

More information on this product can be found at: <http://bit.ly/SH570R8>
 更多本產品資訊, 請查閱: <http://bit.ly/SH570R8>
 Weitere Informationen zu diesem Produkt finden Sie unter: <http://bit.ly/SH570R8>
 Pour plus d'informations sur ce produit, visitez: <http://bit.ly/SH570R8>

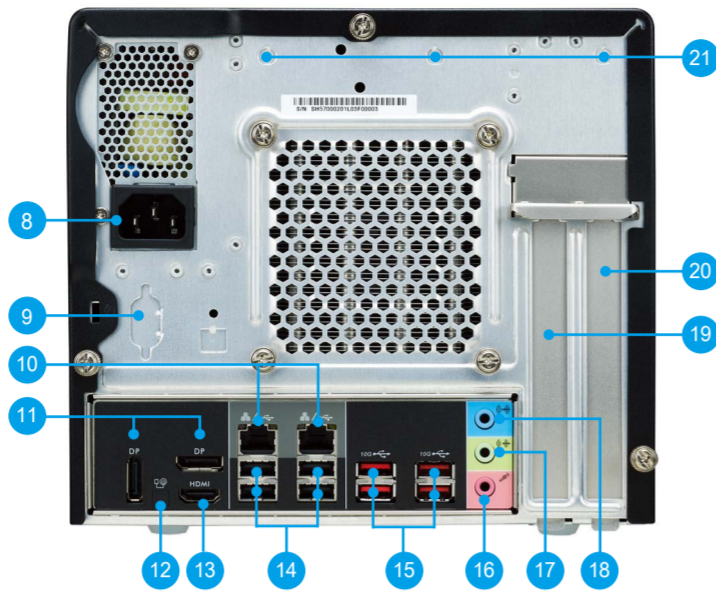
Puede encontrar más información sobre este producto en: <http://bit.ly/SH570R8>
 本製品の詳細な情報については、次のURLより確認頂けます。 <http://bit.ly/SH570R8>
 Для получения дополнительной информации об этом продукте перейдите по ссылке: <http://bit.ly/SH570R8>
 更多本產品信息, 請訪問: <http://bit.ly/SH570R8>

Product Overview

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



1. USB 3.2 Gen1 Type-A ports
2. MIC-in
3. Headphones
4. USB 3.2 Gen1 Type-C port
5. Power button
6. Power LED
7. Hard disk drive LED



8. AC power socket
9. Serial port (optional)
10. LAN ports
11. DisplayPort
12. Clear CMOS & Power Button & +5V
13. HDMI 2.0 port
14. USB 2.0 ports
15. USB 3.2 Gen2 Type-A ports
16. Microphone jack
17. Front speaker out (L/R) port
18. Line-in port
19. PCIe x16 slot
20. PCIe x4 slot
21. Perforation for optional WLAN

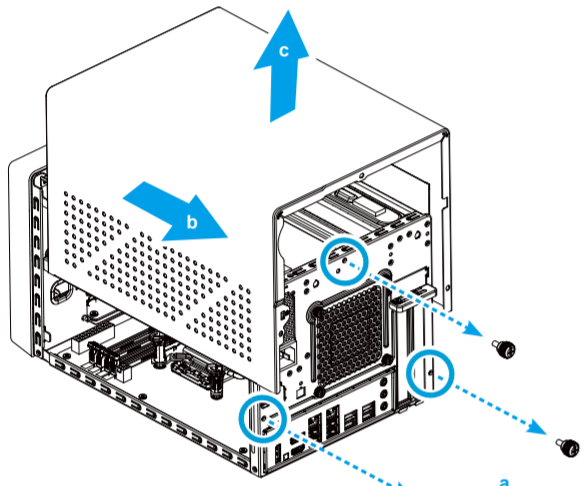
Hardware Installation

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 \ 硬件安裝

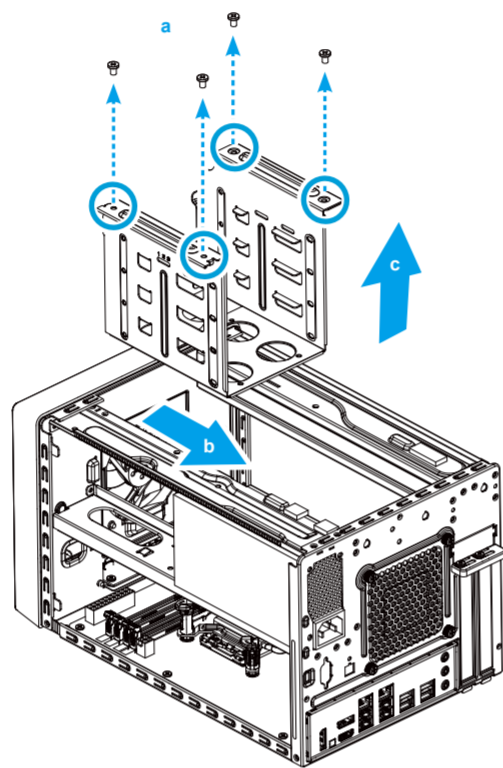
A. Begin Installation

⚠ 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.



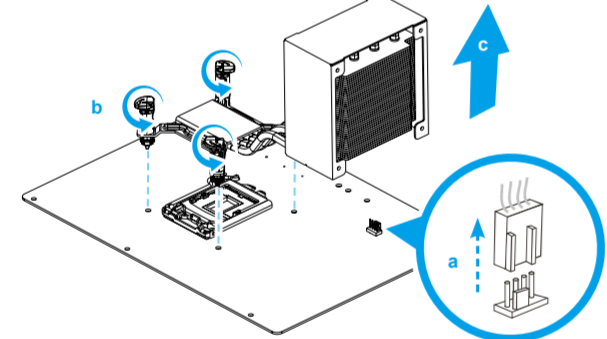
3. Unfasten the rack mount screws and remove the rack.



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

B. CPU and ICE Module Installation

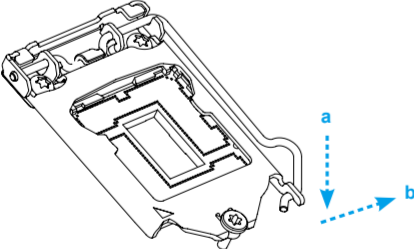
1. Unfasten the ICE fan thumbscrews on the back of the chassis.
2. Unfasten the four ICE module attachment push-pins and unplug the fan connector.



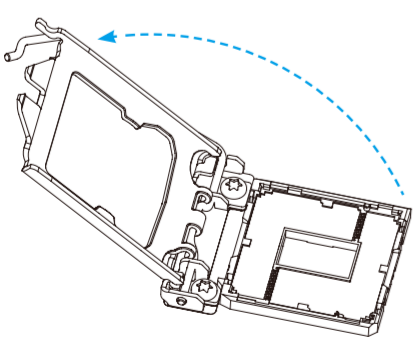
3. Remove the ICE module from the chassis and put it aside.
- ⚠** This CPU socket is fragile and can easily be damaged. Always use extreme care when installing a CPU and limit the number of times you remove or change the CPU. Before installing the CPU, make sure to turn off the computer and unplug the 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.

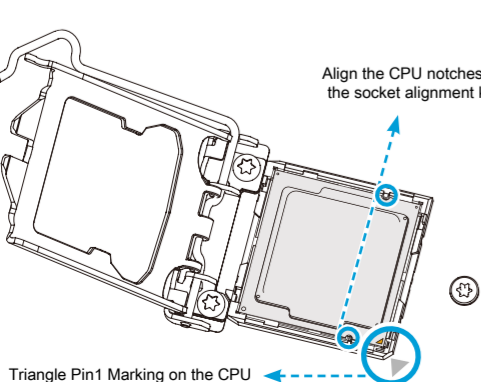


5. Lift the metal load plate off the CPU socket.



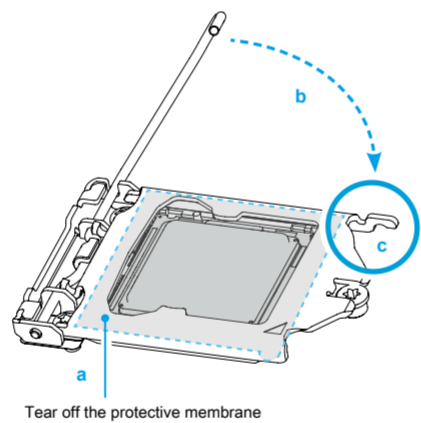
⚠ DO NOT touch the socket contacts. To protect the CPU socket, always use the protective socket cover when the CPU is not installed.

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.

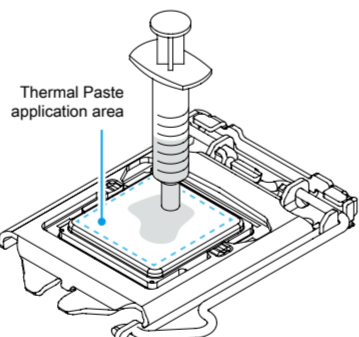


⚠ Please be aware of the CPU orientation, DO NOT force the CPU into the socket to avoid bending of pins on the socket and damage of CPU!

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.

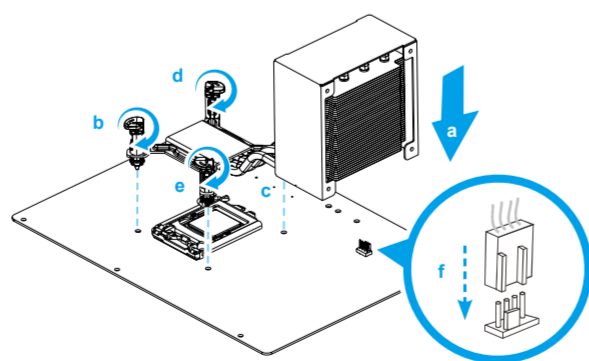


8. Spread thermal paste evenly on the CPU surface.

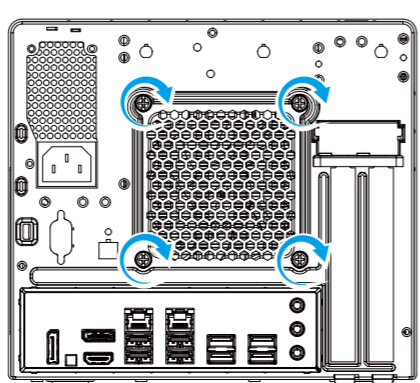


⚠ Please do not apply excess amount of thermal paste.

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.



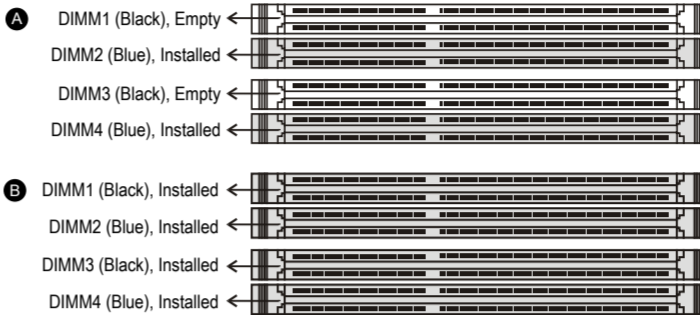
C. Memory Module Installation

➤ 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.

➤ Population rules of dual channel memory modules

In Dual-Channel mode, the memory modules can transmit and receive data with two data bus lines simultaneously. Enabling Dual-Channel mode can enhance system performance. The following illustrations explain the population rules for Dual-Channel mode.

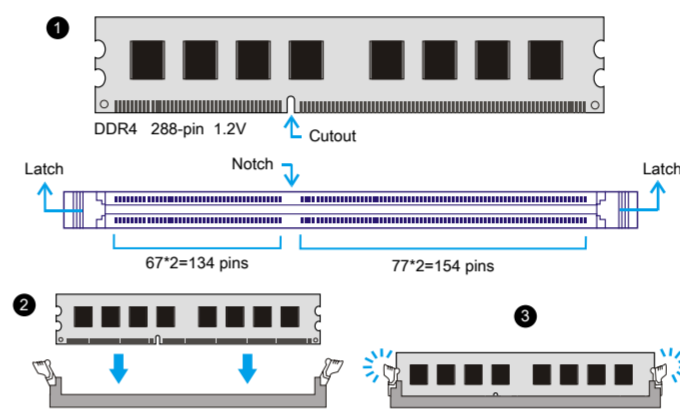


➤ Installing memory modules

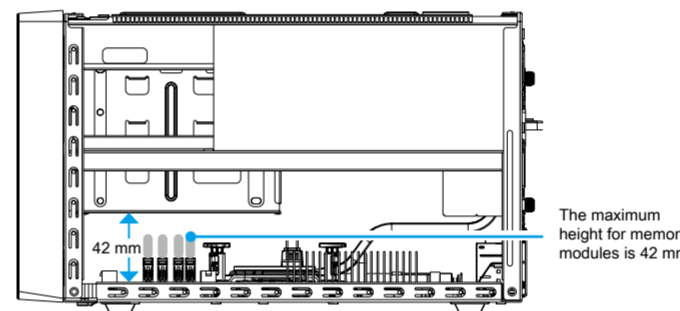
DDR4 and DDR3/DDR2 DIMMs are not compatible to one another or other DDR DIMMs. Be sure to install DDR4 DIMMs on this motherboard only. Follow the steps below to correctly install your memory modules in the memory sockets.

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.



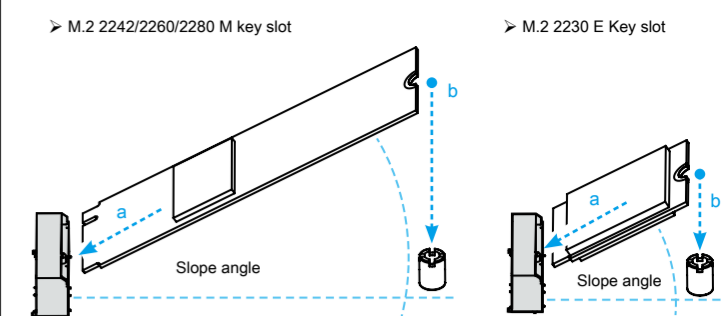
3. Check if the latches are closed and if all memory modules are firmly installed.



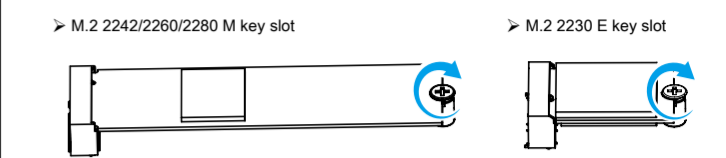
⚠ Repeat the above steps to install additional memory modules, if required.

D. M.2 Device Installation

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

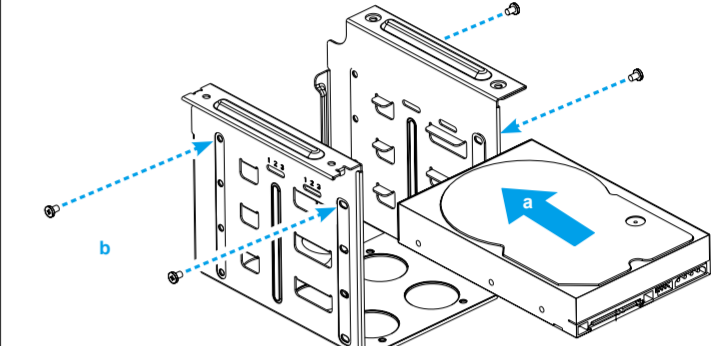


2. Install the M.2 device into the M.2 slot and secure with a screw.



E. Installation of Drives

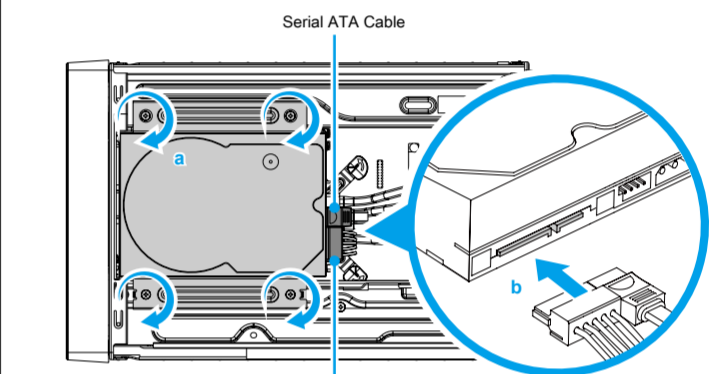
1. Loosen the purse lock and separate the Serial ATA and power cables.
2. Place the HDD or SSD in the rack and secure with screws from the sides.



3. Connect the Serial ATA cable to the motherboard.



4. Place the rack in the chassis and refasten the rack.
5. Connect the Serial ATA and power cables to the HDD or SSD.

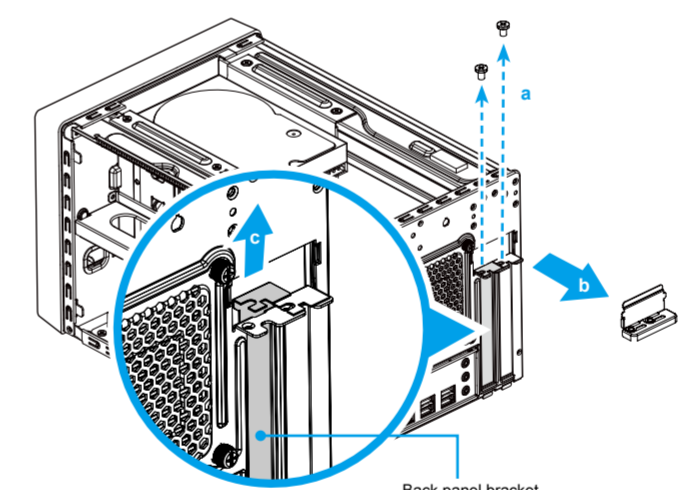


6. Repeat the previous steps to install three further 3.5" drives. The R8 chassis allows for a total of four 3.5" drives to be installed.

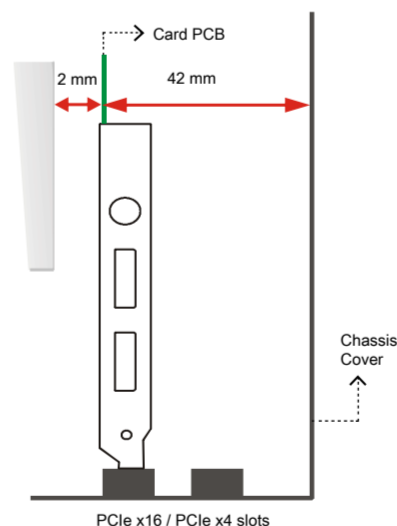
F. Installation of Expansion Cards

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

⚠ The maximum size acceptable for display cards is 280 mm (L) x 120 mm (H) x 40 mm (D).



2. Install the PCIe x4 / PCIe x16 card into the PCIe x4 / 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
 Información o 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. Ne pas remplacer correctement la pile peut endommager l'ordinateur. Remplacez-la uniquement par un modèle identique ou un équivalent comme recommandé par Shuttle. Éliminez les piles usagées conformément à la législation en vigueur dans votre pays.

La sustitución incorrecta de la batería puede dañar este equipo. Sustituya la batería únicamente por una igual o equivalente recomendada por Shuttle. Elimine las pilas usadas de acuerdo con los requisitos legales de su país.

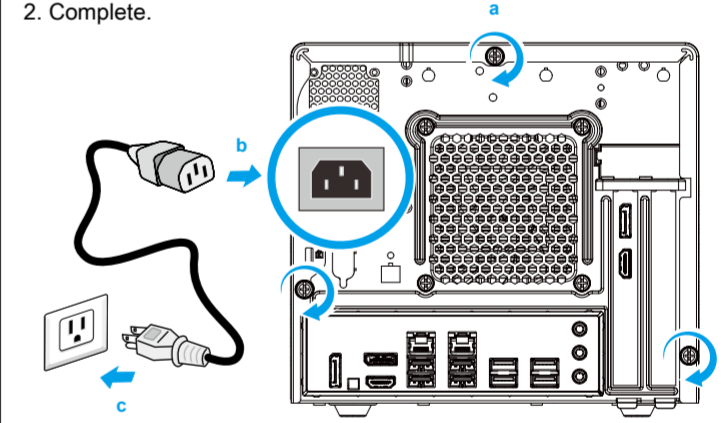
バッテリーを間違えてセットすると、このコンピュータが損傷の原因となります。交換する際は、Shuttle が推奨するバッテリーと同じものまたは同等のものだけを使用するようにしてください。使用済みのバッテリーは、お住みの国の法律に従って処分してください。

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。

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.

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.

CE 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.

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。

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。

* 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: 仅适用于海拔 2000m 以下安全使用, 在海拔 2000m 以上使用时, 可能有安全隐患。

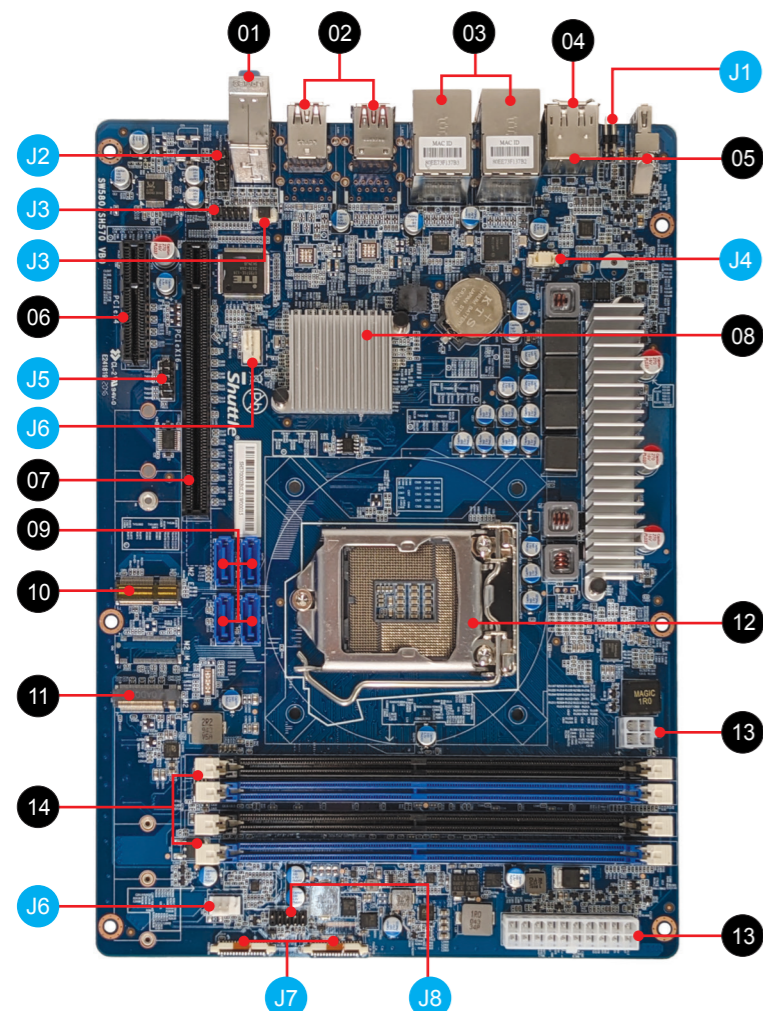
⚠ WARNING THIS PRODUCT CONTAINS A BUTTON BATTERY

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. Do NOT dispose of batteries in household trash or incinerate.
- (b) Even used batteries may cause severe injury or death.
- (c) Call a local poison control center for treatment information.
- (d) Indicating the compatible battery type CR2032.
- (e) Indicating the nominal battery voltage.
- (f) Non-rechargeable batteries are not to be recharged.
- (g) Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.

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.



- 06. PCIe x4 slot
PCIe x4 插槽
PCIe x4 Steckplatz
Emplacement PCIe x4
PCIe x4 Ranura
PCIe x4 スロット
Слоты PCIe x4
PCIe x4 插槽
- 07. 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

- 08. Intel® H570 chipset
Intel® H570 晶片組
Intel® H570 Chipsatz
Chipset Intel® H570
Intel® H570 Conjunto de chips
Intel® H570 チップセット
Набор микросхем Intel® H570
Intel® H570 芯片組

- 09. 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 コネクタ
Разъем SATA 3.0 6 Гбит/с
SATA 3.0 6Gb/s 接口

- 10. 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 キー-スロット
Слот M.2 2230 E ключ
M.2 2230 E key 插槽

- 11. 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 キー-スロット
Слот M.2 2242/2260/2280 M ключ
M.2 2242/2260/2280 M key 插槽

- 12. Processor socket LGA 1200
LGA 1200 處理器插槽
Socket für LGA 1200-CPU's
Socket Processeur LGA 1200
Zócalo LGA 1200 de CPU
Процессор-сокет LGA 1200
Разъем процессора LGA 1200
LGA 1200 处理器插槽

- 13. ATX power connector
電源連接埠
ATX-Netzteil-Anschluss
Prise d'alimentation ATX
Conector de alimentación ATX
ATX電源コネクタ
ATX 電源コネクタ
ATX 電源插座

- 14. 4x 288-pin DDR4 DIMM slot
4x 288-pin DDR4 DIMM 插槽
4x 288-pin DDR4 DIMM Steckplatz
4x emplacements 288-pin pour DDR4 DIMM
4 ranuras DIMM DDR4 de 288 contactos Slots
4x 288-pin DDR4 DIMM スロット
4x 288 контактный Слот DDR4 DIMM
4x 288-pin DDR4 DIMM 插槽

- 01. Line-in port
音源輸入埠
Audio Line-In Eingang
Port d'entrée ligne
Entrada de audio Line-in
ラインインポート
Линейный вход
音源输入端口

- Front speaker out (L/R) port
左 / 右声道輸出埠
Lautsprecher-Anschluss/Line-Out
Sortie audio avant (G/D)
Salida de audio Line-out
正面アウト (L/R) ポート
Линейный выход
左 / 右声道输出端口

- 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
麦克风连接端口

- 02. USB 3.2 Gen2 Type-A Ports
USB 3.2 Gen2 Type-A 連接埠
USB 3.2 Gen2 Typ-A-Anschlüsse
Prises USB 3.2 Gen2 Type-A
Puertos USB 3.2 Gen2 tipo A
USB 3.2 Gen2 Type-A ポート
USB 3.2 Gen2 Type-A 端口
USB 3.2 Gen2 Type-A 端口

- 03. LAN ports
網路連接埠
Netzwerk-Anschlüsse
Prises LAN
Puertos LAN
LAN ポート
Сетевые LAN-порты
LAN 连接端口

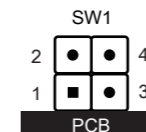
- 03. USB 2.0 ports
USB 2.0 連接埠
USB 2.0-Anschlüsse
Prises USB 2.0
Puertos USB 2.0
USB 2.0 ポート
USB 2.0 端口
USB 2.0 连接端口

- 04. HDMI 2.0 port
HDMI 2.0 連接埠
HDMI 2.0-Anschluss
Prise HDMI 2.0
Puerto HDMI 2.0
HDMI 2.0 ポート
HDMI 2.0 端口
HDMI 2.0 连接端口

- 05. DisplayPort
DisplayPort 連接埠
DisplayPort
Prise DisplayPort
DisplayPort
ディスプレイポート
DisplayPort
DisplayPort 连接端口

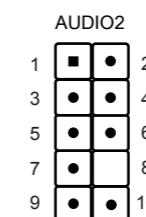
- J1 Clear CMOS & power button & +5V
清除 CMOS & 電源按鈕 & +5V
Clear CMOS & Power Button & +5V
Reset CMOS & Bouton d'alimentation & +5V
Clear CMOS & Botón de encendido & +5V
CMOSクリア & 電源スイッチ & +5V
Сброс CMOS, внешняя кнопка питания, +5 В
清除 CMOS & 电源按钮 & +5V

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



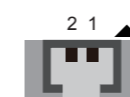
- J2 Front audio header
前面板音效插座
Audio-Anschluss für Vorderseite
Connecteur audio pour façade
Conector de audio del panel frontal
前面オーディオヘッド
Передний аудио разъем
前面板音效插座

- 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 Debug header
Debug 插座
Debug-Anschluss
Connecteur Debug
Conexión Debug
デバッグヘッド
Отладочный разъем
Debug 接头

- 1=I2C Data for EC debug
2=I2C Clock for EC debug



CN1200

- J4 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

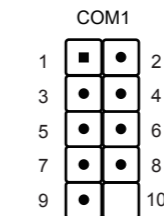
- 1=GND (Power Ground)
2=Data+ (USB 2.0 Data pin)
3=Data- (USB 2.0 Data pin)
4=VBUS (USB power 5.0V/0.5A)



USB2

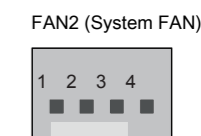
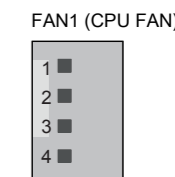
- J5 COM header
COM 插座
COM-Anschluss
Connecteur COM
Base de conexiones COM
COM コネクタ
Разъем COM
COM 插座

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



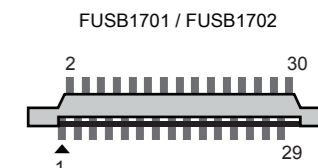
- J6 Fan connector
風扇連接埠
Lüfteranschluss
Connecteur ventilateur
Conector del ventilador
FAN コネクタ
Разъем вентилятора
风扇插座

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



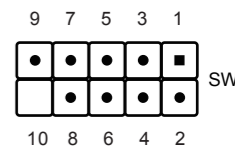
- J7 Front USB 3.0 header
前置 USB 3.0 插座
USB-3.0-Anschluss (für vorne)
Port USB 3.0 (façade)
Conexión delantera USB 3.0
フロントUSB 3.0 用ピンヘッド
Разъем USB 3.0 порта (передняя панель)
前置 USB 3.0 插座

- 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)



- J8 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
电源按钮/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



SW2