

More information on this product can be found at: http://bit.ly/SH510R4
更多本產品資訊，請查閱：https://bit.ly/SH510R4
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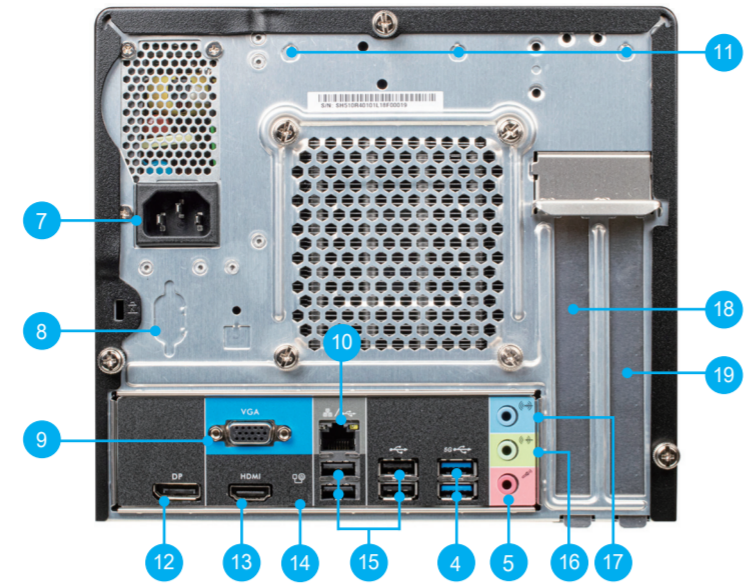
Puede encontrar más información sobre este producto en: https://bit.ly/SH510R4
本製品の詳細な情報については、次の URL より確認頂けます。https://bit.ly/SH510R4
Для получения дополнительной информации об этом продукте перейдите по ссылке: https://bit.ly/SH510R4
更多本产品信息，请访问：https://bit.ly/SH510R4

Product Overview

產品外觀 / Produktübersicht / Présentation du produit / Resumen del producto / 製品概要 / Обзор продукта / 产品外观



- 1. 5.25" Bay
2. Hard disk drive LED
3. Power button / Power LED
4. USB 3.2 Gen 1 ports
5. Microphone jack
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

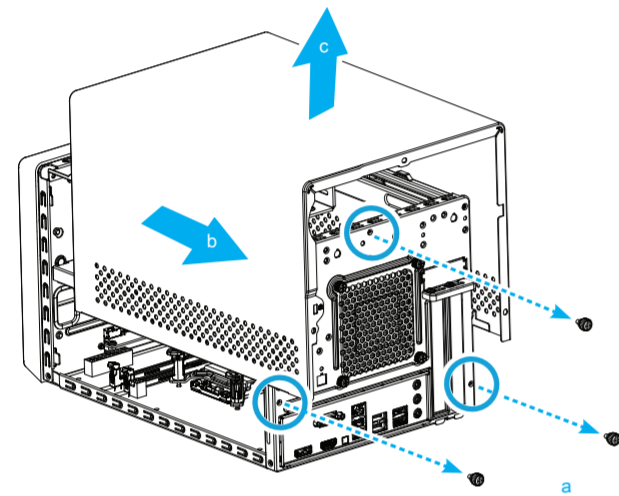
Hardware Installation

硬體安裝 / Hardware Installation / Installation du matériel / Instalación de hardware / ハードウェアのインストール / Установка оборудования / 硬件安装

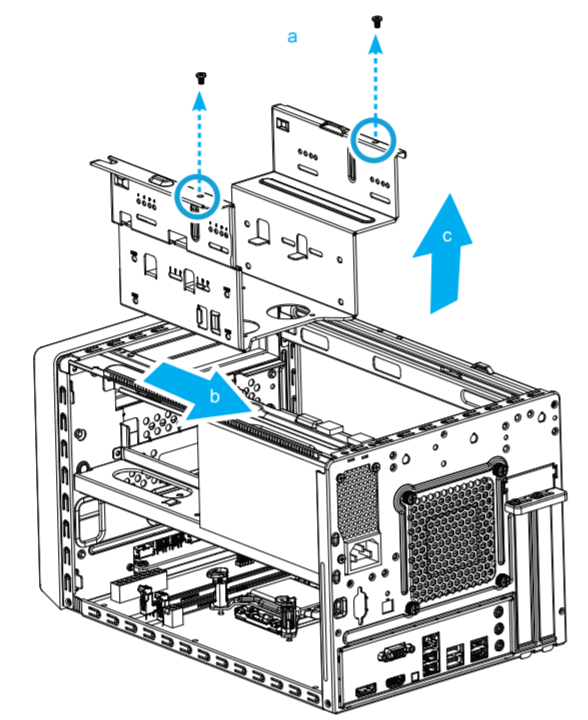
A. Begin Installation

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.



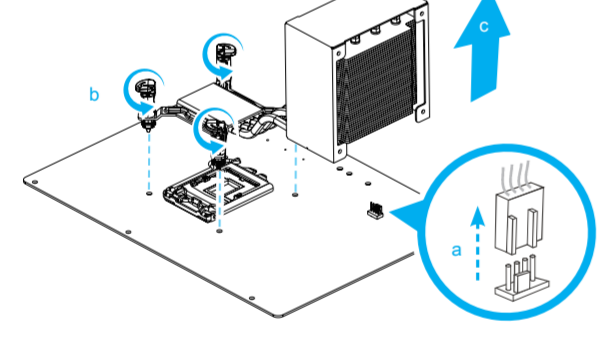
- 3. Unfasten the rack mount screws and remove the rack.



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

B. 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.

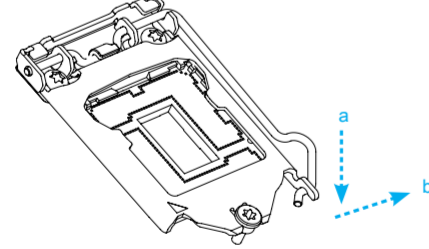


- 3. Remove the ICE module from the chassis and put it aside.

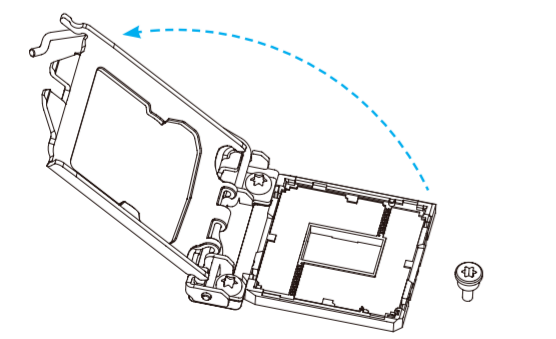
This CPU socket is fragile and can easily be damaged. Always use extreme care when installing a CPU and limit the number of times you remove or change the CPU. Before installing the CPU, make sure to turn off the computer and unplug the power cord from the power outlet to prevent damage of the CPU.

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

- 4. Unlock and raise the socket lever.

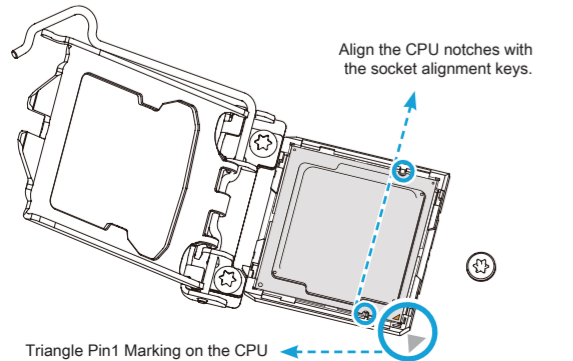


- 5. Lift the metal load plate off the CPU socket.



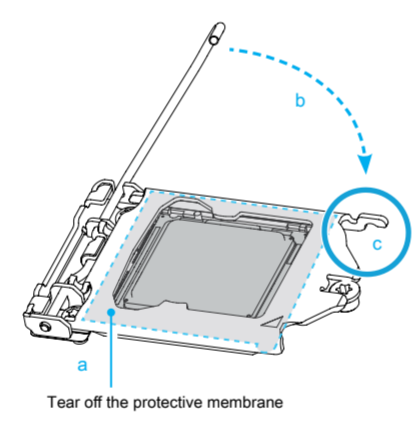
DO NOT touch the socket contacts. To protect the CPU socket, always use the protective socket cover when the CPU is not installed.

- 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.

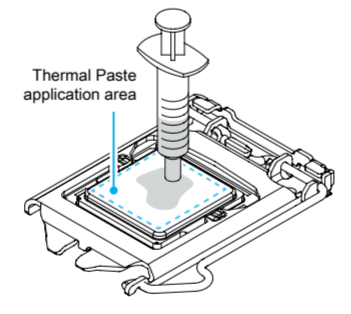


Please be aware of the CPU orientation, DO NOT force the CPU into the socket to avoid bending of pins on the socket and damage of CPU!

- 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.

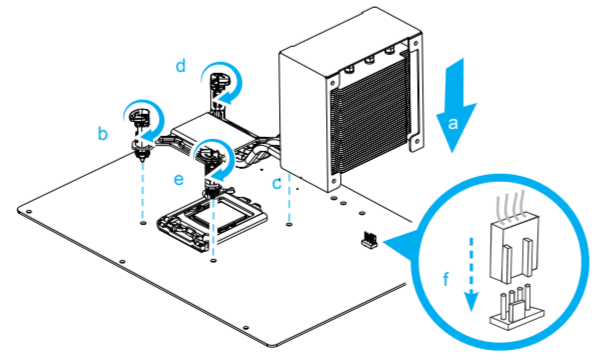


- 8. Spread thermal paste evenly on the CPU surface.

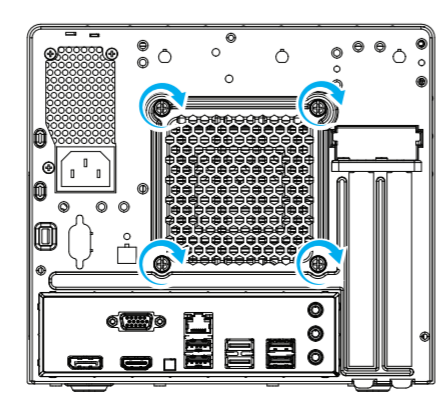


Please do not apply excess amount of thermal paste.

- 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.



C. Memory Module Installation

- Guidelines for Memory Configuration
Before installing DIMMs, read and follow these guidelines for memory configuration.

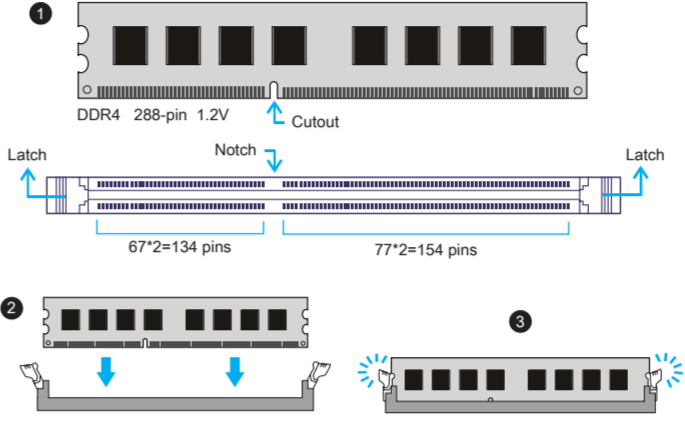
Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips is used. (Go to Shuttle's website for the latest memory support list.) Memory modules have a foolproof design. A memory module can be installed in only one direction. If you 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.

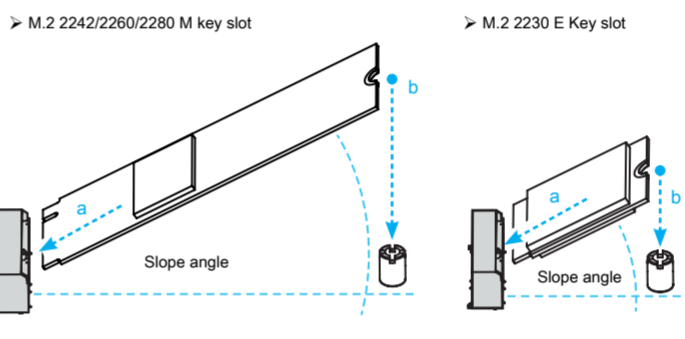
A DDR4 memory module has a cutout, so it only fits in one direction.



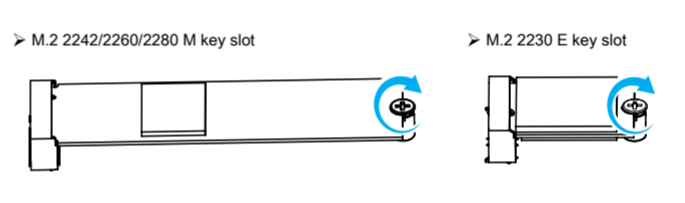
- 3. Check if the latches are closed and if all memory modules are firmly installed.
4. Repeat the above steps to install an additional memory module, if required.

D. M.2 Device Installation

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

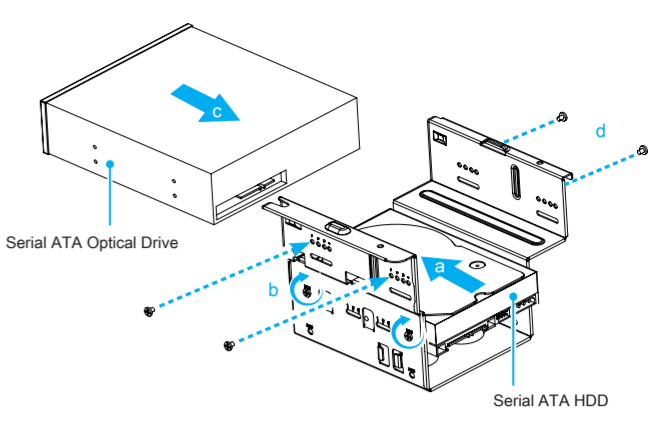


- 2. Install the M.2 device into the M.2 slot and secure with a screw.



E. Installation of Drives

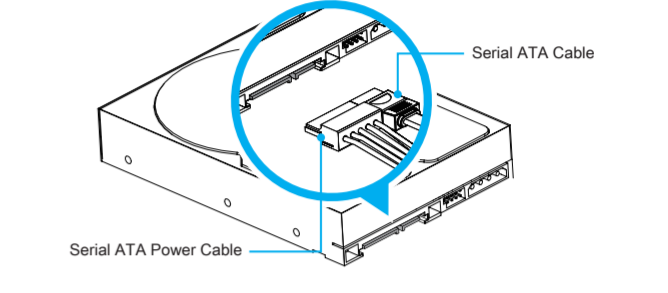
- 1. Loosen the purse lock and separate the Serial ATA and power cables.
2. Please place the HDD or SSD and the optical drive in the rack and secure with screws from the sides.



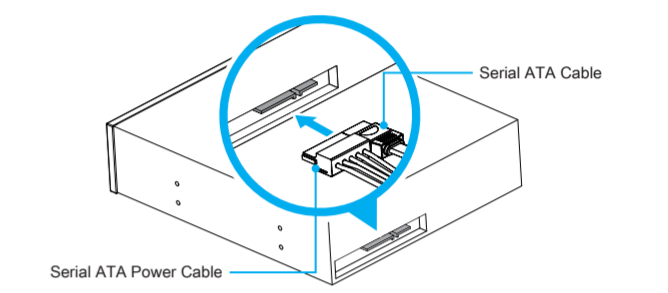
- 3. Connect the Serial ATA cable to the motherboard.



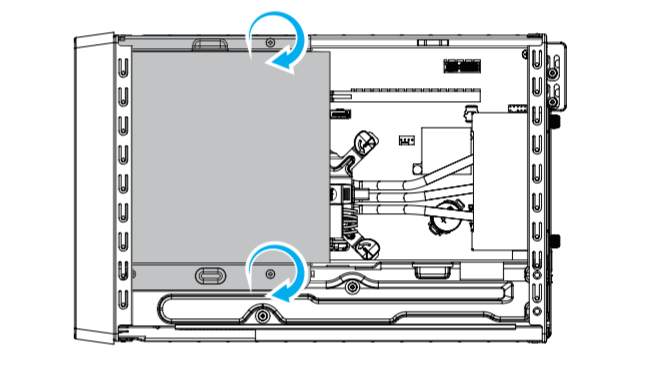
- 4. Connect the Serial ATA and power cables to the HDD.



- 5. Connect the Serial ATA and power cables to the optical drive.



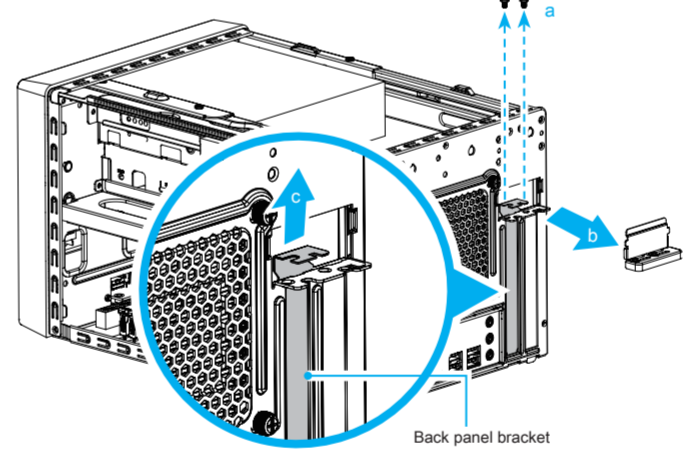
- 6. Place the rack in the chassis and refasten the rack.



F. Installation of Expansion Cards

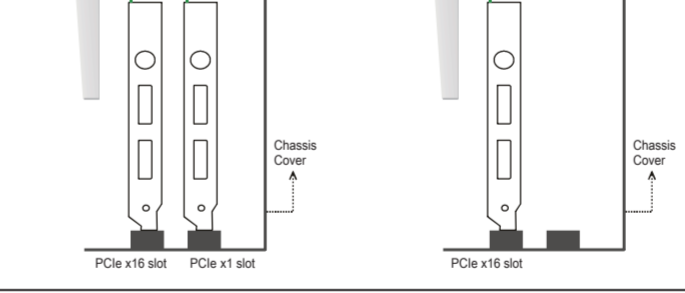
- 1. Unfasten the expansion slot bracket screws. Remove the back panel bracket and put it aside.

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



- 2. Install the PCIe x1 / PCIe x16 card into the PCIe x1 / PCIe x16 slots.

- 3. Secure the bracket.



Safety Information
安全資訊 / Sicherheitshinweise / Informations de sécurité
Información de seguridad / 安全に関する情報
Информация о безопасности / 安全信息

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.

更換電池方式錯誤可能會損壞本電腦以及引發爆炸、火災或其他危險。僅能依 Shuttle 的建議，以相同或同等的電池更換。請根據您在國家/地區的法律規定處理廢電池。

Das unkorrekte Austauschen der Batterie kann diesen Computer beschädigen. Ersetzen Sie die Batterie nur durch den gleichen Typ oder ein gleichwertiges, von Shuttle empfohlenes Modell. Entsorgen Sie gebrauchte Batterien gemäß den gesetzlichen Vorschriften in Ihrem Land.

Неправильная замена батареи может привести к повреждению компьютера. Батарея должна соответствовать стандарту производителя Shuttle или быть идентичной предыдущей. Утилизируйте использованные батареи в соответствии с законодательством вашей страны.

更換電池方式錯誤可能會損壞本電腦。僅能依 Shuttle 的建議，以相同或同等的電池更換。請根據您在國家/地區的法律規定處理廢電池。

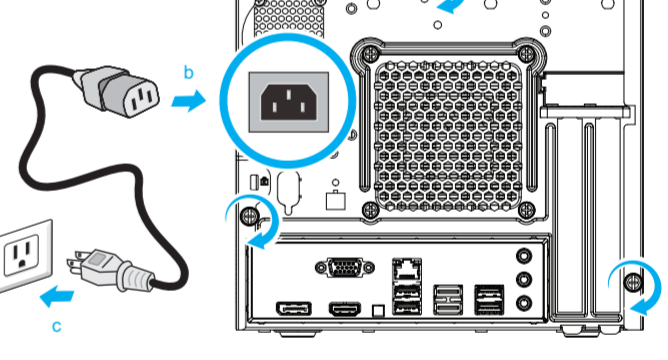
All bundled parts, power cord included, shall not be used without this product.
電源ケーブル等、すべての付属品は本機以外ではご使用になれません。

The equipment was evaluated for use in a maximum air ambient temperature of 40 °C.
產品宣告最大適用環境溫度為 40 °C。

注意：仅适用于在非热带气候条件下安全使用。
在热带气候条件下使用时，可能有安全隐患。
注意：允许产品使用的最高环境温度为 40°C。

G. 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.

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.

雷射符合性聲明：本主機中的光碟機屬於雷射產品。光碟機的等級標識貼於光碟機上。CLASS 1 雷射產品 注意：打開時會有不可見的雷射光放射，避免曝露於雷射光下。Auf dem Gerät ist ein Aufkleber mit der Klassifikation des Laufwerks zu finden. LASERKLASSE 1 PRODUKT ACHTUNG: UNSICHTBARE LASERSTRAHLUNG KANN BEIM ÖFFNEN DES GERÄTES AUSSTREITEN. VERMEIDEN SIE ES, DEN STRAHLEN AUSGESETZT ZU WERDEN.

Etat de conformité du laser: Le lecteur de disque optique dans ce PC est un produit à laser. Le label de classification du lecteur laser est situé sur le lecteur. PRODUIT LASER DE CLASSE 1 ATTENTION: RADIATIONS LASER A LOUVERTURE. EVITER L'EXPOSITION AU FAISCEAU LASER

Declaración de cumplimiento relacionada con el láser: La unidad de disco óptica de este servidor es un producto láser. La etiqueta de clasificación de la unidad se encuentra situada en dicha unidad. PRODUCTO LASER DE CLASE 1 PRECAUCIÓN: RADIACIÓN LASER INVISIBLE CUANDO SE ABRE. NO SE EXPONGA AL HAZ.

レーザ準拠声明：このサーバーの光ディスクドライブは、レーザー製品です。ドライブの分類シールは、ドライブに貼ってあります。クラス1レーザー製品 注意：開けると目に見えないレーザー照射にさらされます。ビームへの曝露を避けてください。

Декларация соответствия лазера: Оптический привод на этом ПК представляет собой лазерный продукт. Маркировка диска находится на диске. ЛАЗЕРНЫЙ ПРОДУКТ КЛАССА 1 ПРЕДУПРЕЖДЕНИЕ: НЕВИДИМОЕ ЛАЗЕРНОЕ ИЗЛУЧЕНИЕ, КОГДА ОТКРЫТО. Избегайте воздействия радиации.雷射符合性聲明：本主機中的光碟機屬於雷射產品。光碟機的等級標識貼於光碟機上。CLASS 1 雷射產品 注意：打開時會有不可見的雷射光放射，避免曝露於雷射光下。

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.

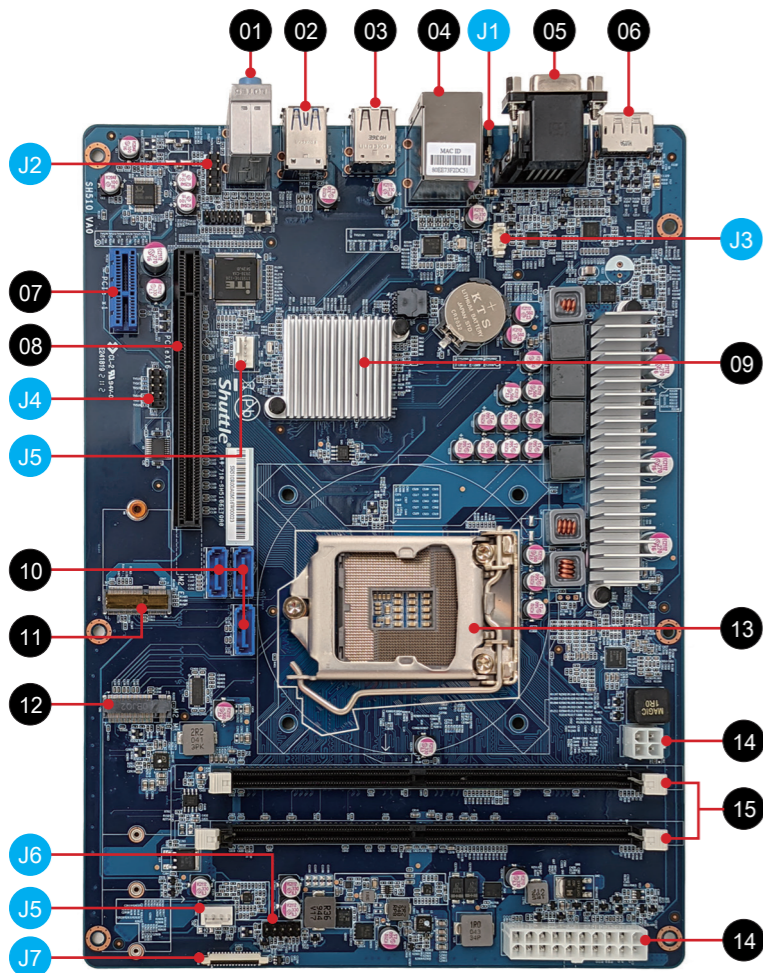
1. The statement "remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate."
(a) Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children.
(b) Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
(c) Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
(d) 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.

2. This product contains a button Battery/coin cell batteries
(a) Ensure the batteries are installed correctly according to polarity (+ and -).
(b) Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
(c) Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
(d) 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.

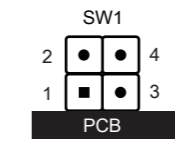
This device meets the requirements for the EU conformity in accordance to the currently valid EU directives. Dieses Produkt erfüllt die Anforderungen für die EU-Konformität entsprechend der aktuell geltenden EU-Richtlinien. Ce produit répond aux exigences de la conformité UE suivant les directives européennes actuellement en vigueur.





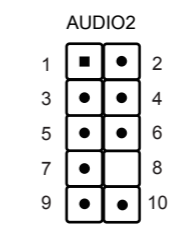
- 01. Line-in port  
音源輸入埠  
Audio Line-In Eingang  
Port d'entrée ligne  
Entrada de audio  
ラインインポート  
Линейный вход  
音源輸入端口
- Line-out port  
音源輸出埠  
Audio Line-Out Ausgang  
Sortie audio  
Salida de línea de audio  
ラインアウトポート  
Аудио выход  
音源輸出端口
- Microphone jack  
麥克風輸入埠  
Mikrofon-Anschluss  
Entrée Micro  
Entrada del micrófono  
マイクインポート  
Гнездо для микрофона  
麦克风端口
- 02. USB 3.2 Gen 1 ports  
USB 3.2 Gen 1 連接埠  
USB 3.2 Gen 1-Anschlüsse  
Prises USB 3.2 Gen 1  
Puertos USB 3.2 Gen 1  
USB 3.2 Gen 1 端口  
USB 3.2 Gen 1 端口
- 03. USB 2.0 ports  
USB 2.0 連接埠  
USB 2.0-Anschlüsse  
Prises USB 2.0  
Puertos USB 2.0  
USB 2.0 端口  
USB 2.0 端口
- 04. LAN / USB 2.0 ports  
網路連接埠 / USB 2.0 連接埠  
Netzwerk / USB 2.0-Anschlüsse  
Prises LAN / USB 2.0  
Puertos LAN /USB 2.0  
LAN / USB 2.0 端口  
Сетевые LAN / USB 2.0-порты  
LAN / USB 2.0 端口
- 05. VGA / HDMI 2.0 port  
VGA / HDMI 2.0 連接埠  
VGA / HDMI 2.0-Anschluss  
Prise VGA / HDMI 2.0  
Puerto VGA / HDMI 2.0  
VGA / HDMI 2.0 端口  
VGA / HDMI 2.0 端口
- 06. DisplayPort  
DisplayPort 連接埠  
DisplayPort  
Prise DisplayPort  
DisplayPort  
ディスプレイポート  
DisplayPort  
DisplayPort 端口
- 07. PCIe x1 slot  
PCIe x1 插槽  
PCIe x1 Steckplatz  
Emplacement PCIe x1  
PCIe x1 Ranura  
PCIe x1 スロット  
Слоты PCIe x1  
PCIe x1 插槽
- 08. PCIe x16 slot  
PCIe x16 插槽  
PCIe x16 Steckplatz  
Emplacement PCIe x16  
PCIe x16 Ranura  
PCIe x16 スロット  
Слоты PCIe x16  
PCIe x16 插槽
- 09. Intel® H510 chipset  
Intel® H510 晶片組  
Intel® H510 Chipsatz  
Chipset Intel® H510  
Intel® H510 Conjunto de chips  
Intel® H510 Чипсет  
Набор микросхем Intel® H510  
Intel® H510 晶片組
- 10. SATA 3.0 6Gb/s connector  
SATA 3.0 6Gb/s 插槽  
SATA 3.0-Anschlüsse (6 Gb/s)  
Connecteurs SATA 3.0 6Gb/s  
Base de conexiones SATA 3.0 6Gb/s  
SATA 3.0 6Gb/s 連接埠  
Разъем SATA 3.0 6 Гбит/с  
SATA 3.0 6Gb/s 接口
- 11. M.2 2230 E key slot  
M.2 2230 E key 插槽  
M.2-2230 (E) Steckplatz  
Emplacement M.2 2230 E  
Ranura M.2 2230 E  
M.2 2230 E 晶片插槽  
Слот M.2 2230 E ключ  
M.2 2230 E key 插槽
- 12. M.2 2242/2260/2280 M key slot  
M.2 2242/2260/2280 M key 插槽  
M.2-2242/2260/2280 (M) Steckplatz  
Emplacement M.2 2242/2260/2280 M  
Ranura M.2 2242/2260/2280 M  
M.2 2242/2260/2280 M 晶片插槽  
Слот M.2 2242/2260/2280 M ключ  
M.2 2242/2260/2280 M key 插槽
- 13. Processor socket LGA 1200  
LGA 1200 處理器插槽  
Sockel für LGA 1200-CPU's  
Socket Processeur LGA 1200  
Zócalo LGA 1200 de CPU  
Процессорный LGA 1200  
Разъем процессора LGA 1200  
LGA 1200 处理器插槽
- 14. ATX power connector  
電源連接埠  
ATX-Netzteil-Anschluss  
Prise d'alimentation ATX  
Conector de alimentación ATX  
ATX電源連接埠  
ATX 電源接口  
ATX 電源插座
- 15. 2x 288-pin DDR4 DIMM slot  
2x 288-pin DDR4 DIMM 插槽  
2x 288-pin DDR4 DIMM Steckplatz  
2x emplacements 288-pin pour DDR4 DIMM  
2 ranuras DIMM DDR4 de 288 contactos Slots  
2x 288-pin DDR4 DIMM 晶片插槽  
2x 288 контактный Слот DDR4 DIMM  
2x 288-pin DDR4 DIMM 插槽

- J1 Clear CMOS & power button & +5V  
清除 CMOS & 電源按鈕 & +5V  
Reset CMOS & Power Button & +5V  
Reset CMOS & Bouton d'alimentation & +5V  
Clear CMOS & Botón de encendido & +5V  
CMOS クリア & 電源スイッチ & +5V  
Сброс CMOS, внешняя кнопка питания, +5 V  
清除 CMOS & 電源按鈕 & +5V



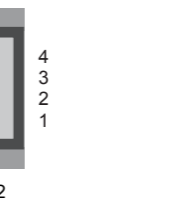
- 1=RTC Reset
- 2=VCC\_AUX (Power source 5.0V/0.5A)(Disable in Eup mode)
- 3=GND
- 4=Power SW

- J2 Front audio header  
前面板音效插座  
Audio-Anschluss für Vorderseite  
Connecteur audio pour façade  
Conector de audio del panel frontal  
前面オーディオヘッド  
Передний аудио разъем  
前面板音效插座



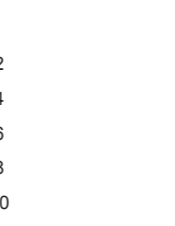
- 1=Microphone input L
- 2=Audio GND
- 3=Microphone input R
- 4=Front panel daughter board detection (Low active)
- 5=Headphone out R
- 6=Microphone audio jack detect
- 7=Front panel audio jack sense
- 8=NULL
- 9=Headphone out L
- 10=Headphone audio jack detect

- J3 USB 2.0 cable connector  
USB 2.0 排線插座  
Anschluss für USB 2.0-Kabel  
Connecteur câble USB 2.0  
Conexión para cable USB 2.0  
USB 2.0 ケーブルコネクタ  
Разъем USB 2.0- кабеля  
USB 2.0 扁平电缆插座



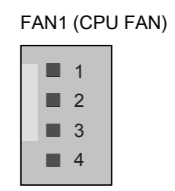
- 1=GND (Power Ground)
- 2=Data+ (USB 2.0 Data pin)
- 3=Data- (USB 2.0 Data pin)
- 4=VBUS (USB power 5.0V/0.5A)

- J4 COM header  
COM 插座  
COM-Anschluss  
Connecteur COM  
Base de conexiones COM  
COM 連接埠  
Разъем COM  
COM 插座

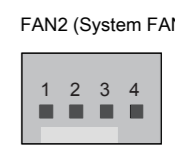


- 1=DCD
- 2=RXD
- 3=TXD
- 4=DTR
- 5=GND
- 6=DSR
- 7=RTS
- 8=CTS
- 9=XRI1
- 10=NULL

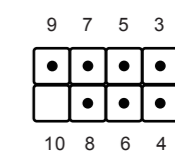
- J5 Fan connector  
風扇連接埠  
Lüfteranschluss  
Connecteur ventilateur  
Conector del ventilador  
FAN 連接埠  
Разъем вентилятора  
風扇插座



- 1=GND
- 2=+12V
- 3=FAN IO
- 4=FAN PWM

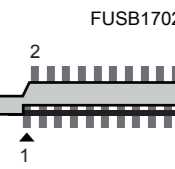


- J6 Connector for front buttons/LEDs  
電源按鈕 / LED 插座  
Anschluss für vordere Buttons/LEDs  
Connexion pour les boutons en façade  
Conexión para pulsadores frontales/LEDs  
フロントボタン LED 用コネクタ  
Разъем для кнопок / LED- индикаторов передней панели  
電源按鈕 / LED 插座



- 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

- J7 Front USB 3.0 header  
前置 USB 3.0 插座  
USB-3.0-Anschluss (für vorne)  
Port USB 3.0 (façade)  
Conexión delantera USB 3.0  
フロント USB 3.0 用ピンヘッド  
Разъем USB 3.0 порта ( передняя панель )  
前置 USB 3.0 插座



- 1=3VSB (Power source 3.3V)
- 2=5V\_DAU1 (Power Source 5.0V)
- 3=5V\_DAU2 (Power Source 5.0V)
- 4=5V\_DAU3 (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\_DAU4 (Power Source 5.0V)
- 28=5V\_DAU5 (Power Source 5.0V)
- 29=5V\_DAU6 (Power Source 5.0V)
- 30=3VSB (Power source 3.3V)