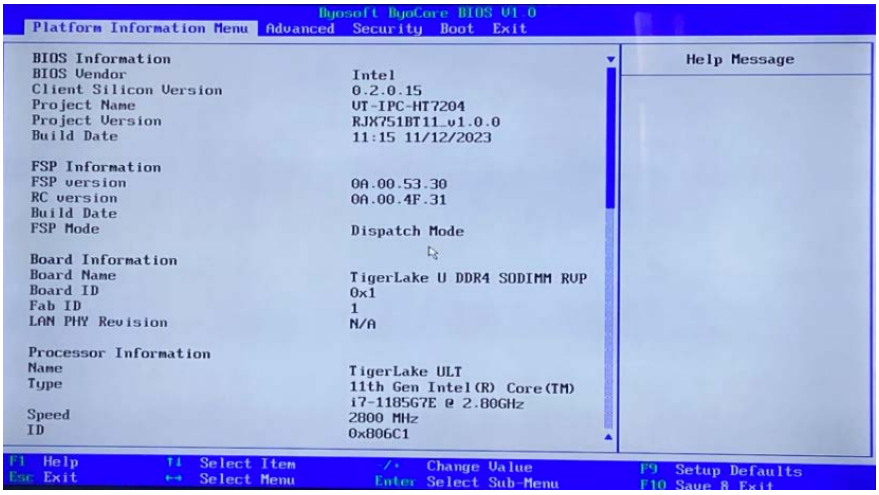
- An error message appears suggesting that the user should run BIOS Setup;
- Default settings need to be customized.

Please be aware that BIOS will be under continuous update for better system performance, therefore the description in this chapter might vary slightly and is for reference only.

4.3 BIOS Setup

4.3.1 Accessing BIOS Setup Utility

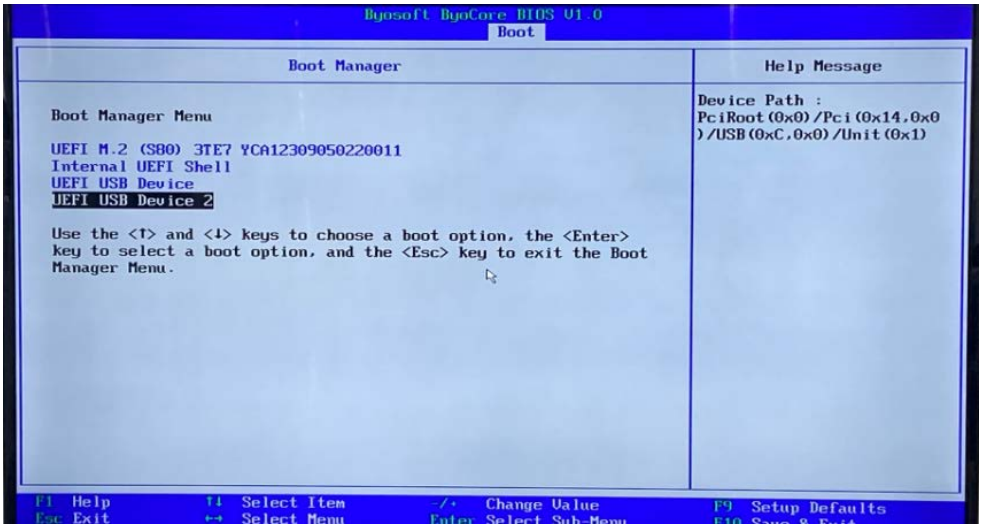
When the device is powered on, the system will start the power-on self-test process. At this point, you can press **F2** to access the BIOS configuration page for more settings.



The BIOS menu bar comprises:

- **Platform Information Menu**: Basic system configurations, like BIOS information, FSP information, device information, processor information, firmware information, system time and date, etc.
- **Advanced**: Advanced configurations that allow users to customize the system and device settings
- **Security**: System security settings where users can set the administrator and user passwords, manage the passwords, implement secure boot, etc.
- **Boot**: System boot options, boot manager, etc.
- **Exit**: BIOS load or exit options with or without changes saved

4.3.2 Selecting a boot option



You can access the Boot Manager menu from the **Boot** tab in BIOS environment or by pressing **F7** at the bootup of the device.

As shown in above screenshot:

UEFI M.2 (S80) 3TE7… is an UEFI boot option for accessing the Windows operating system installed in the M.2 SSD on the device. When selected, it initiates the boot process for Windows.

Internal UEFI Shell is a command line interface that provides access to a range of commands and utilities to be used for network booting, system management or recovery, system diagnostics, troubleshooting, etc.

UEFI USB Device/UEFI USB Device2 are specific boot entries associated with the USB device. This option allows you to boot the device from this bootable device.

Please refer to 4.4.2 Making a Bootable USB Drive for Window 10 for the details of making a bootable USB device.

4.4 Installing Windows 10 System

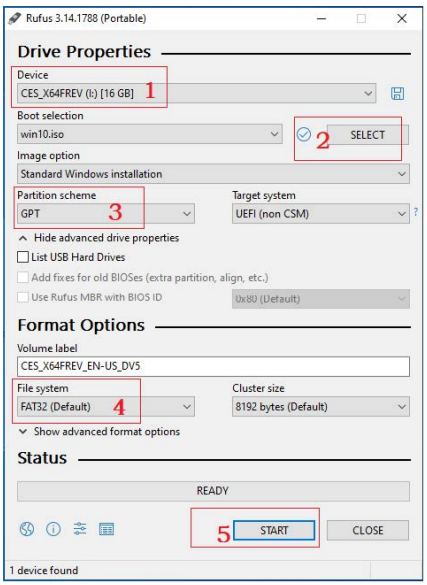
4.4.1 Prerequisites

- A USB drive with capacity no less than 8GB, preferably supporting USB 3.0
- Software release package of HT6200
- A program for making the bootable device: rufus-xxx .exe (available in the release package, usually in \4 Sw-Tests)
- Windows 10 image (available in the release package, usually in \5 Image)
- A host computer running Windows system
- A USB keyboard, mouse and monitor to connect the device for easier operation

4.4.2 Making a Bootable USB Drive for Windows 10

Run the program rufus-xxx .exe after plugging the USB drive into the host computer and it will automatically detect the USB drive. Then follow the steps below to make a bootable USB drive.

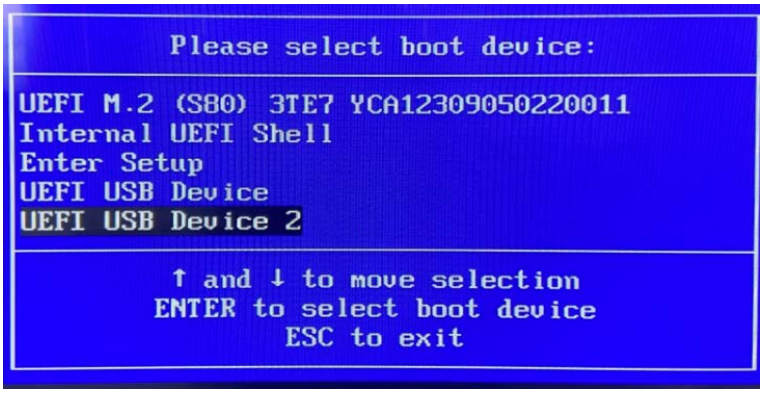
1. Choose the USB drive you want to use from the drop-down list under **Device**;
2. Select the ISO image you want to burn onto the USB drive and click **Select**;
3. Generally, users would like to create a **Standard Windows installation**, and Rufus will automatically detect the correct **Partition Scheme** based on the USB drive. Yet make sure the partition scheme is **GPT**;
4. Set the Target system as **UEFI** and the File system as **FAT32** or **NTFS**;
5. Click **START** to make the bootable USB drive;



6. Unplug the USB drive from the host computer after the bootable device is successfully made.

4.4.3 System installation

1. Plug the bootable USB drive into HT6200;
2. Power on the device and it will enter the boot process;
3. Press **F7** during the boot process to access the **BIOS Boot Manager** menu;
4. Select the bootable USB drive you just created for Windows system and press **ENTER**;



5. Wait for the installation of Windows on HT6200.

4.5 Driver Introduction

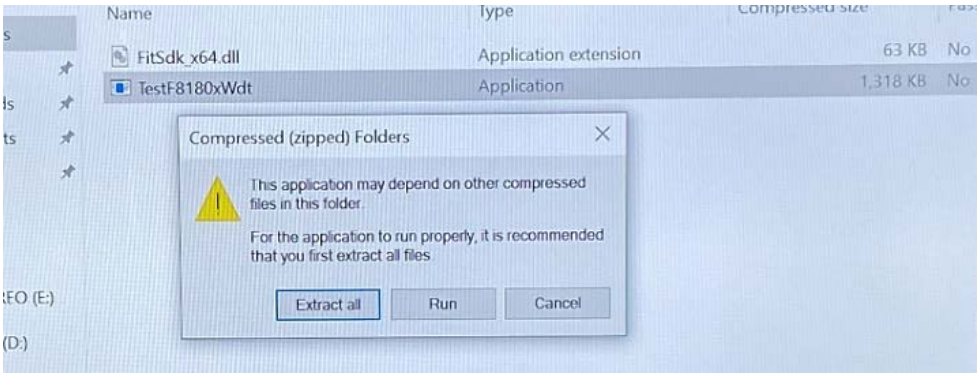
The device is equipped with the required drivers before shipment. The table below lists the driver folders in the software release package of the device (path: \3 Sw-Driver\) that might be used to run the device after reinstalling the operating system.

Driver folder	Description
Audio	To provide advanced audio effects and processing options for audio devices
Chipset	To tell the user if the chipset INF file needs to be updated
F8108x	Driver necessary for the SIO
Graphic	To provide support for various features and enhancements for graphics rendering and display
LAN	To provide support for the LAN7400 Ethernet Controller commonly used in network interface cards
SerialIO	Required if you plan to use the GPIO host controllers
TXE	To manage the Intel CSME firmware
USB2COM	To enable communication between the COM port on the device and the target USB port
WIFI&BTH	To provide various features and enhancements for wireless and Bluetooth connectivity

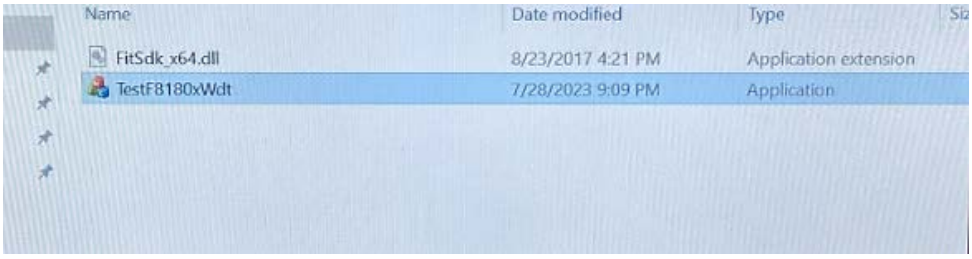
4.6 Watchdog Timer Debugging

The watchdog timer is controlled through the I/O chip F81804. You can enable or disable the watchdog timer by running the program **TestF8180xWdt.exe** located in \4 Sw-Tests\WDT\TestF8180xWdt.zip.

1. Navigate to the abovementioned folder, double click the application and extract all files;

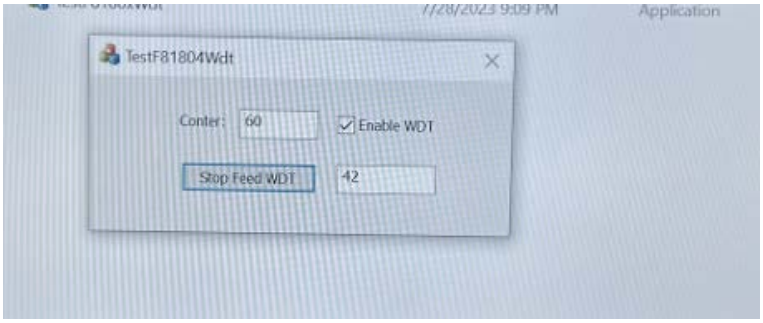


2. Double click to run the TestF8180xWdt.exe program;



3. Set a timer (e.g., 60s) in the **Counter** field for dog feeding and click the checkbox to enable the watchdog timer;

4. The timer will count down from the preset time. During this period, if you click the **Feed WDT** button to feed the dog, the time will be reset. If you click the **Stop Feed WDT** button or stop clicking the **Feed WDT** button during the countdown, the device will restart after the countdown finishes.



CHAPTER 5 DISPOSAL AND WARRANTY

5.1 Disposal

When the device comes to end of life, you are suggested to properly dispose of the device for the sake of the environment and safety.

Before you dispose of the device, please back up your data and erase it from the device.

It is recommended that the device is disassembled prior to disposal in conformity with local regulations. Please ensure that the abandoned batteries are disposed of according to local regulations on waste disposal. Do not throw batteries into fire or put in common waste canister as they are explosive. Products or product packages labeled with the sign of “explosive” should not be disposed of like household waste but delivered to specialized electrical & electronic waste recycling/disposal center.

Proper disposal of this sort of waste helps avoid 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.

5.2 Warranty

Product warranty

VANTRON warrants to its CUSTOMER that the Product manufactured by VANTRON, or its subcontractors will conform strictly to the mutually agreed specifications and be free from defects in workmanship and materials (except that which is furnished by the CUSTOMER) upon shipment from VANTRON. VANTRON's obligation under this warranty is limited to replacing or repairing at its option of the Product which shall, within **24 months** after shipment, effective from invoice date, be returned to VANTRON's factory with transportation fee paid by the CUSTOMER and which shall, after examination, be disclosed to VANTRON's reasonable satisfaction to be thus defective. VANTRON shall bear the transportation fee for the shipment of the Product to the CUSTOMER.

Out-of-Warranty Repair

VANTRON will furnish the repair services for the Product which are out-of-warranty at VANTRON's then-prevailing rates for such services. At customer's request, VANTRON will provide components to the CUSTOMER for non-warranty repair. VANTRON will provide this service as long as the components are available in the market; and the CUSTOMER is requested to place a purchase order up front. Parts repaired will have an extended warranty of 3 months.

Returned Products

Any Product found to be defective and covered under warranty pursuant to Clause above, shall be returned to VANTRON only upon the CUSTOMER's receipt of and with reference to a VANTRON supplied Returned Materials Authorization (RMA) number. VANTRON shall supply an RMA, when required within three (3) working days of request by the CUSTOMER. VANTRON shall submit a new invoice to the CUSTOMER upon shipping of the returned products to the CUSTOMER. Prior to the return of any products by the CUSTOMER due to rejection or warranty defect, the CUSTOMER shall afford VANTRON the opportunity to inspect such products at the CUSTOMER's location and no Product so inspected shall be returned to VANTRON unless the cause for the rejection or defect is determined to be the responsibility of VANTRON. VANTRON shall in turn provide the CUSTOMER turnaround shipment on defective Product within **fourteen (14) working days** upon its receipt at VANTRON. If such turnaround cannot be provided by VANTRON due to causes beyond the control of VANTRON, VANTRON shall document such instances and notify the CUSTOMER immediately.

Appendix Regulatory Compliance Statement

This product has been determined to be compliant with the applicable standards, regulations, and directives for the countries where the product is marketed.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates 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.

This device complies with Part 15 of 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.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate this equipment.