Manuals+ — User Manuals Simplified.

Shuttle SH510R4 Series XPC Cube Desktop HDD User Guide

Contents

Shuttle

Shuttle SH510R4 Series XPC Cube Desktop HDD

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1. 5.25" Bay
2. Hard disk drive LED
3. Power button / Power LED
4. USB 3.2 Gen 1 ports
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6. Headphones
7. AC power socket
8. Serial port (optional)
9. VGA port
10. LAN port
11. Perforation for optional WLAN
12. DisplayPort
13. HDMI port
14. Clear CMOS & Power Button & +5V
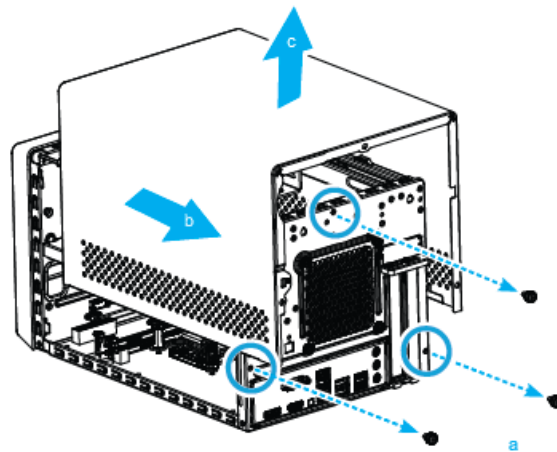15. USB 2.0 ports
16. Line-out port

17. Line-in port

18. PCIe x16 slot

19. PCIe x1 slot
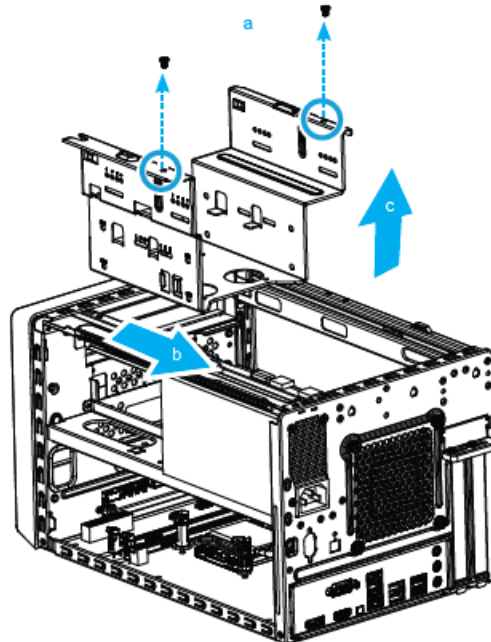
Hardware Installation

Begin Installation
For safety reasons, please ensure that the power cord is disconnected before opening the case.

1. Unscrew 3 thumbscrews of the chassis cover.

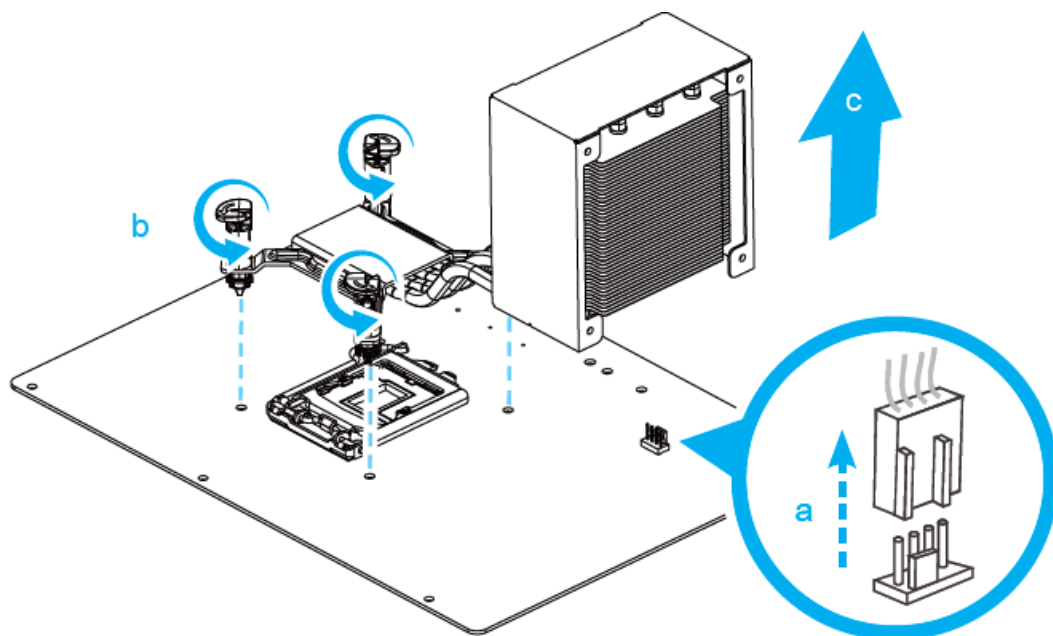2. Slide the cover backwards and upwards.

3. Unfasten the rack mount screws and remove the rack.

The product's colour and specifications may vary from the actually shipped product.

CPU and ICE Module Installation

1. Unfasten the ICE fan thumbscrews on the back of the chassis.

2. Unfasten the four ICE module attachment push-pins and unplug the fan connector.

3. Remove the ICE module from the chassis and put it aside.

   This CPU socket is fragile and can easily be damaged. Always use extreme care when installing a CPU and limit the number of times you remove or change the CPU. Before installing the CPU, make sure to turn off the computer and unplug the power cord from the power outlet to prevent damage of the CPU.

   Follow the steps below to correctly install the CPU into the motherboard CPU socket.

4. Unlock and raise the socket lever

5. Lift the metal load plate off the CPU socket.
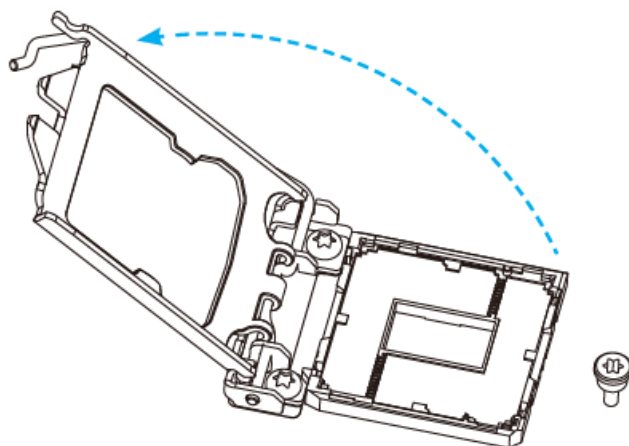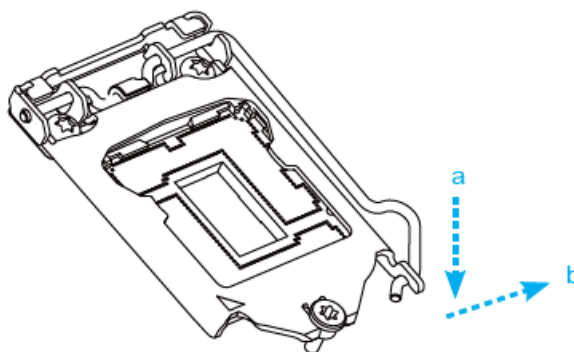
   DO NOT touch the socket contacts. To protect the CPU socket,always use the protective socket cover when the CPU is not installed.

6. Please orientate the CPU correctly and align the CPU notches with the socket alignment keys. Make sure the

CPU sits perfectly horizontal, then push it gently into the socket.

Align the CPU notches with the socket alignment keys.

Triangle Pin1 Marking on the CPU
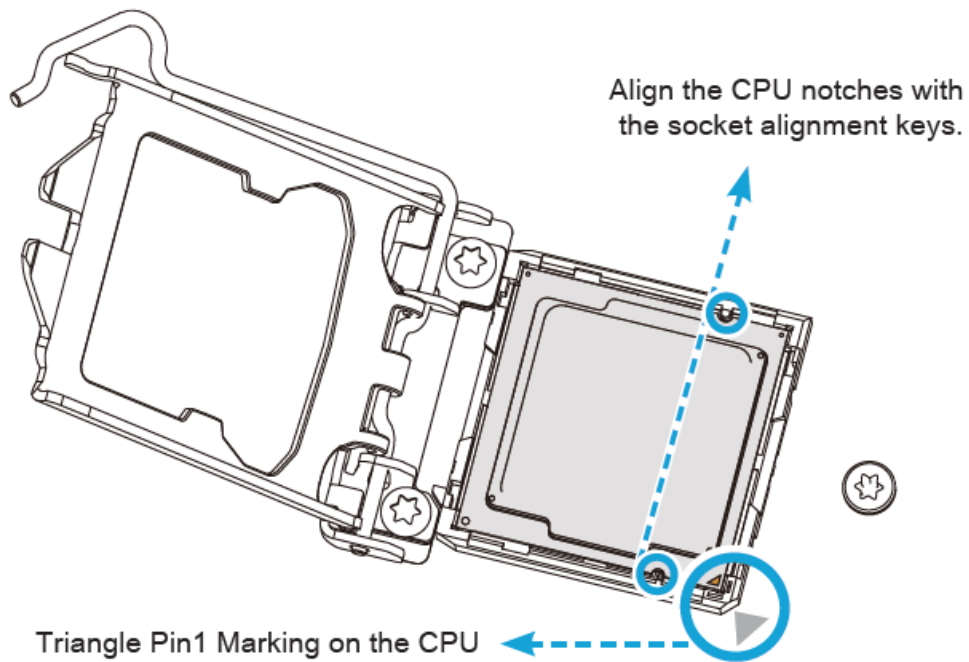
Please be aware of the CPU orientation, DO NOT force the CPU into the socket to avoid bending of pins on the socket and damage of the CPU!

7. Tear off the protective membrane from the metal load plate. Close the metal load plate, lower the CPU socket lever and lock in place.
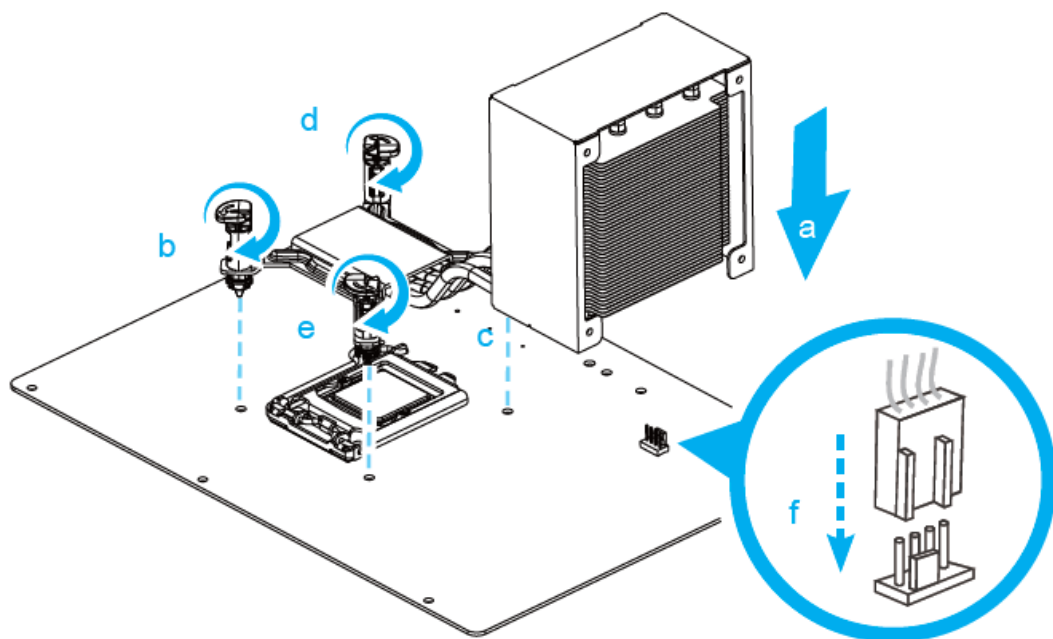
Tear off the protective membrane
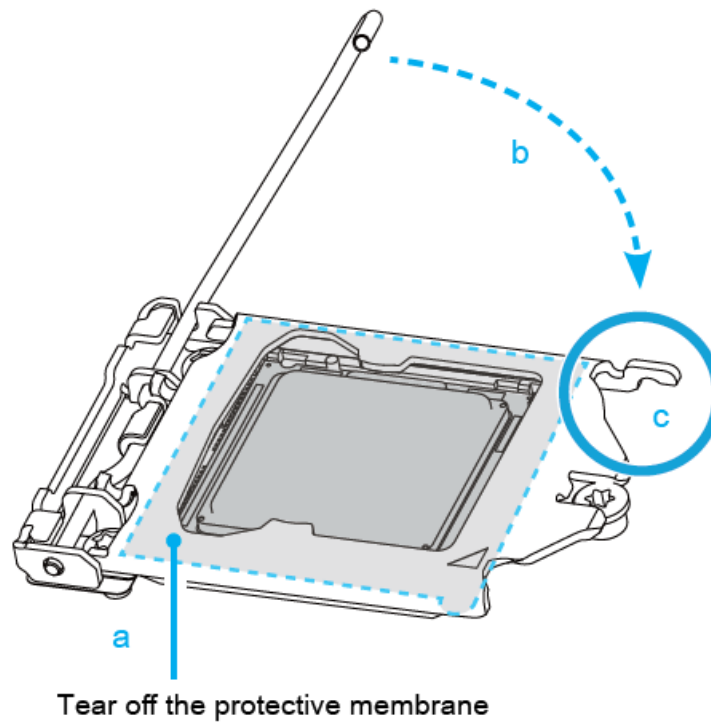
8. Spread thermal paste evenly on the CPU surface.
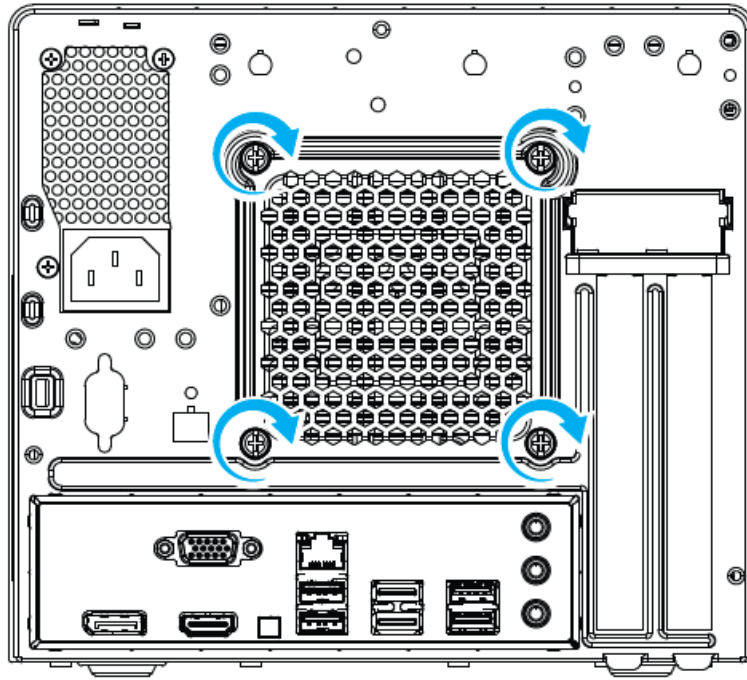
Thermal Paste application area
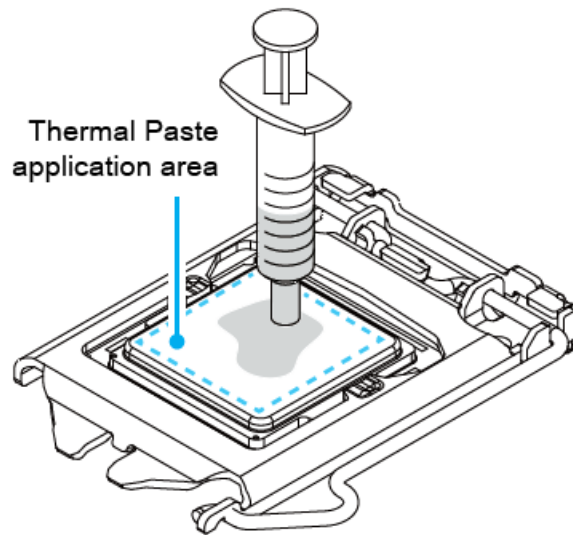
Please do not apply excess amount of thermal paste.

9. Screw the ICE module to the motherboard. Note to press down on the opposite diagonal corner while tightening each push-pin.

10. Connect the fan.

11.

Tighten the Smart Fan to the chassis with the four thumbscrews.

Memory Module Installation

Guidelines for Memory Configuration Before installing DIMMs, read and follow these guidelines for memory configuration.
Make sure that the motherboard supports the memory.
It is recommended that memory of the same capacity, brand, speed, and chips is used. (Go to Shuttle's website for the latest memory support list.)
Memory modules have a foolproof design. A memory module can be installed in only one direction. If you are unable to insert the module, reverse direction.
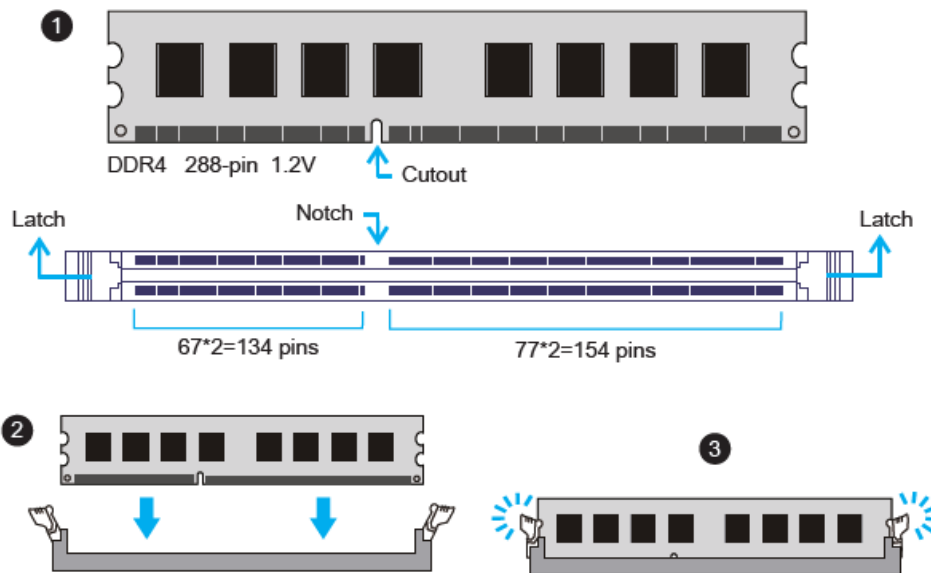
Installing memory modules
DDR4 and DDR3/DDR2 DIMMs are not compatible to one another or other DDR DIMMs.
Be sure to install DDR4 DIMMs on this motherboard only. Follow the steps below to correctly install your memory modules in the memory sockets.

1. Unlock the DIMM latch.
2. Align the memory module's cutout with the notch of the DIMM slot. Slide the memory module into the DIMM slot.

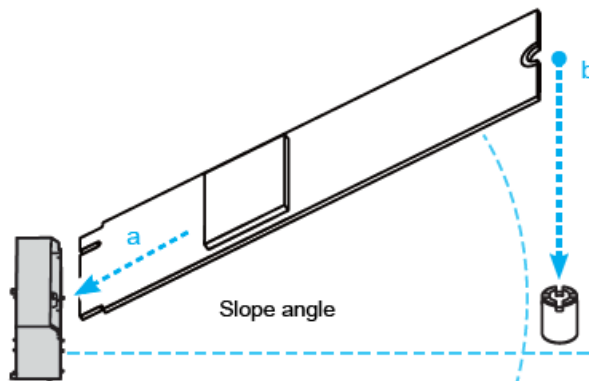   A DDR4 memory module has a cutout, so it only fits in one direction.

3. Check if the latches are closed and if all memory modules arefirmly installed.
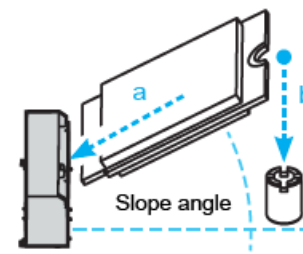4. Repeat the above steps to install an additional memory module, if required.

M.2 Device Installation

1. Locate the M.2 key slots on the motherboard.
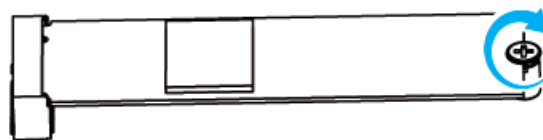

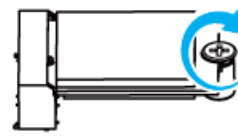
> M.2 2242/2260/2280 M key slot

> M.2 2230 E Key slot

2. Install the M.2 device into the M.2 slot and secure with a screw.

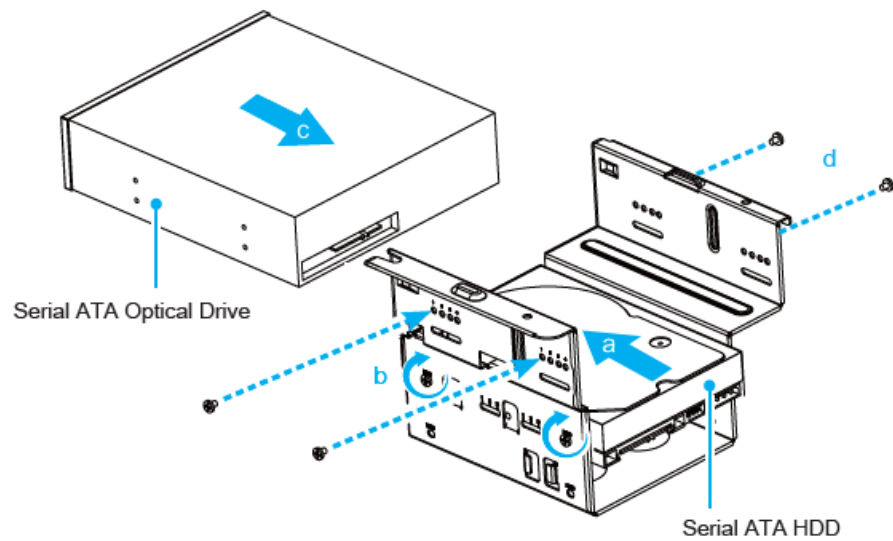> M.2 2242/2260/2280 M key slot

> M.2 2230 E key slot

Installation of Drives

1. Loosen the purse lock and separate the Serial ATA and power cables.
2. Please place the HDD or SSD and the optical drive in the rack and secure with screws from the sides.

Serial ATA Optical Drive

Serial ATA HDD

3. Connect the Serial ATA cable to the motherboard.
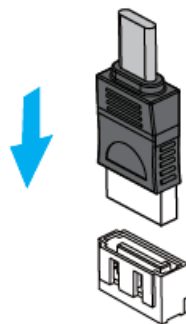
4. Connect the Serial ATA and power cables to the HDD.

Serial ATA Cable

Serial ATA Power Cable

4. Connect the Serial ATA and power cables to the optical drive.

Serial ATA Cable

Serial ATA Power Cable

5. Place the rack in the chassis and refasten the rack.
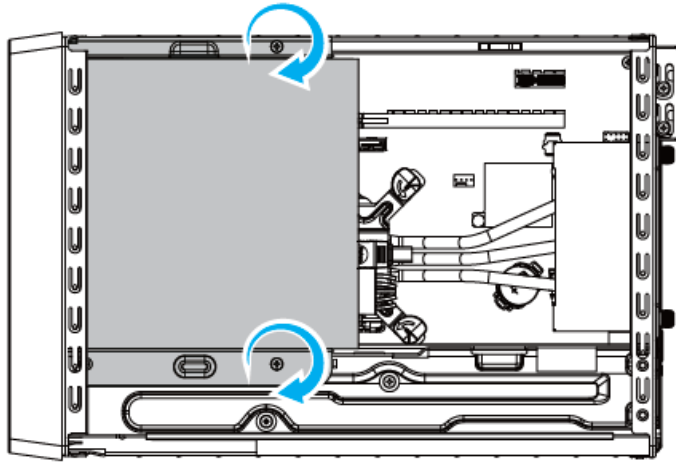
Installation of Expansion Cards

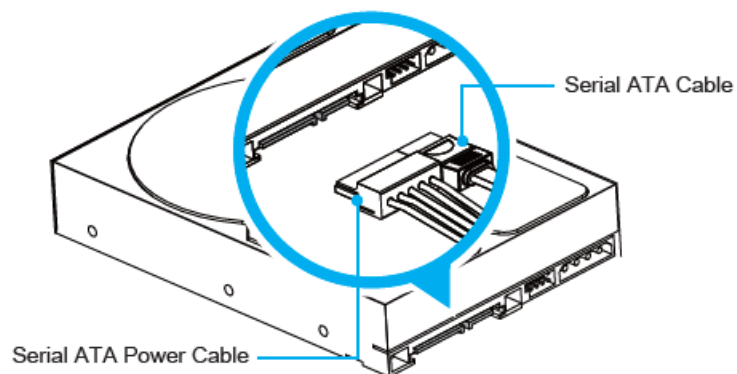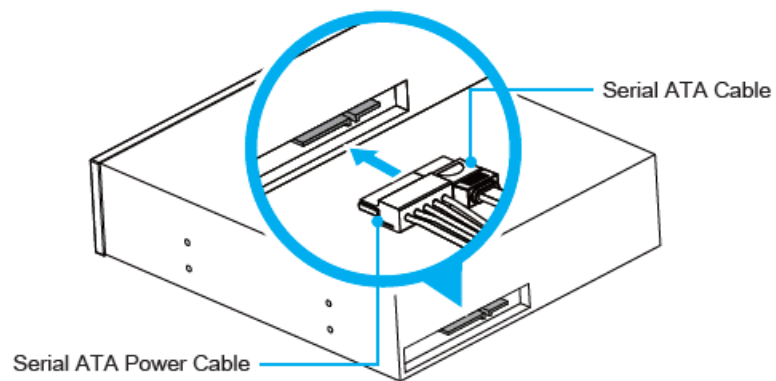1. Unfasten the expansion slot bracket screws. Remove the back panel bracket and put it aside.

   The maximum size acceptable for display cards is 273mm (L) x 98mm (H) x 38mm (D)

Back panel bracket
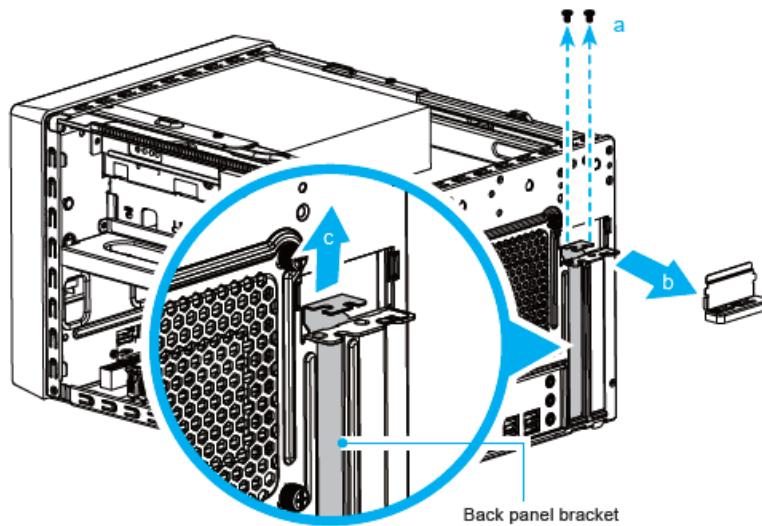
2. Install the PCIe x1 / PCIe x16 card into the PCIe x1 / PCIe x16 slots.
3. Secure the bracket.

Card PCB — 2 mm | 20 mm | 22 mm — Chassis Cover — PCIe x16 slot | PCIe x1 slot

Card PCB — 2 mm | 42 mm — Chassis Cover — PCIe x16 slot
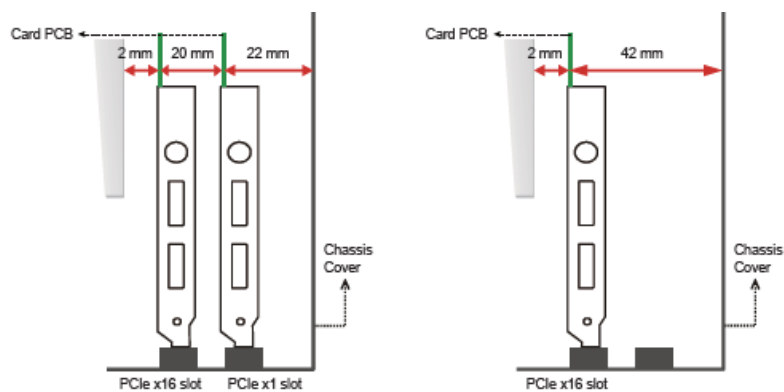
Complete

1. Replace the cover and tighten the thumbscrews, then connect the power cord.
2. Complete.
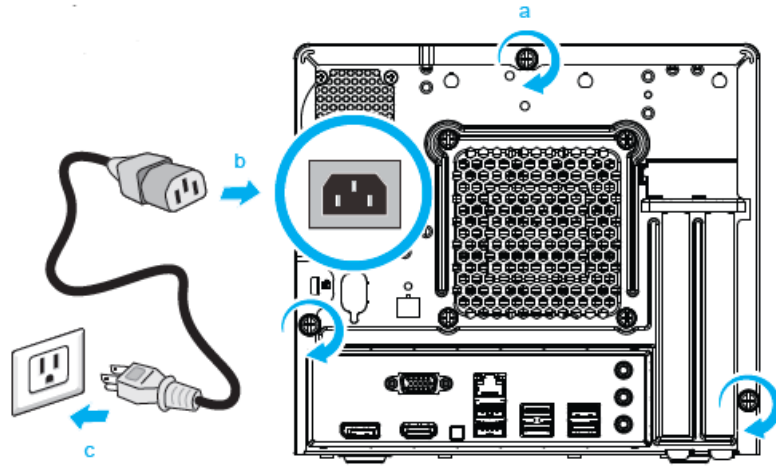
Please press the "Del" key while booting to enter BIOS. Here, please load the optimised BIOS settings.

Safety Information

- Incorrectly replacing the battery may damage this computer.
- Replace only with the same or equivalent as recommended by Shuttle.
- Dispose of used batteries in accordance with the laws of your country.
- All bundled parts, power cord included, shall not be used without this product.
- The equipment was evaluated for use in a maximum air ambient temperature of 40 ºC.
- Laser compliance statement: The optical disc drive in this PC is a laser product.
- The drive's classification label is located on the drive.
- CLASS 1 LASER PRODUCT CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

WARNING THIS PRODUCT CONTAINS A BUTTON BATTERY
If swallowed, a lithium button battery can cause severe or fatal injuries within 2 hours.
Keep batteries out of reach of children. If you think batteries may have been swallowed or placed inside any part of the body, seek immediate medical attention.

1. The statement "remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children.
    - Do NOT dispose of batteries in household trash or incinerate."
    - Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children.
    - Do NOT dispose of batteries in household trash or incinerate.
    - Even used batteries may cause severe injury or death.
    - Call a local poison control center for treatment information.
    - Indicating the compatible battery type CR2032.
    - Indicating the nominal battery voltage.
    - Non-rechargeable batteries are not to be recharged.
2. This Product contains a button Battery/coin cell batteries
    - Ensure the batteries are installed correctly according to polarity (+ and -).
    - Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or

rechargeable batteries.

- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.
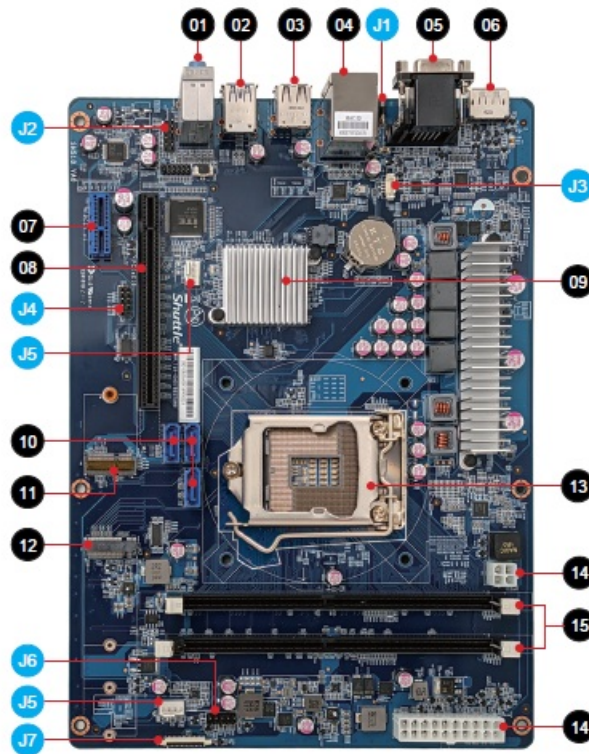
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

This device meets the requirements for the EU conformity in accordance to the currently valid EU directives

Motherboard Illustration

1.

   Line-in port

2. USB 3.2 Gen 1 ports
3. USB 2.0 ports
4. LAN / USB 2.0 ports
5. VGA / HDMI 2.0 port
6. DisplayPort
7. PCIe x1 slot
8. PCIe x16 slot Intel®
9. H510 chipset
10. SATA 3.0 6Gb/s connector
11. M.2 2230 E key slot
12. M.2 2242/2260/2280 M key slot

13. Processor socket LGA 1200

14. ATX power connector

15. 2x 288-pin DDR4 DIMM slot

Jumper Settings

1. Clear CMOS & power button & +5V
    1. =RTC Reset
    2. =VCC_AUX (Power source 5.0V/0.5A)(Disable in Eup mode)
   3. =GND
    4. =Power SW
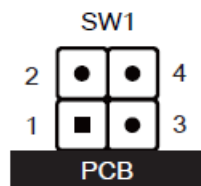
2. Front audio header
    1. =Microphone input L
    2. =Audio GND
    3. =Microphone input R
    4. =Front panel daughter board detection (Low active)
    5. =Headphone out R
    6. =Microphone audio jack detect
    7. =Front panel audio jack sense
    8. =NULL
    9. =Headphone out L
    10. =Headphone audio jack detect
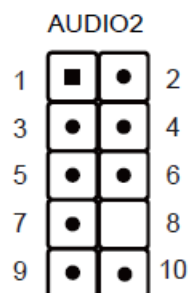
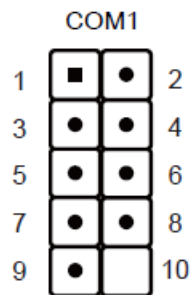3. USB 2.0 cable connector
    1. =GND (Power Ground)
    2. =Data+ (USB 2.0 Data pin)
    3. =Data- (USB 2.0 Data pin)
    4. =VBUS (USB power 5.0V/0.5A)

USB2
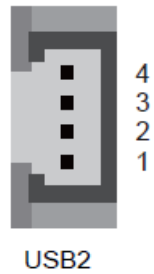
4. COM header
    1. =DCD
    2. =RXD
    3. =TXD
    4. =DTR
    5. =GND
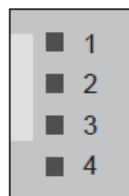   6. =DSR
    7. =RTS
    8. =CTS
    9. =-XRI1
    10. =NULL

5.

COM1

Fan connector
    1. =GND
    2. =+12V
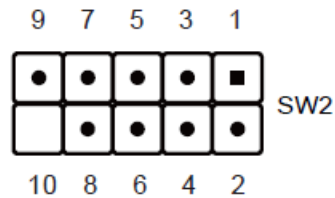   3. =FAN IO
    4. =FAN PW

FAN1 (CPU FAN)

FAN2 (System FAN)

6. Connector for front buttons/LEDs
    1. =HDD LED P
   2. =Power LED P

3. =HDD LED N

4. =Power LED N

5. =System reset (Low active)

6. =Power switch (Low active)

7. =GND

8. =GND

9. =NA.

10. =NULL

```
9   7   5   3   1
┌───┬───┬───┬───┬───┐
│ • │ • │ • │ • │ ■ │    SW2
├───┼───┼───┼───┼───┤
│   │ • │ • │ • │ • │
└───┴───┴───┴───┴───┘
10   8   6   4   2
```

7. Front USB 3.0 header

1. =3VSB (Power source 3.3V)

2. =5V_DAUL (Power Source 5.0V)

3. =5V_DAUL (Power Source 5.0V)

4. =5V_DAUL (Power Source 5.0V)

5. =USB Power ON (Low active)

6. =GND

7. =USB3.2 Gen1 port 1 RX_N

8. =USB3.2 Gen1 port 1 RX_P

9. =GND

10. =USB3.2 Gen1 port 1 TX_N

11. =USB3.2 Gen1 port 1 TX_P

12. =GND

13. =USB2.0 Port 1 Data N

14. =USB2.0 Port 1 Data P

15. =GND

16. =GND

17. =USB2.0 Port 2 Data P

18. =USB2.0 Port 2 Data N

19. =GND

20. =USB3.2 Gen1 port 2 TX_P

21. =USB3.2 Gen1 port 2 TX_N

22. =GND

23. =USB3.2 Gen1 port 2 RX_P

24. =USB3.2 Gen1 port 2 RX_N

25. =GND

26. =USB Power ON (Low active)

27. =5V_DAUL (Power Source 5.0V)

28. =5V_DAUL (Power Source 5.0V)

29. 5V_DAUL (Power Source 5.0V)

30. =3VSB (Power source 3.3V)

FUSB1702

2   30

1
29
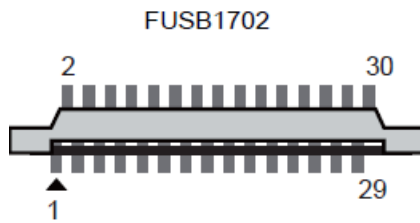
Documents / Resources
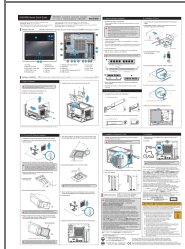
Shuttle SH510R4 Series XPC Cube Desktop HDD [pdf] User Guide
SH510R4 Series XPC Cube Desktop HDD, SH510R4 Series, XPC Cube Desktop HDD, Cube Desktop HDD, Desktop HDD

References

- **User Manual**