SH170R8 Quick Guide 【 English 】

62R-SH1701-5201   SH170R8
English.Spanish.Korean.
Traditional Chinese.Japanese.
French. German Quick Guide
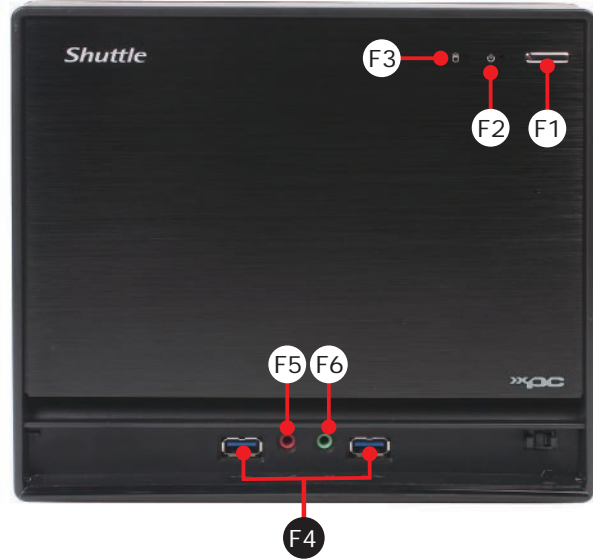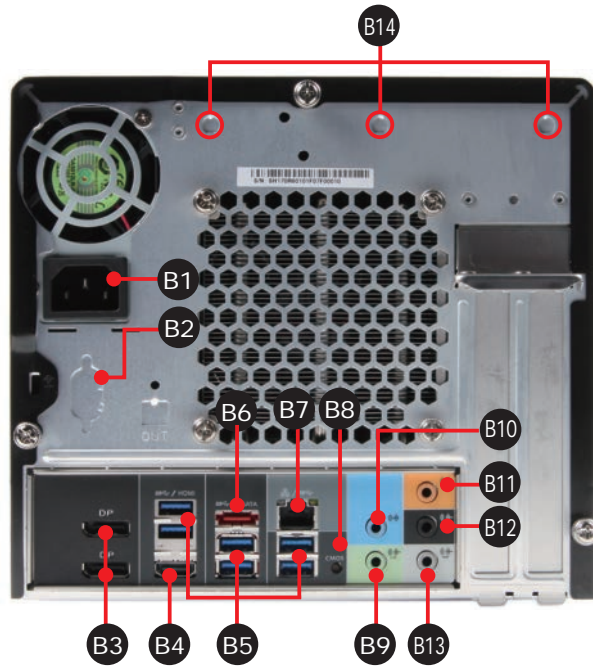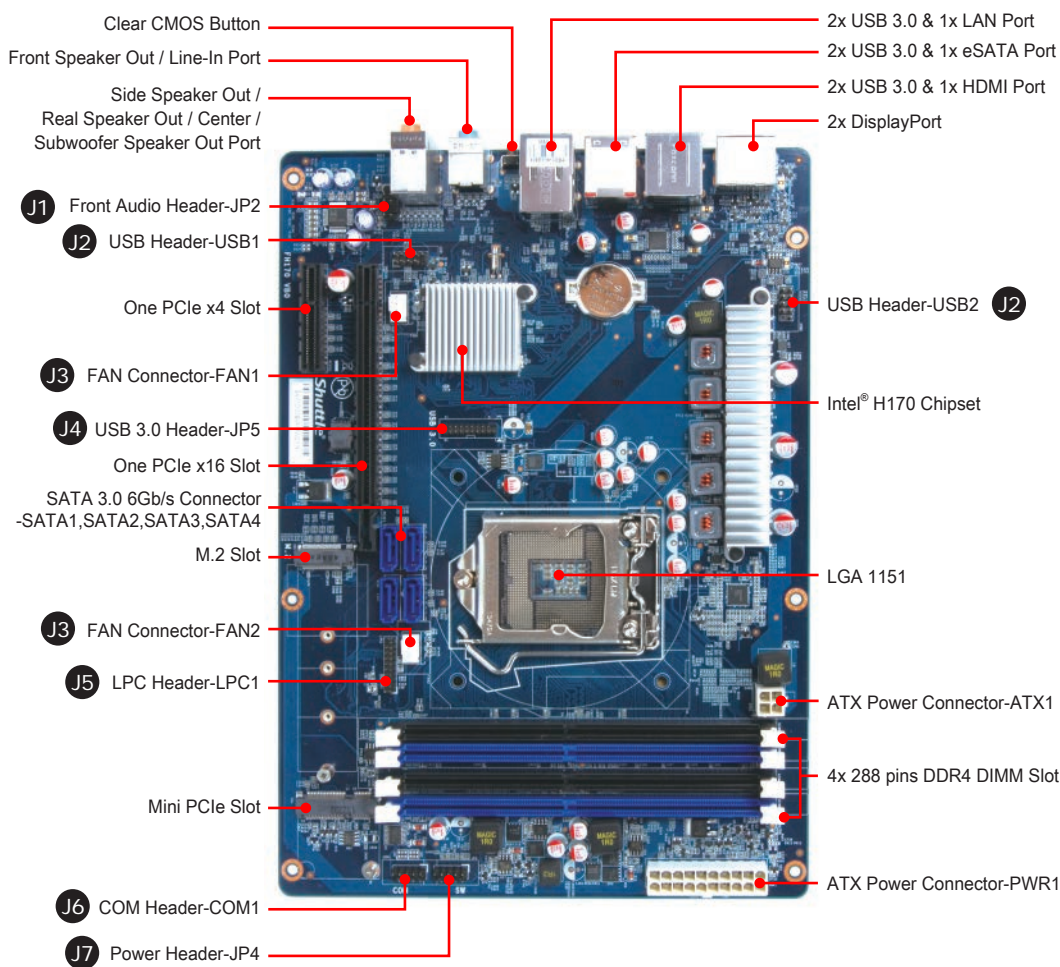
Front Panel

F1. Power On Button
F2. Power LED
F3. HDD LED
F4. USB 3.0 Port
F5. Mic In
F6. Headphones

Back Panel

B1. AC Power Socket
B2. Serial Port (Optional)
B3. DisplayPort
B4. HDMI Port
B5. USB 3.0 Port
B6. eSATA Port
B7. LAN Port
B8. Clear CMOS Button
B9. Front Speaker Out (L/R) Port
B10. Line-In Port
B11. Side Speaker Out (L/R) Port
B12. Real Speaker Out (L/R) Port
B13. Center/Subwoofer Speaker Out Port
B14. Wireless LAN Perforation (Optional)

Motherboard Illustration

Clear CMOS Button
Front Speaker Out / Line-In Port
Side Speaker Out / Real Speaker Out / Center / Subwoofer Speaker Out Port

2x USB 3.0 + 1x LAN Port
2x USB 3.0 + 1x eSATA Port
2x USB 3.0 + 1x HDMI Port
2x DisplayPort

J1 Front Audio Header-JP2
J2 USB Header-USB1
One PCIe x4 Slot
J3 FAN Connector-FAN1
J4 USB 3.0 Header-JP5
One PCIe x16 Slot
SATA 3.0 6Gb/s Connector -SATA1,SATA2,SATA3,SATA4
M.2 Slot
J3 FAN Connector-FAN2
J5 LPC Header-LPC1
Mini PCIe Slot
J6 COM Header-COM1
J7 Power Header-JP4

USB Header-USB2 J2
Intel® H170 Chipset
LGA 1151
ATX Power Connector-ATX1
4x 288 pins DDR4 DIMM Slot
ATX Power Connector-PWR1

Jumper Settings

J1 Front Audio Header (JP2)

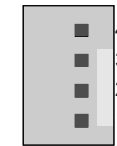|	
1=MIC_L	2=GND
3=MIC_R	4=Front_Detect
5=LINE_R	6=Mic_detect
7=sense	8=NULL
9=LINE_L	10=Line_Detect
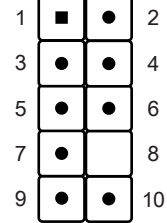
J2 USB Header (USB1,USB2)

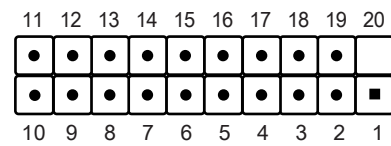|	
1=5V_USB	2=5V_USB
3=USB A-	4=USB B-
5=USB A+	6=USB B+
7=GND	8=GND
9=NULL	10=GND
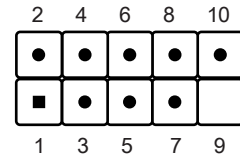
J3 Fan Connectors (FN1,FN2)

1=Ground
2=+12V
3=SPEED_SENSE
4=PWM_CTRL

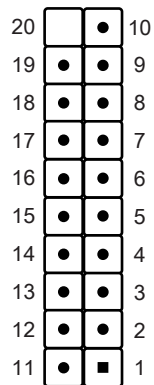### J4 USB 3.0 Header (JP5)

|	
1=5VCC	2=A_RX_N
3=A_RX_P	4=Ground
5=A_TX_N	6=A_TX_P
7=Ground	8=B_Data_N
9=A_Data_P	10=OC
11=B_Data_P	12=B_Data_N
13=Ground	14=B_TX_P
15=B_TX_N	16=Ground
17=B_RX_P	18=B_RX_N
19=5VCC	20=NULL

J5 LPC Header (LPC1)

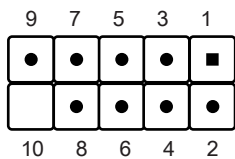|	
1=+12V	2=5V
3=5VSB	4=SERIRQ
5=CLK_24M	6=CLK_24M
7=SIO_RST	8=LFRAME
9=LAD3	10=LAD2
11=-12V	12=3VSB
13=NA	14=LDRQ0
15=SIO_PME	16=LAD1
17=LAD0	18=+3.3V
19=GND	20=NULL

J6 COM Header (COM1)

1=DCD	2=RXD
3=TXD	4=DTR
5=Ground	6=DSR
7=RTS	8=CTS
9=NA	10=NULL
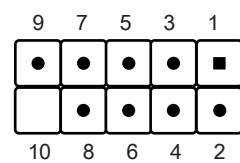
J7 Power Header (JP4)

1=+HD_LED	2=PWR_LED
3=-HD_LED	4=GND
5=RST_SW	6=PWR_SW
7=GND	8=GND
9=NA	10=NULL

➢ Safety Information

Read the following precautions before setting up a Shuttle XPC.

CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by Shuttle. Disposal of used batteries according to the manufacturer's instructions.

Laser compliance statement

The optical disc drive in this PC is a laser product.
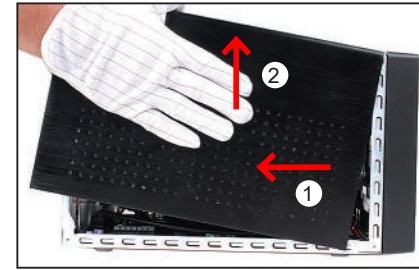The drive's classification label is located on the drive.

CLASS 1 LASER PRODUCT

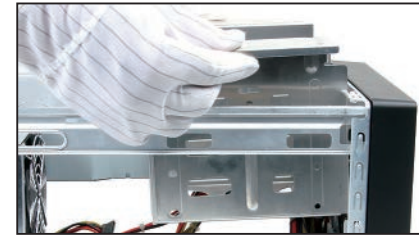**CAUTION:** INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

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.
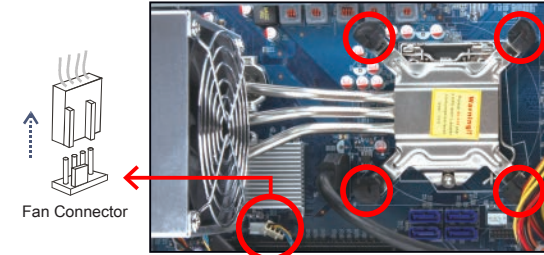2. Slide the cover backwards and upwards.

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

B. CPU and ICE Installation

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


Fan Connector

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

⚠ This 1151-pin socket is easily damaged and pins bend quickly. Always use extreme care when installing a CPU and limit the number of times that 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 to the CPU.

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

4. First unlock and raise the socket lever.
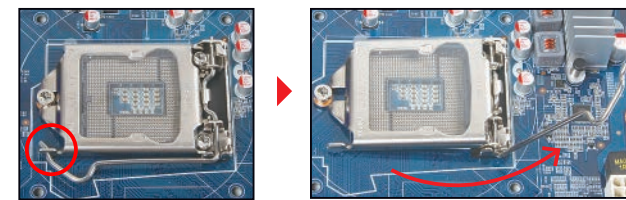
5. Tear off the protective membrane from the metal load plate. Lift the metal load plate on the CPU socket.

Metal load plate

Tear off the protective membrane.
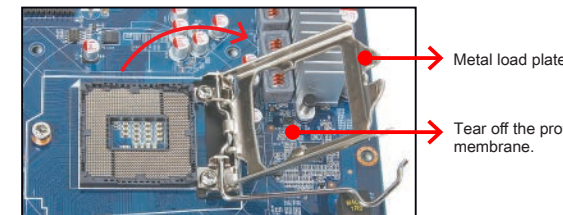
⚠ DO NOT touch socket contacts. To protect the CPU socket, always replace the protective socket cover when the CPU is not installed.

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.

Triangle Pin1 Marking on the CPU

Socket 1151 CPU
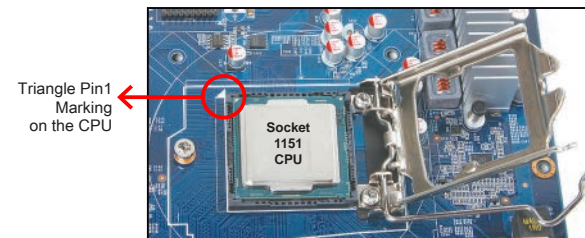
⚠ Please be aware of the CPU orientation, DO NOT force the CPU into the socket to avoid bending of pins and damage of CPU!

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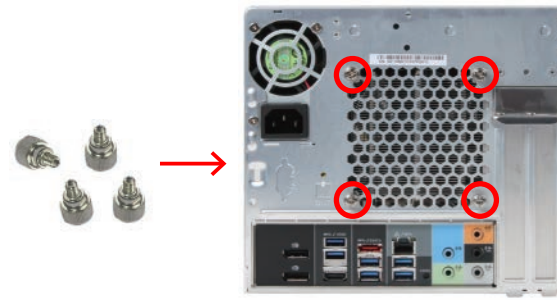
Thermal Paste application area
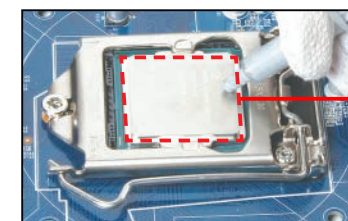
⚠ Please do not apply excess amount of thermal paste.

9. Screw the ICE module to the mainboard. Note to press down on the opposite diagonal corner while tightening each screw.
10. Connect the fan connector.

Fan Connector
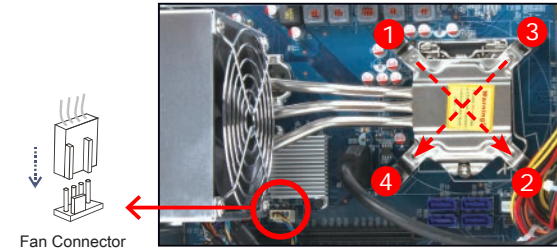
11. Fasten the Smart Fan to the chassis with the four thumbscrews.
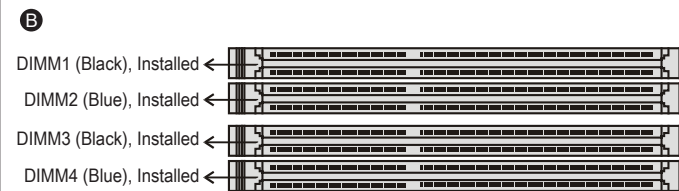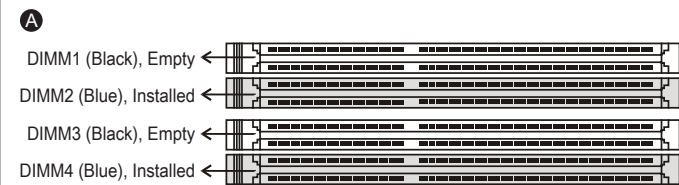
C. Memory Module Installation

➢ 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 are 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 memory, switch the direction.

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

A

DIMM1 (Black), Empty
DIMM2 (Blue), Installed
DIMM3 (Black), Empty
DIMM4 (Blue), Installed

B

DIMM1 (Black), Installed
DIMM2 (Blue), Installed
DIMM3 (Black), Installed
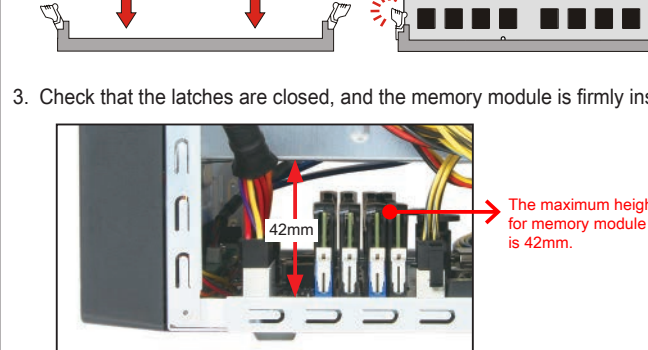DIMM4 (Blue), Installed

➢ Installing a memory module
DDR4 and DDR3/DDR2 DIMMs are not compatible to each other or other DDR DIMMs.
Be sure to install DDR4 DIMMs on this motherboard. 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 DIMM slot notch. Slide the memory module into the DIMM slot.

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

① DDR4 288 pin 1.2V   Cutout
Latch   Notch   Latch
67*2=134 pin   77*2=154 pin
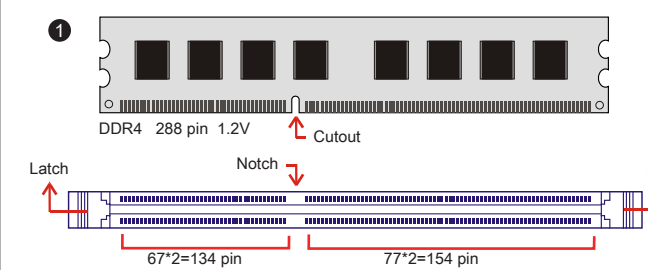
3. Check that the latches are closed, and the memory module is firmly installed.

The maximum height for memory module is 42mm.
42mm

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

D. Component Installation

1. As shown, unfasten the screw first.
2. Install the Mini PCIE card / M.2 SSD into the Mini PCIE slot / M.2 slot and secure with screw.
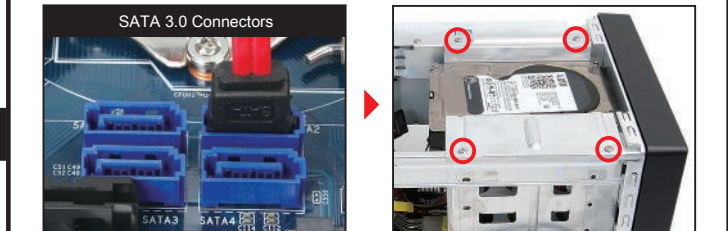
M.2 slot   Mini PCIE slot

E. Installation of Drives

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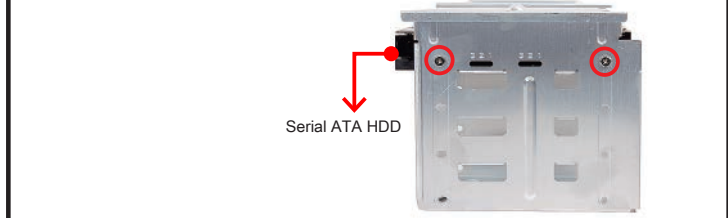
Serial ATA HDD

3. Connect the Serial ATA Cable to the motherboard.
4. Place the rack in the chassis and refasten the rack.

SATA 3.0 Connectors

5. Connect the Serial ATA and power cables to the HDD.

Serial ATA Cable
Serial ATA Power Cable
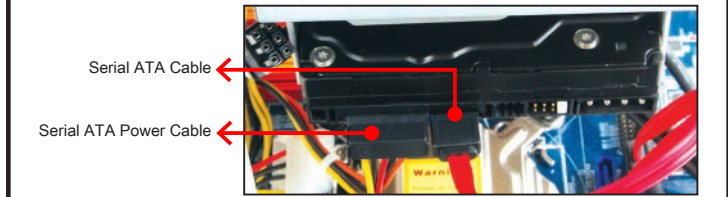
6. Repeat these steps to install up to four 3.5" HDDs, if desired.
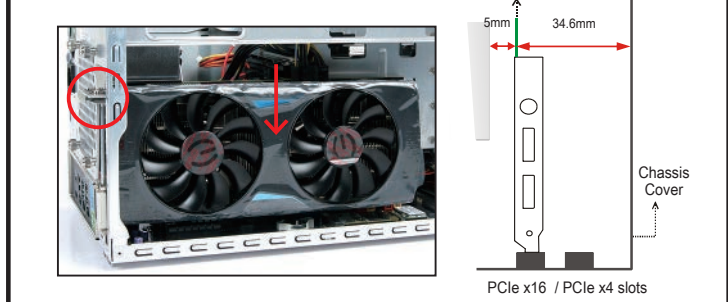
SATA 3.0 Connectors
1st
2nd
3rd
4th

F. Installation of Expansion Cards

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

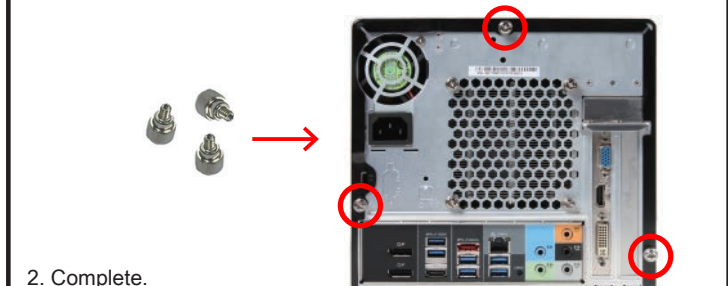⚠ The maximum size acceptable for display cards is 267mm x 120mm x 34.6mm.

PCIe x4 slot
PCIe x16 slot
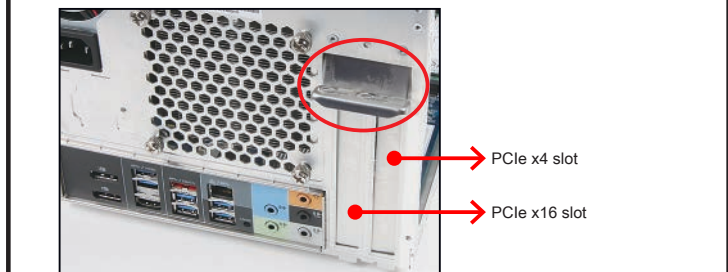
2. Install the PCIe x4 / PCIe x16 card into the PCIe x4 / PCIe x16 slots.
3. Secure the bracket.

VGA Card PCB
5mm   34.6mm
Chassis Cover
PCIe x16 / PCIe x4 slots

G. Complete

1. Replace the cover and refasten the thumbscrews.

2. Complete.

⚠ Please press the "Del" key while booting to enter BIOS. Here, please load the optimised BIOS settings.

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

53R-SH1703-H301