User Manual

Mini PC User Manual

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(H4T-10th)
User Manual

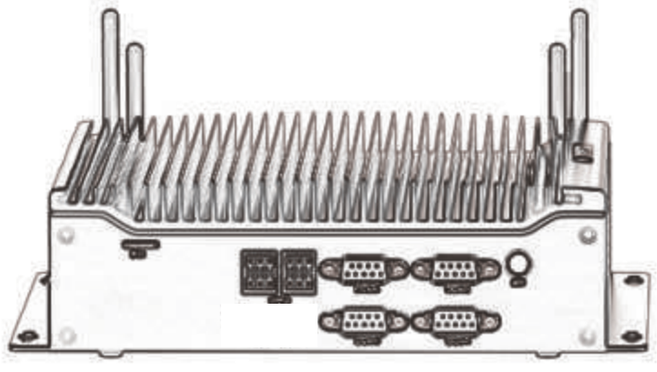
CAN Bus version appearance

PS:

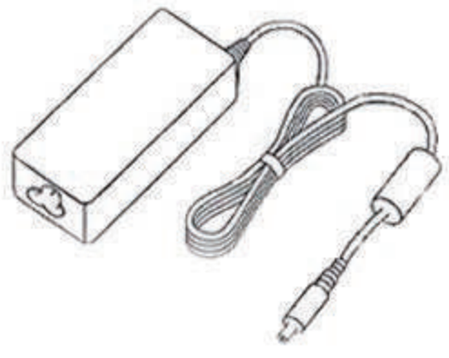
To meet the needs of different scenarios, this product provides two chassis designs: standard version and CAN Bus version. Please select the appropriate model according to the actual purpose. The CAN Bus version is an optional accessory and needs to be purchased for an additional fee.

Package List

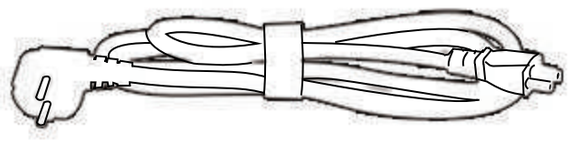
Included Accessories



Mini PC x1



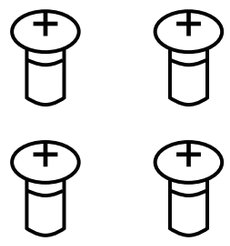
Power Adapter x1



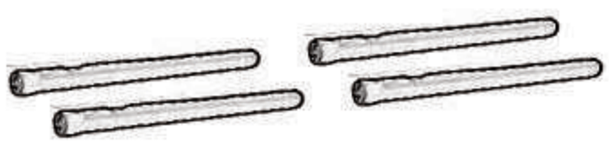
Power Cord x1

SATA Cable x1

User Manual and
Other Documents x1



Screw Packet x1



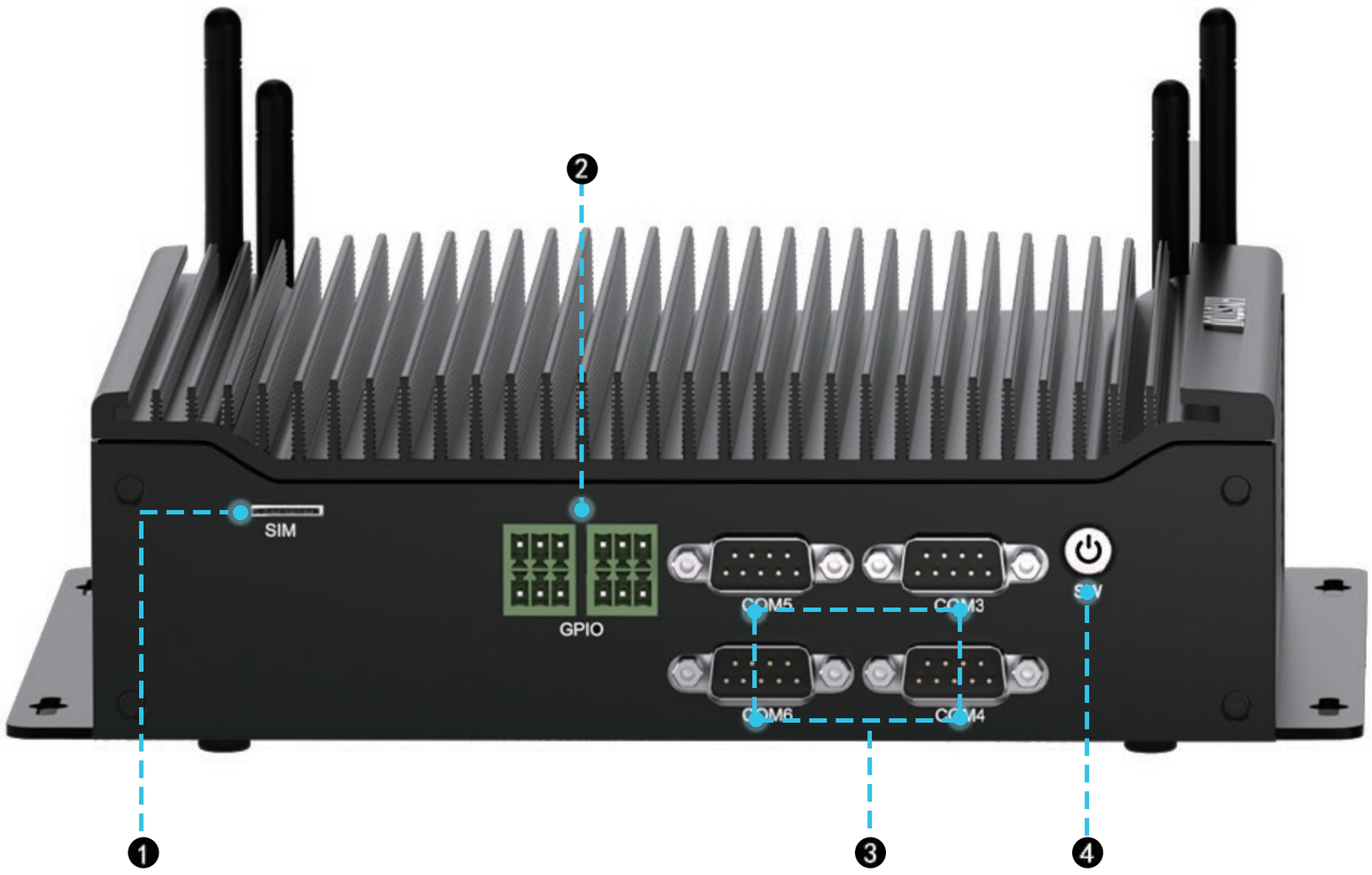
SMA Gain Antennas ×2 or 4

Note:

The power adapter and other accessories included in the packaging box may vary depending on the model specifications or purchase region.

Appearance interface

Host front



① Nano SIM card slot

It is mainly used to connect to mobile networks, allowing computers to receive 4G or 5G signals and realize wireless Internet access;

Hardware module dependency description:

a. The SIM card slot must be equipped with a 4G/5G wireless communication module (need to be purchased separately or pre-installed by the host) before the SIM card can be recognized normally. If the host does not have this module built-in, the corresponding module must be installed through the motherboard interface (such as M.2 KEY-B) and the driver installation can be completed before the SIM card can be inserted to use the mobile network function.

b. The network frequency bands supported by the module must match the 4G/5G network of the local operator to avoid the inability to connect to the Internet due to incompatibility of the frequency band.

② GPIO（General-Purpose Input/Output）

The common interface for digital signal interaction between the host and industrial peripherals, supports programmable input/output mode, and is suitable for industrial scenarios such as sensor signal acquisition, actuator control, equipment status monitoring, etc.

③ COM3\4\5\6 Port (DB 9pin)

It supports RS232 communication standard and is often used for data transmission between computers and external devices (such as modems and industrial equipment).

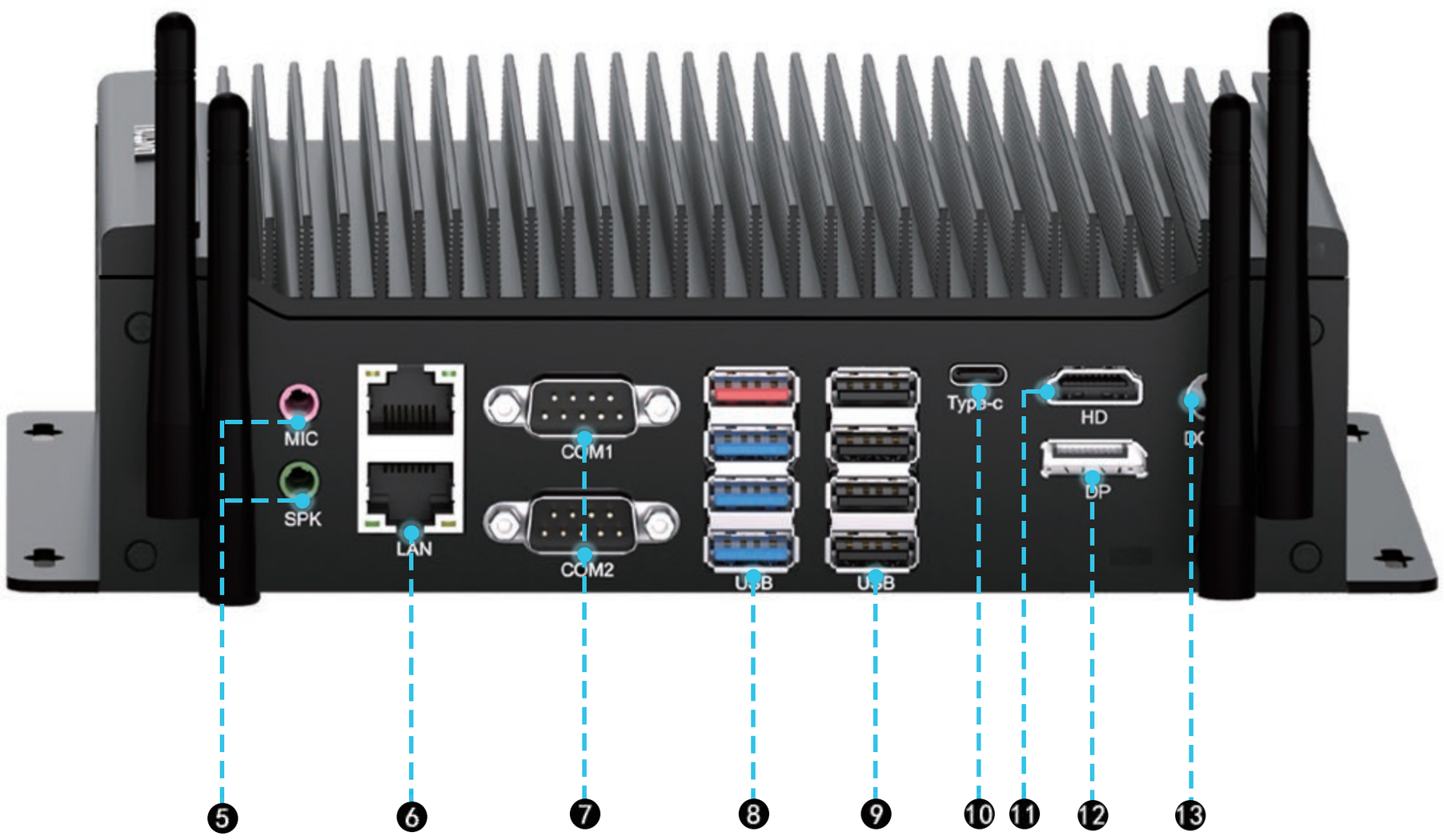
④ Power-on button

Tap the boot button for 2 seconds to start the computer;

Press and hold the power button for 10 seconds to force shut down the computer;

During the normal operation of the computer, tap for 1 second to realize the sleep function.

Back of the host



⑤ MIC（Microphone）/ SPK（Speaker）Port

This port is 3.5mm, audio input/output jack, and is often used to connect microphones, headphones, active speakers, etc.

⑥ LAN Port

It uses standard RJ45 Ethernet port and is compatible with common Ethernet cables on the market. Supports data transmission rates up to 1Gbps, and is backward compatible with 100Mbps\10Mbps rates. It can automatically negotiate and

adapt to the optimal transmission rate according to the network environment and connected devices.

⑦ COM1/COM2 Port (DB 9pin)

Support RS232/RS422/RS485 communication standard, default RS232 communication standard

⑧ USB 3.0 Port

Theoretically, the transmission speed of 5Gbps can be backward compatible with USB2.0 and other devices, and provides 5V power supply.

⑨ USB 2.0 Port

Supports USB2.0 port devices and is compatible with USB3.0 devices. When connected to USB3.0 devices, the transmission speed is USB2.0 speed. Commonly used to connect keyboard, mouse, printer and other devices

⑩ Type-c interface

It supports data transmission function connecting to Type-c interface devices, and the theoretical maximum transmission speed is 5Gbps. Supports audio and video transmission and can be connected to the monitor. Supports external docking stations to expand the number of interfaces and functions of mini computers

⑪ HDMI Port

HDMI high-definition interface supports audio and video transmission, and can be used to connect to high-definition displays, LCD displays and other display devices.

⑫ DisplyPort Port

This port is a dedicated video transmission interface, focusing on high-definition video output, and is suitable for connecting display devices such as monitors and projectors.

⛔ Functional limitation description

Audio transmission: Due to the hardware design adaptation requirements, the current port does not support synchronous transmission of audio signals. It is recommended to obtain audio through the following methods:

Use the host's standalone audio interface (SPK (Speaker) Port)

Audio return of the monitor connected through the HDMI/-Type-C interface (if the monitor supports it)

No hot plug-in support: To ensure stability, please keep the host power out when connecting/disconnecting the device (non-hot plug-in design)

This interface uses an extended chip to achieve EDP function adaptation, which is somewhat different from the native DP protocol.

⑬ Power interface (DC 19V)

The equipped power adapter connects the computer through this power interface to convert AC power into DC to provide power to the device.

Volume dimensions

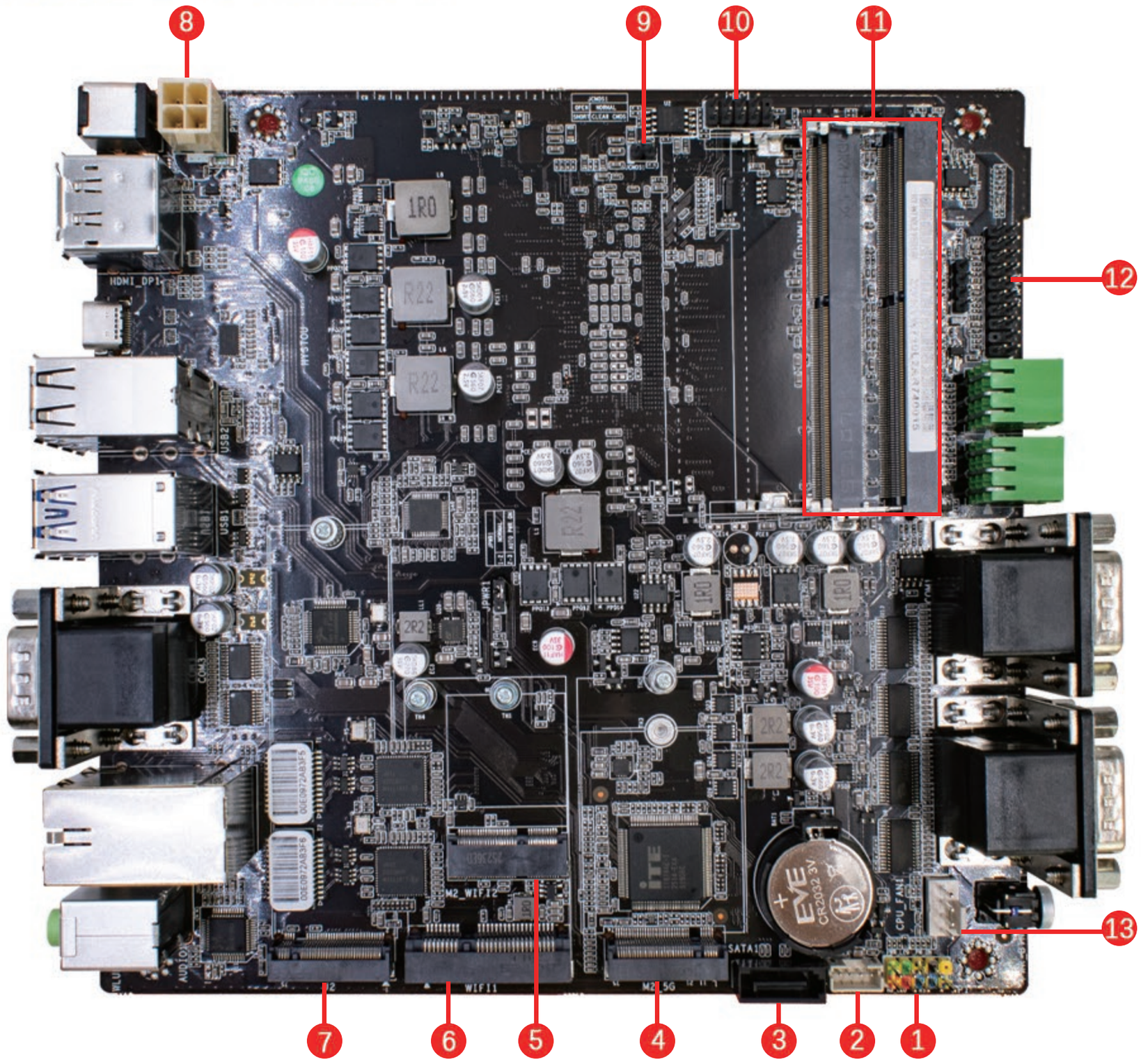
Volume size: 230mm*182mm*65mm

Net weight of the host: 1.8Kg

Note:

The size and weight are both manual measurements, and there are subtle errors. Please refer to the actual object.

Motherboard Overview



pin	Name	Purpose
1	Front panel needle	Used to expand external switches、resets、 power LED、 HDD、 LED
2	SATA power supply interface	For 2.5-inch SSD/HDD power supply
3	SATA3.0 data connection	For 2.5-inch SSD/HDD data transmission
4	M.2 KEY-B slot	Used to expand 4G/5G modules, etc.

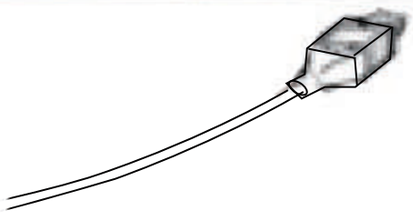
5	M.2 KEY- E W IFI slot	Used to extend the WIFI module, equipped with WIFI5, optional WIFI6 (intel AX200)
6	Mini PCIE slot	Used to extend CAN Bus modules, etc.
7	M.2 KEY-M SATA/NVME slot	Suitable for M.2 2280 SATA or NVME protocol SSD, maximum support for 4TB capacity
8	4PIN power socket	For connecting to 4PIN power adapter
9	JCMOS needle mount	In the power outage state, use metal shorting for 5 seconds to restore the CMOS parameters to the default state
10	LPC1 needle	This needle is often used for factory development and debugging, and is meaningless to users rather than to
11	SODIMM memory slot*2	Suitable for 260pin DDR4 memory stick, maximum support for 64G capacity
12	JTPM needle mount	Used to extend the TPM2.0 module
13	CPU_FAN needle mount	For extending CPU fan

Get started with your mini computer

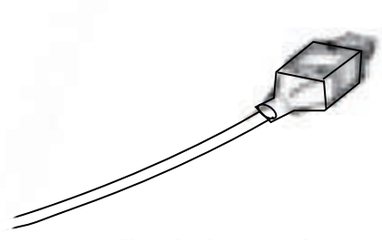
Connect the monitor

The monitor compatible interface connected to the mini computer host is as follows:

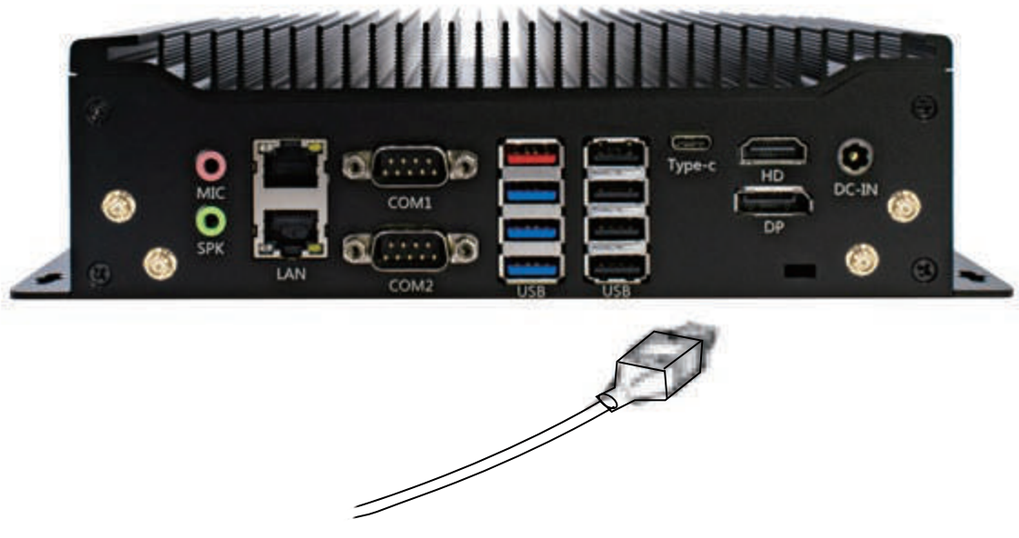
- Tpe-c interface
- HDMI high-definition interface
- DisplayPort interface



•Type-c interface



•HDMI high-definition interface



•DisplayPort interface

- Note: If your monitor interface is VGA, DVI, etc., you need to use an adapter cable (header) to connect the monitor. It only supports HDMI interface of mini computers, and uses HDMI to VGA or HDMI to DVI data cable for conversion. In principle, DisplayPort\Type-C interface does not support conversion.

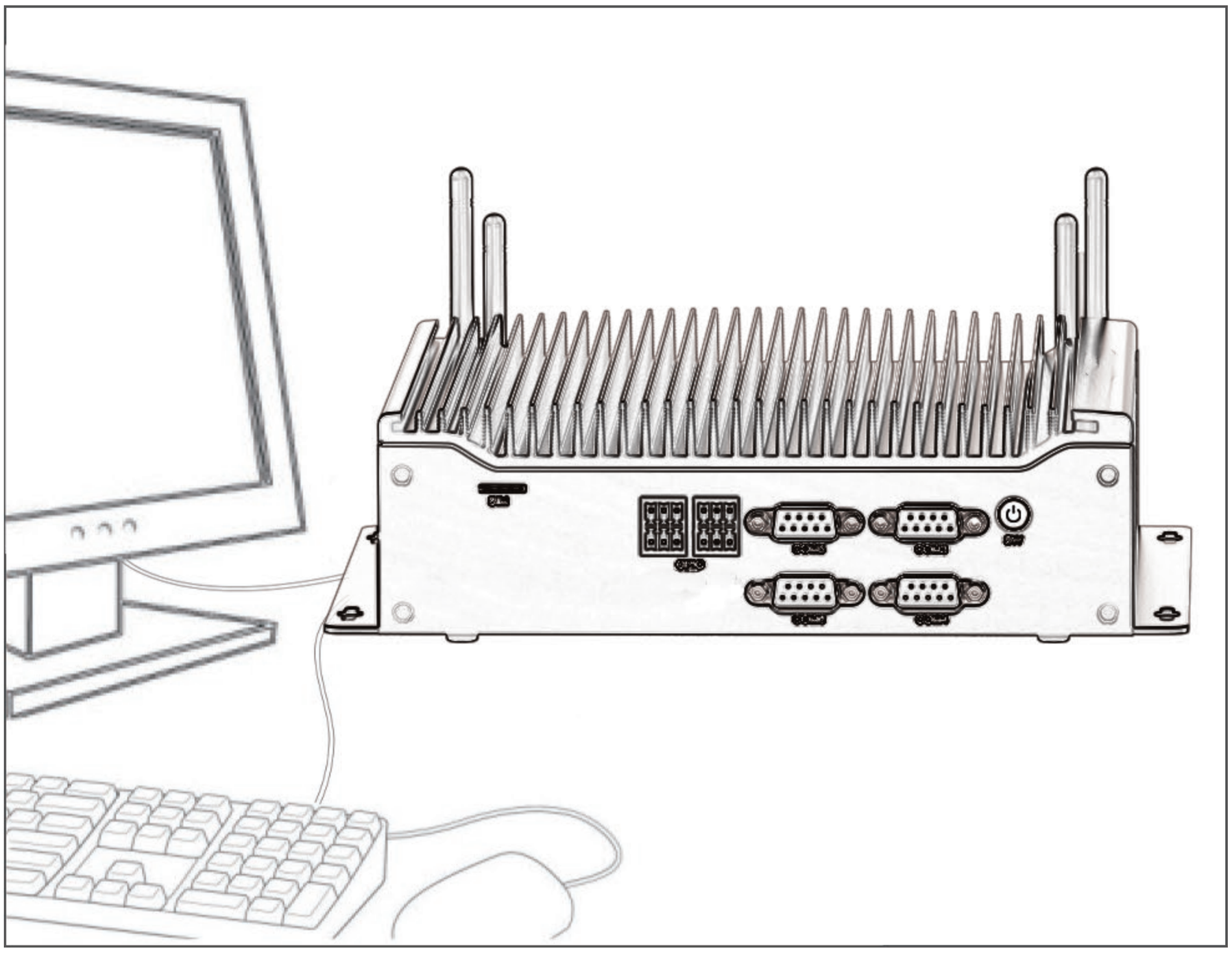
- DisplayPort\Type-C interface. In principle, only supports the use of DisplayPort to DisplayPort and Type-C to Type-C data cables to directly connect to the monitor. Using other types of conversion cables may cause no display or splash screens.
  Special requirements: If your monitor does not have a DisplayPort\-Type-C port, you can use an active (with chip) conversion cable (supporting DP to HDMI\Type-C to HDMI) to connect.
- This type of active (with chip) conversion cable can be purchased with your hardware supplier.

Connect USB keyboard and mouse

You can connect an independent USB wired keyboard and a USB wired mouse, or you can connect a USB wireless keyboard and mouse set and a Bluetooth keyboard and mouse. You can purchase it yourself as needed. Here, the example is wired USB keyboard and mouse as an example.

Let’s start connecting the keyboard and mouse:

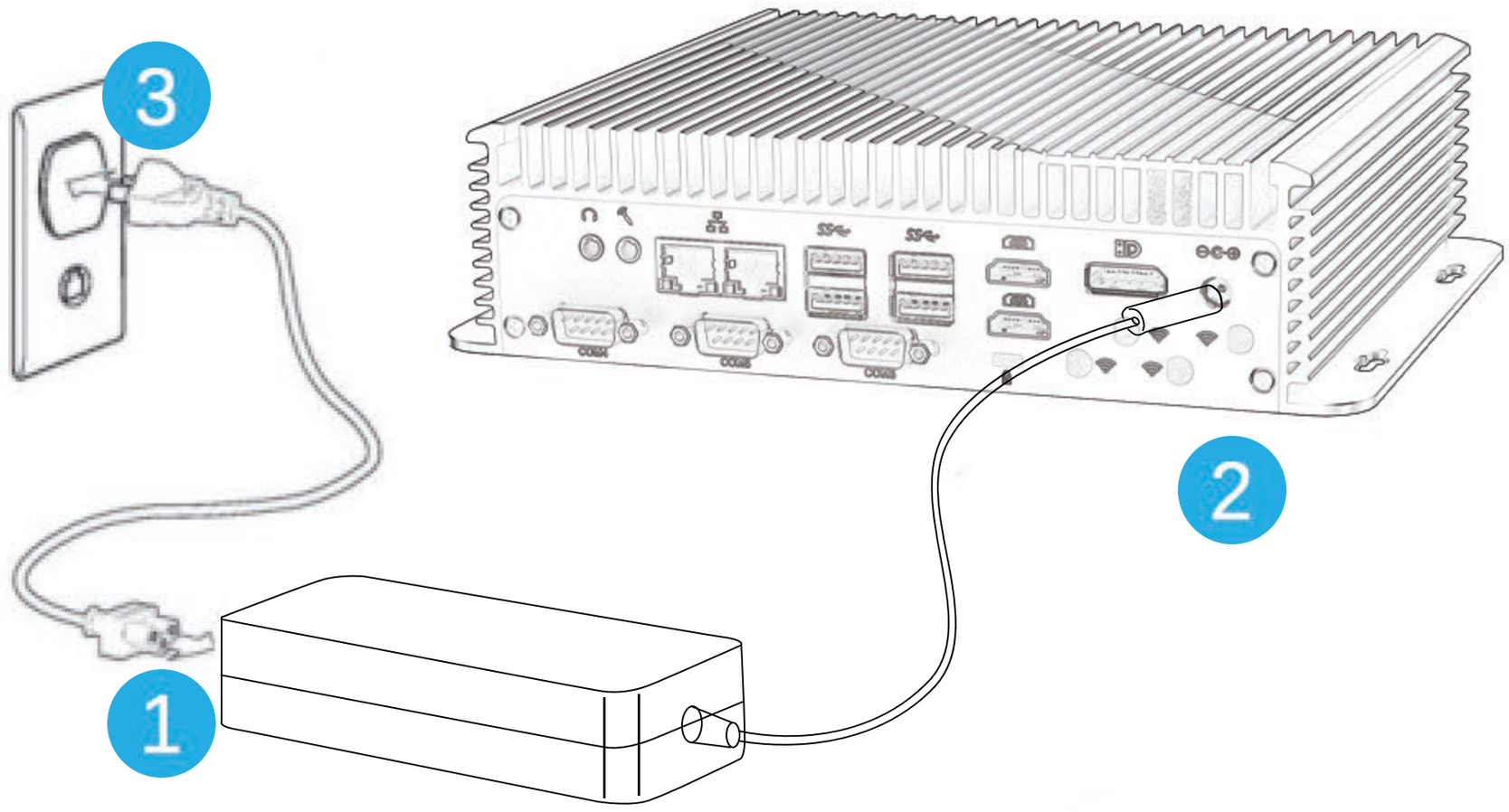
- Plug the USB port of the keyboard and mouse into the USB port of the computer (recommended to plug in USB2.0)
- When inserting the USB port, please carefully observe the direction of the USB port. If the direction is wrong, you cannot force it into it, otherwise it will be easy to plug in the USB pins.



Connect to the power supply

Connect the power adapter and the power cord to the computer host

- Connect the power cord to the power adapter
- Plug the 5.5*2.5mm power head of the power adapter to the DC interface of the computer, and plug the power head into place
- Then plug the power cord into the socket

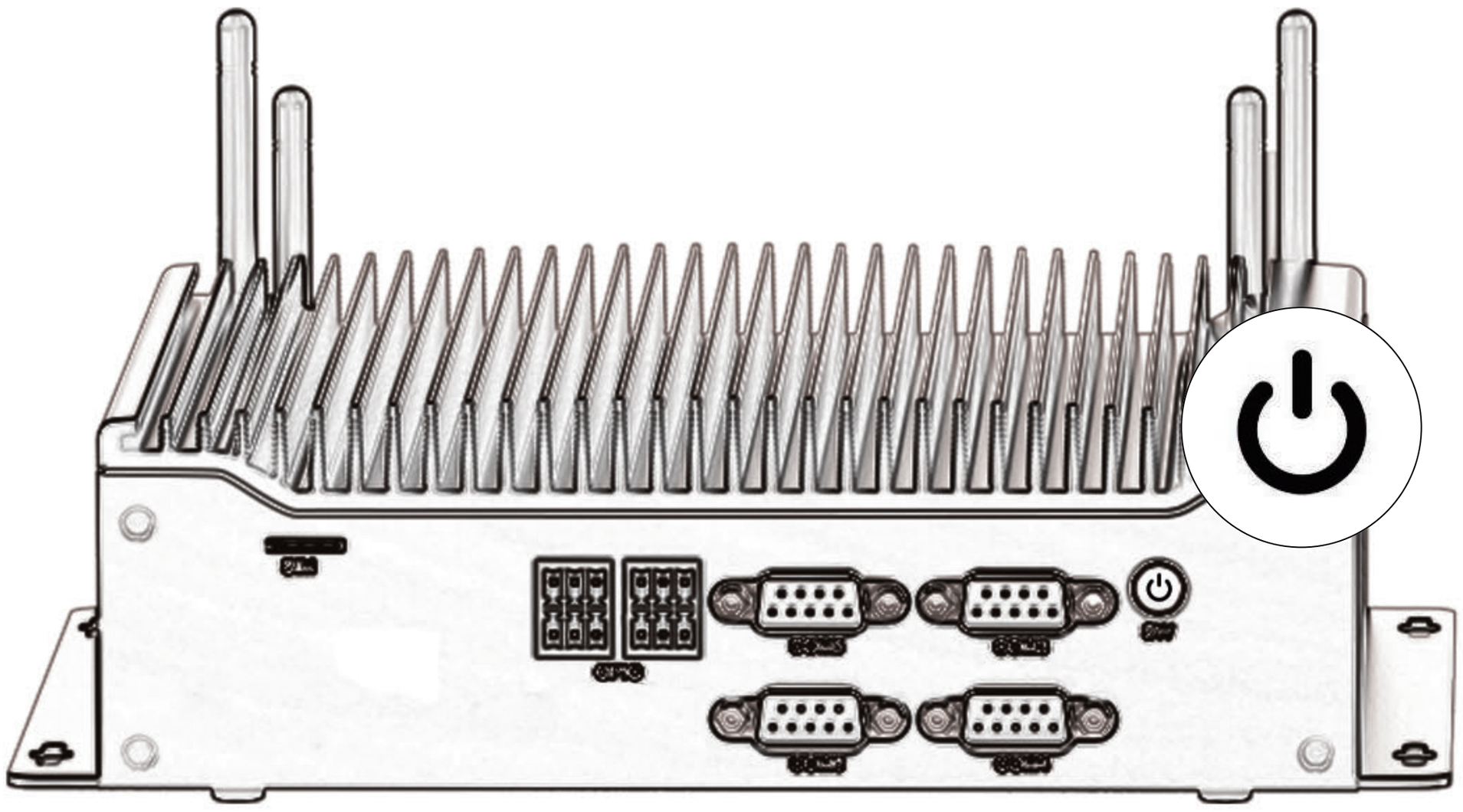


Important information!

- The computer host must use the power adapter equipped by the computer to ensure stable power supply;
- The socket connected to the power adapter must be grounded to ensure stable power supply to the computer;
- The sockets connected to the power adapter should be preferred for sockets close to the computer;
- When you turn off the computer and don’t use the computer for a long time, please disconnect the power supply in time and unplug the plug from the socket.

Start the computer host

Tap the Power On (SW) button on the host for 2 seconds, and the light on the Power On button will turn blue.



Turn off the computer host

When the computer host does not respond, press and hold the power-on button for 10 seconds until the power-on button indicator light goes out. If the fan is rotated, the power is forced to shut down.

Go to sleep

When the computer is running normally and there is no need to use the computer for the time being, you can press the power-on button for 1 second to enter a sleep state.

Wake up from sleep

When the computer enters sleep, press the power-on button for 1 second to wake up the computer.

Note: The computer cannot wake up with the USB keyboard or mouse when it goes to sleep!

Connect to the Internet (internet)

Wired network (net cable) connection

- Connection device: Plug one end of the network cable into the RJ45 interface of the mini host, and connect the other end to the LAN port of the router/switch

- Power-on detection:

  Observe whether the network indicators of the host and router/switch are on (always on or flashing means the connection is successful)

  If the system does not automatically recognize it, enter the network settings interface (such as Windows' "Network and Internet Settings") to check the IP acquisition status. It usually needs to be set to "Automatically obtain IP address"

  Test the network: Open the browser to access the web page or use the command prompt to enter ping 8.8.8.8 to test connectivity

Wireless Network (WIFI) Connection

- Connect the SMA gain antenna

- Enable wireless function:

  Check whether the WiFi function is enabled in the system settings. Usually, if the wireless network card module is selected, the function is enabled by default;

- Search and connect to the network:

  Select the target WiFi name (SSID) in the system network list and enter the password;

- Verify the connection:

  Check the network status and display "Connected" and test the network access through the browser

Common Problem Handling

- The network cannot be recognized:

  Restart the mini host and router

- Check whether the network cable/network port is damaged, or replace other USB to network cable adapters
  Replace and confirm the normal network environment trouble-shooting
- Wife WiFi signal:
  Adjust the host position to reduce obstacle interference
  Confirm that the SMA gain antenna is connected
  Update wireless network card driver or router firmware
  IP conflict: manually set static IP addresses to avoid conflicts with other devices in the LAN

Wall-mounted installation instructions

(Installed through 4 fixed holes in the bottom shell)

Safety Tips

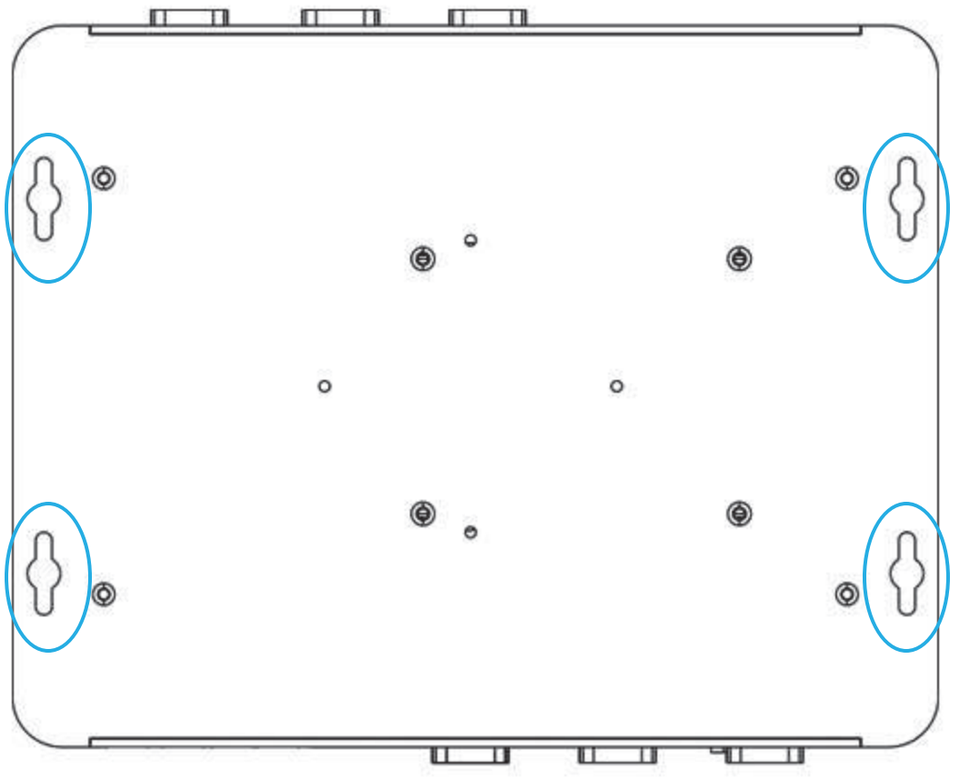
- Please turn off the power of the equipment and disconnect all external connections before installation.
- Ensure wall/bracket load-bearing capacity ≥ Mini computer weight (net weight of the host is approximately 1.8Kg).
- It is recommended to operate by professionals to avoid fall-ing or damaging the equipment.

Step 1: Prepare the tool and check the hole position

Tool list

- Phillips screwdriver
- Electric drill (adapted to wall material)
- Level, tape measure, marker

- Expansion screw (M3~M4 specifications are recommended)
- Flip the main machine and confirm the 4 fixed holes in the bottom shell



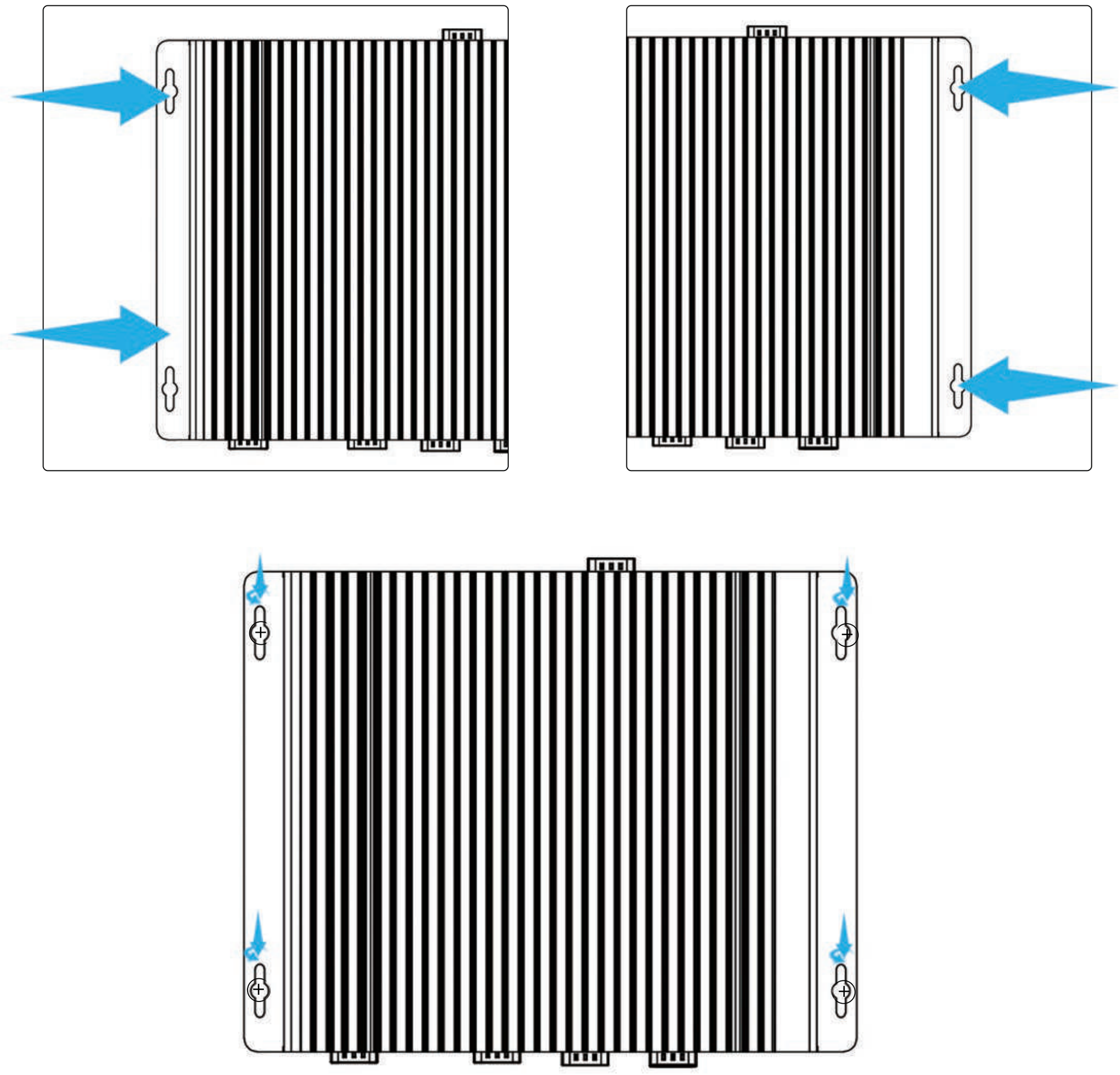
Step 2: Positioning and punching

Mark the installation location

- Use a level to mark the horizontal reference line on the wall.
- Press the chassis case against the wall, align the reference line, and mark the positions of the 4 screw holes with markers.
- Use an electric drill to drill holes at the marked position (the hole size must be matched with the expansion screw).
- Marking the Installation Position

Step 3: Installing the Mini Computer

- Align the 4 fixing holes of the main machine bottom shell with the expansion screw sleeve.
- Steply tighten the screws in diagonal order (such as upper left → lower right → upper right → lower left) to ensure uniform stress



Step 3: Installing the Mini Computer

Stability test

- Swing the host to confirm that there is no loosening.
- Check that the screws are fully tightened and readjust if necessary.

Line sorting

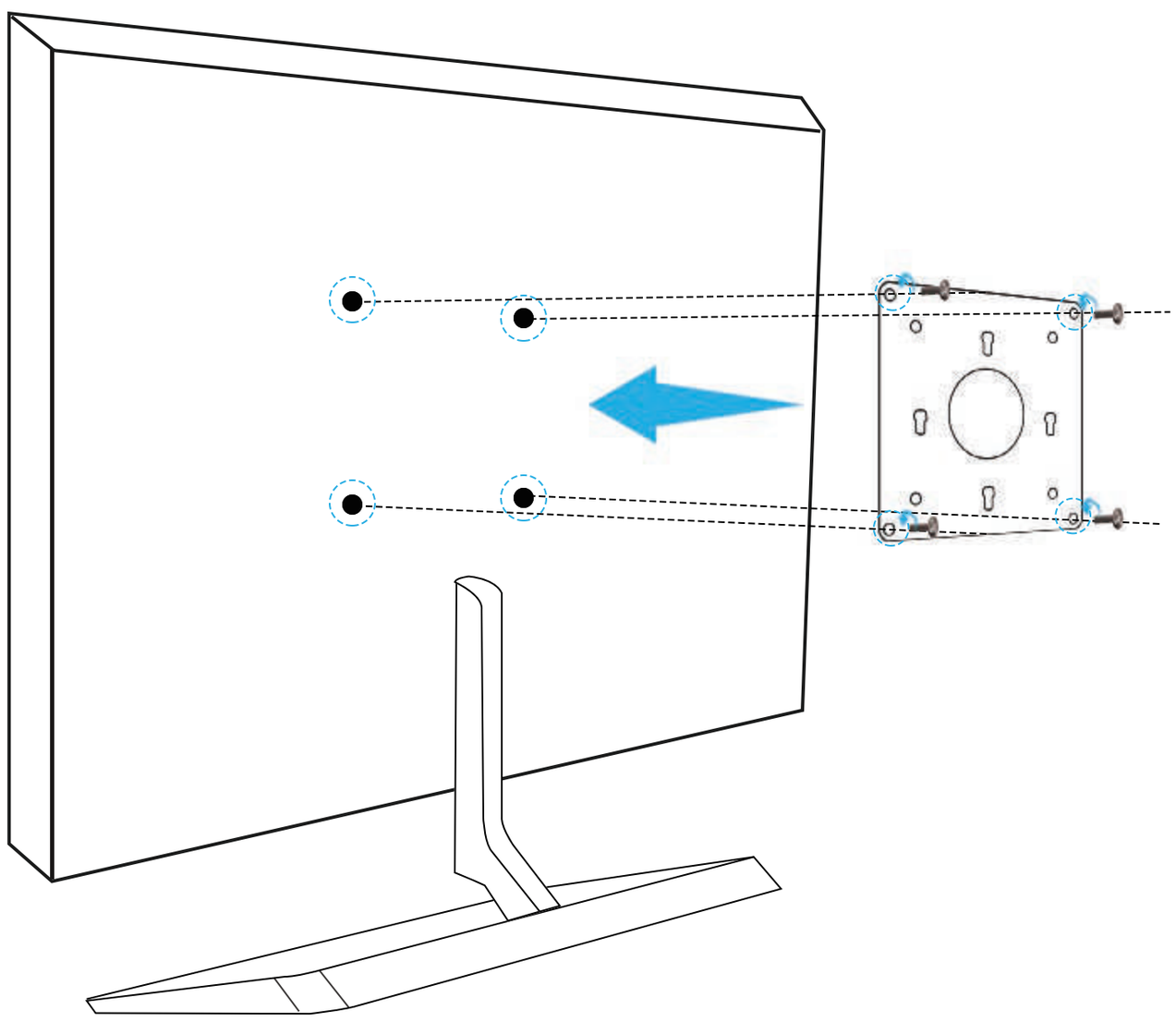
- Connect power cords, peripherals, etc., and use a cable ties or cable manager to fix the cable.

Things to note

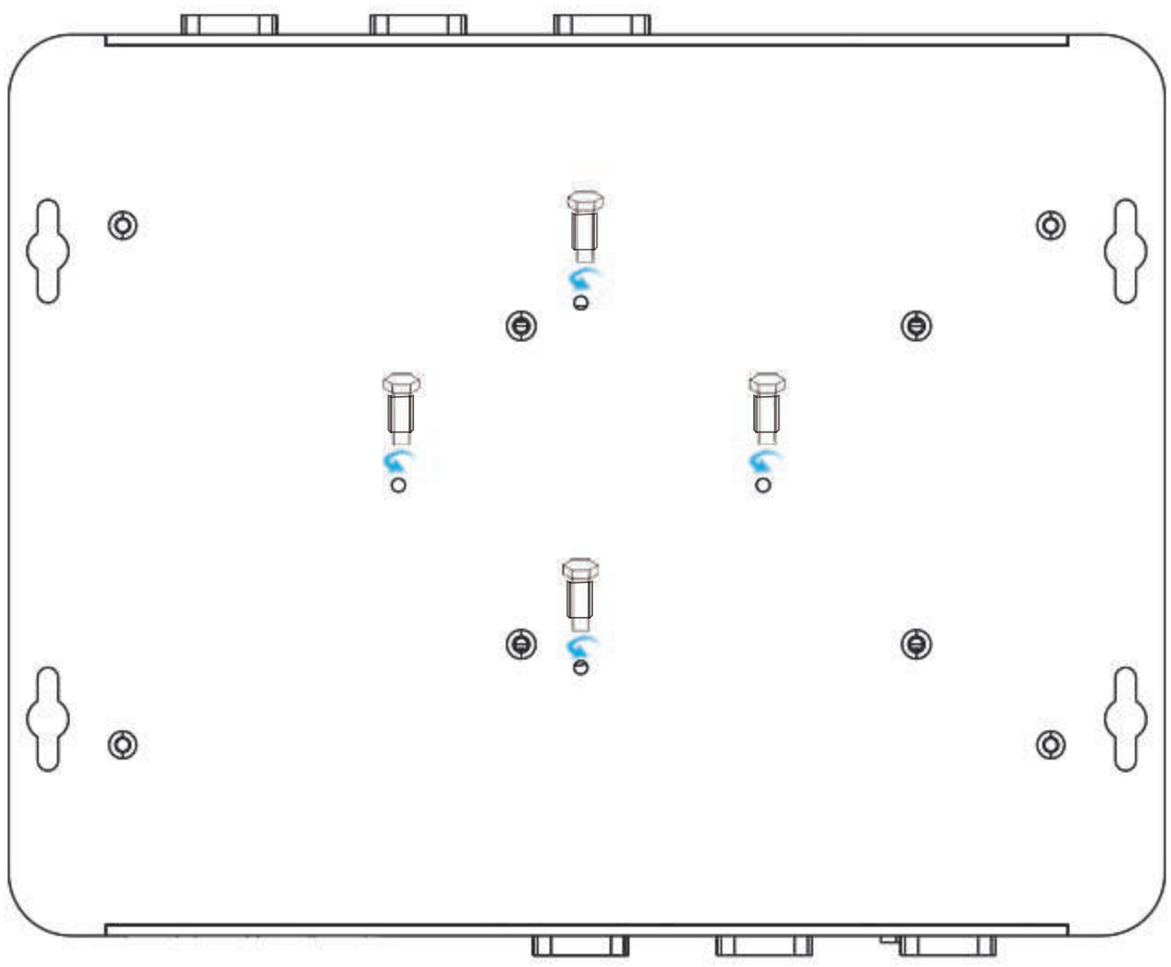
- Regularly check the screw tightness status to prevent loosening after long-term use.
- If disassembly is required, please operate in reverse order to avoid damage caused by force pulling.

VESA mount installation instructions

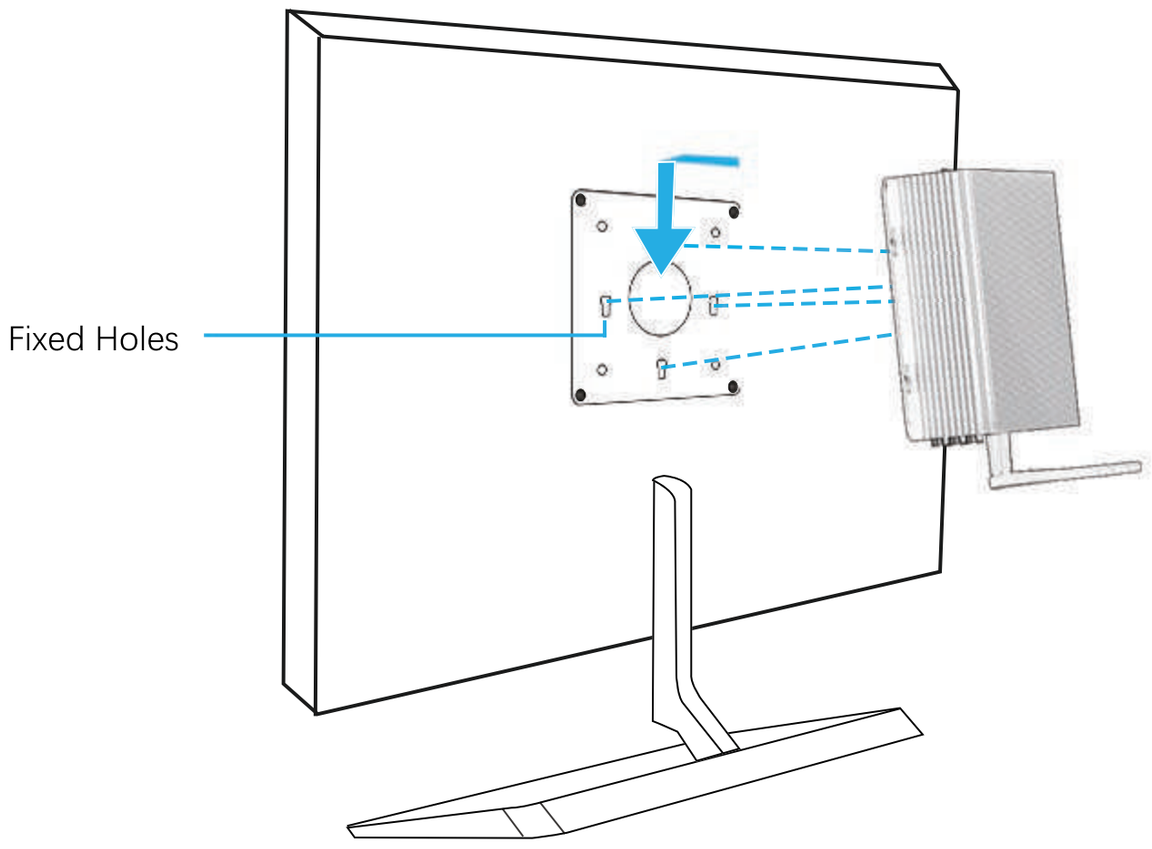
- Secure the VESA mounting bracket to the back of the monitor using the four small monitor screws (size M4) contained in the box.

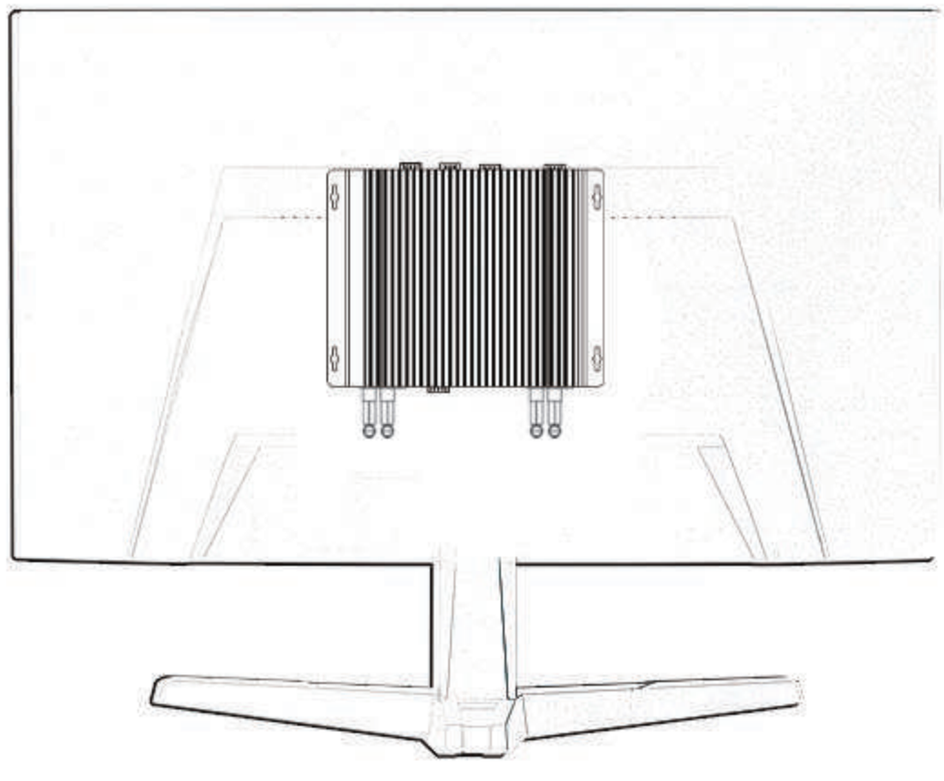


- Fix four screws (size M3) to the bottom of the mini computer case.



- Just hang the mini computer into the VESA rack.





VESA mount installation instructions

Aluminum alloy chassis heat dissipation design instructions:

- This product adopts a chassis cooling system designed by aluminum alloy material. Aluminum alloy has excellent thermal conductivity and can quickly transmit heat generated by internal components to the chassis surface, and naturally dissipate heat through air convection, thereby improving the operation stability of the equipment.
- The maximum surface temperature of the chassis can reach (≤55℃) is a normal heat dissipation phenomenon, indicating that the heat is effectively discharged through the chassis, and there is no need to worry about equipment abnormalities.
- The product design has passed strict temperature control testing, and the surface temperature of 55°C will not affect the equipment performance or safety.
- Make sure the surroundings of the equipment are well ventilated to maintain optimal heat dissipation.

Safety warning!

- After the equipment is running for a long time, the surface of the chassis may be in a high temperature state (≤55℃). Please do not touch it directly with your hands to avoid burning the skin.
- If you need to move or maintain the equipment, please turn off the power and let it sit for 10-15 minutes before operating.

FQA

- Q1: When you receive the product, why do you need to wait a long time for the monitor to display when you turn it on for the first time? Is this normal?

- A: When the computer is turned on for the first time, the system will perform key processes such as hardware initialization, operating system preconfiguration, and driver loading. This process takes about 40 seconds (depending on the memory capacity, the larger the memory capacity, the longer the boot time) to complete the environment. This is a normal phenomenon. Please wait patiently for the system to complete automatically.

- Q2: Will the long first startup time affect subsequent use?

- A: No. The preparation for the first startup is a one-time process. If the host is not powered off, the normal startup time will be shortened to about 20 seconds (the specific time depends on the system configuration), and you will get a smooth user experience.

- Q3: What should I do if the monitor has no screen output through the DP port?

- A: Step 1: Confirm that both ends of the DP cable are completely inserted
  - Try to replace the cable to confirm normal test

    PS: When outputting video through the DP port, please use a DP to DP cable to connect directly to the monitor with the DP port, otherwise there may be no display or other unknown faults.

- Step 2: Verify the monitor input source

  Manually switch the monitor input source to the DP channel

- Q4: What should I do if the monitor has video but cannot transmit audio through the monitor?

- A: The audio output device settings may not be selected for the corresponding monitor audio output. For example, in Windows system, right-click the sound icon in the taskbar and select "Open Sound Settings". In the Output option, confirm that the connected monitor audio output device is selected. Some monitors themselves do not have audio playback functions and are only used as video display devices. In this case, audio cannot be output from the monitor even if it is correctly connected. Please check the monitor user manual to confirm whether the monitor has audio playback function. If the monitor does not have audio function, consider connecting an external

- speaker or headphone to the audio output interface of the mini computer.

  The audio function of the monitor may be turned off or set to mute to confirm that the audio function is turned on and the volume is not set to mute.

- Please go to Device Manager to check whether the audio driver is installed normally. If it is not installed, try downloading and installing the latest audio driver. After the installation is complete, restart the mini computer to check whether the audio is restored to normal transmission.

- Manufacturer:Shenzhenshi Shaochen Dianzikeji Youxian-gongsi
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