

Altos
BrainSphere P10 F7 SFF
User Guide



ALTOS

an Acer company

System setup

System notes

Thank you for purchasing your Altos Workstation. This user guide is intended as a reference for experienced Workstation technicians and helps detail many of the features available in Altos Workstations. For more detailed information about any particular component or software solution, you may consult the technical specifications or the user manual for that application.



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Note: Before opening or removing any components please contact your local certified Altos service representative



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Warning: Any parts or components damaged during replacement by a non-certified technician are not covered by the warranty. For details, please consult the warranty guide from your system.

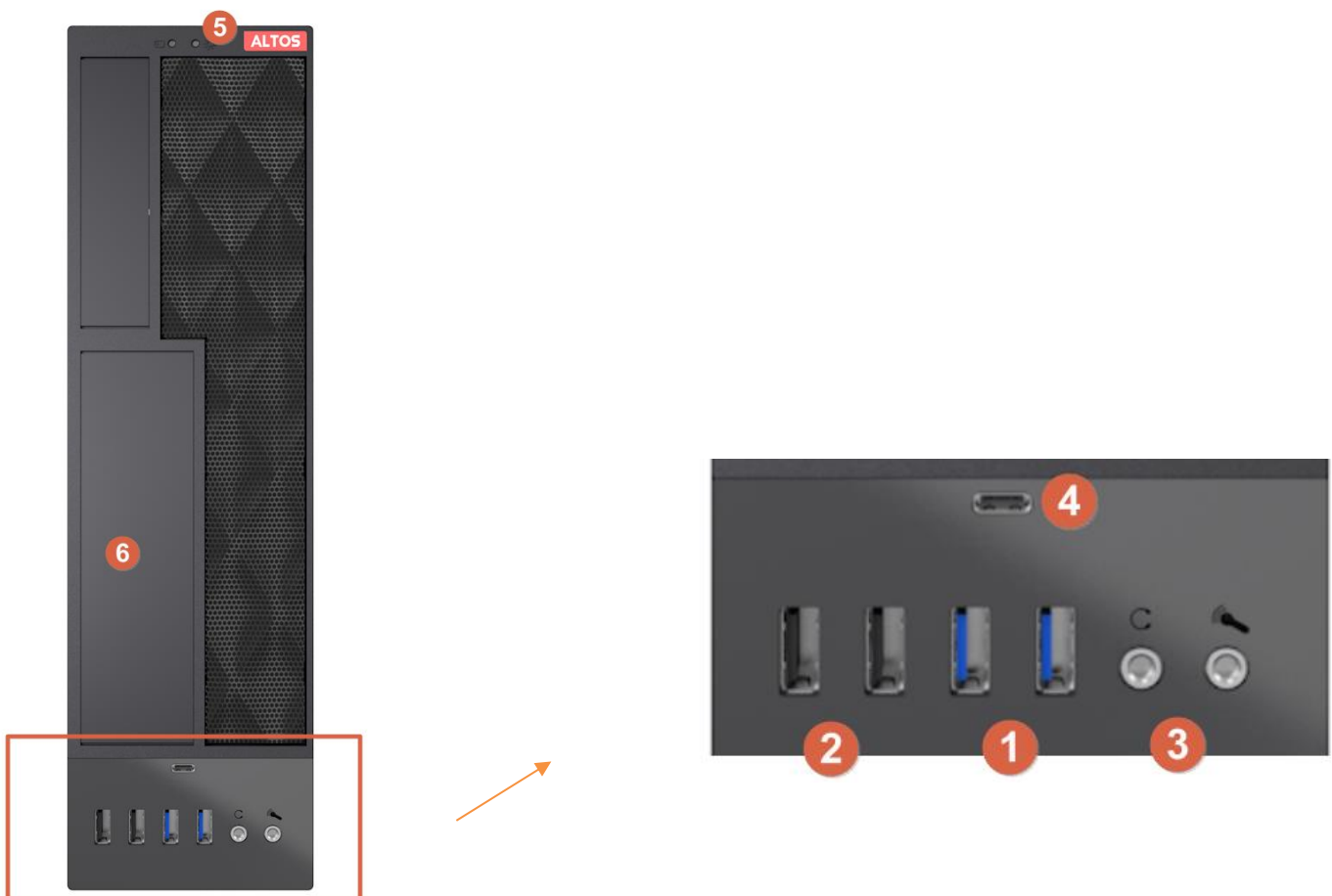
Important Notice: 100-240 Vac, 5A, 50/60hz

System component identification

Altos BrainSphere P10 F7 SFF Front configuration:

12L SFF Chassis

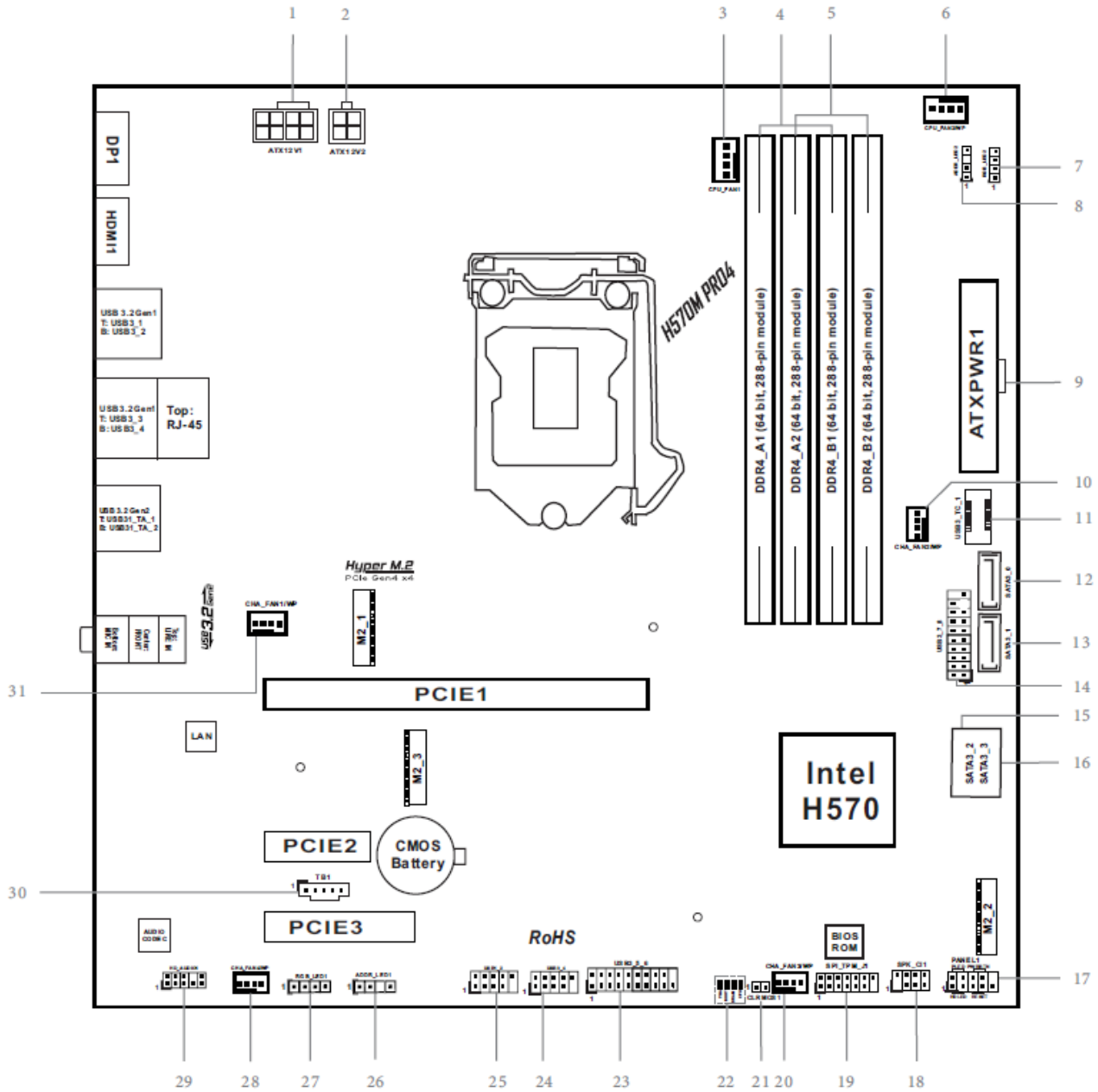
編號	說明
1	USB 3.2 Gen 1 埠 x 2
2	USB 2.0 埠 x 2
3	音源輸入/輸出孔
4	USB 3.2 Gen1 埠(Type C)
5	電源按鈕/指示燈 Green ON: 系統開機 Off: 系統關機
6	DVD CD-ROM (選配)



Specification introduction

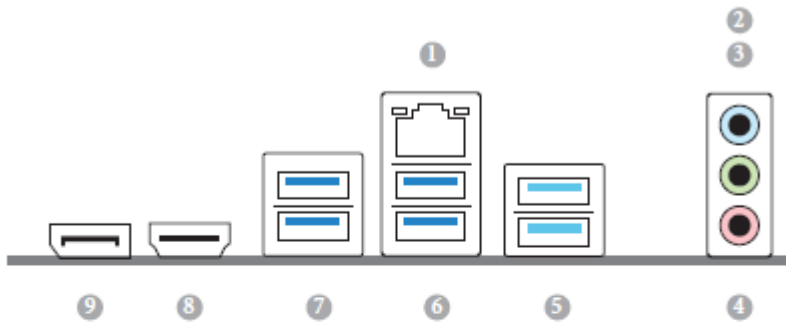
CPU	Processor type	<ul style="list-style-type: none"> Intel® 11th/10th Core™ i9/i7/i5/i3 series Processors, TDP Up to 65W 		
	Number of processors	1		
On-board Devices	Chipset	Intel® H570 Chipset		
	SATA	4 SATA3 (6 Gb/s) ports		
	SATA RAID	Intel onboard software RAID 0, 1, 5, 10 (only supports Windows OS)		
	Graphics	Intel® UHD Graphics Support (by CPU)		
	Network controller	1 Gb/s (10/100/1000) BASE-T LAN port (Intel® I219V)		
	Audio controller	Realtek ALC897		
Memory	Memory slot	4 DIMM slots (Dual channel)		
	Memory type	Up to 128GB, Non ECC UDIMM, DDR4 3200 MHz		
Expansion slots	PCIe	<ul style="list-style-type: none"> 1 PCI-E 4.0 x16 slot (by CPU) 1 PCI-E 3.0 x4 slot 1 PCI-E 3.0 x1 slot 		
	M.2	<ul style="list-style-type: none"> 1 M.2 2280 PCI-E 4.0 slot (by CPU) 1 M.2 2280 PCI-E 3.0 slot 1 M.2 2230 PCI-E 3.0, E Key for Wi-Fi & Bluetooth 		
I/O ports	Front I/O ports	<ul style="list-style-type: none"> 1 USB 3.2 Gen1 port(Type C) 2 USB 3.2 Gen1 ports 2 USB 2.0 ports 	<ul style="list-style-type: none"> Audio jacks (In/Out) Option: Multi-Card Reader 	
	Rear I/O ports	<ul style="list-style-type: none"> 1 Display Port 1.4 1 HDMI Port 2 USB 3.2 Gen2 ports(Type-A) 	<ul style="list-style-type: none"> 1 Gigabit LAN port (RJ-45) 4 USB 3.2 Gen1 ports 3 Audio jacks (In/Out/Mic) 	
Management & Security		<ul style="list-style-type: none"> Option: TPM v2.0 module Option: Altos Smart Server Management software 		
Drive Bays	Media bay	<ul style="list-style-type: none"> 1x 5.25" bay, 1x 3.5" bay 		
	Storage bay	<ul style="list-style-type: none"> 1x 3.5" bay, 1x 2.5" bay 		
Power supply		<ul style="list-style-type: none"> 300W 80 PLUS Bronze PSU 		
Form factor	Form factor	Compact		
	Dimensions (D x W x H)	12L , 370 (D) x 96 (W) x 334 (H) mm approximately		
Tested OS		<ul style="list-style-type: none"> Microsoft® Windows 10 Pro Red Hat Enterprise Linux 8 Ubuntu Linux 20.04 		
Regulatory Compliance	EMC	CE	FCC	BSMI(Class B)
	Safety	CB	MET	CCC

Motherboard Layout



No.	Description
1	ATX 12V Power Connector (ATX12V1)
2	ATX 12V Power Connector (ATX12V2)
3	CPU Fan Connector (CPU_FAN1)
4	2 x 288-pin DDR4 DIMM Slots (DDR4_A1, DDR4_B1)
5	2 x 288-pin DDR4 DIMM Slots (DDR4_A2, DDR4_B2)
6	CPU/Water Pump Fan Connector (CPU_FAN2/WP)
7	RGB LED Header (RGB_LED2)
8	Addressable LED Header (ADDR_LED2)
9	ATX Power Connector (ATXPWR1)
10	Chassis/Water Pump Fan Connector (CHA_FAN2/WP)
11	Front Panel Type C USB 3.2 Gen1 Header (USB3_TC_1)
12	SATA3 Connector (SATA3_0)
13	SATA3 Connector (SATA3_1)
14	USB 3.2 Gen1 Header (USB3_7_8)
15	SATA3 Connector (SATA3_2)(Upper)
16	SATA3 Connector (SATA3_3)(Lower)
17	System Panel Header (PANEL1)
18	Chassis Intrusion and Speaker Header (SPK_C11)
19	SPI TPM Header (SPI_TPM_J1)
20	Chassis/Water Pump Fan Connector (CHA_FAN3/WP)
21	Clear CMOS Jumper (CLRMOSE1)
22	Post Status Checker (PSC)
23	USB 3.2 Gen1 Header (USB3_5_6)
24	USB 2.0 Header (USB3_4)
25	USB 2.0 Header (USB1_2)
26	Addressable LED Header (ADDR_LED1)
27	RGB LED Header (RGB_LED1)
28	Chassis/Water Pump Fan Connector (CHA_FAN4/WP)
29	Front Panel Audio Header (HD_AUDIO1)
30	Thunderbolt AIC Connector (TB1)
31	Chassis/Water Pump Fan Connector (CHA_FAN1/WP)

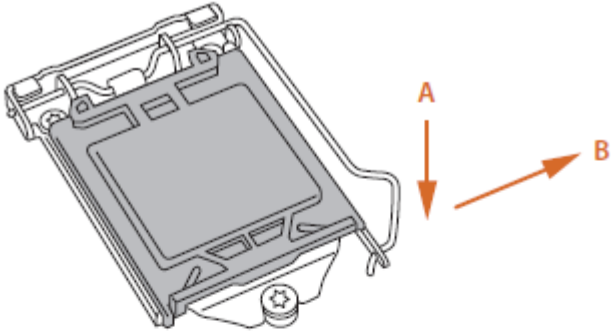
I/O Panel



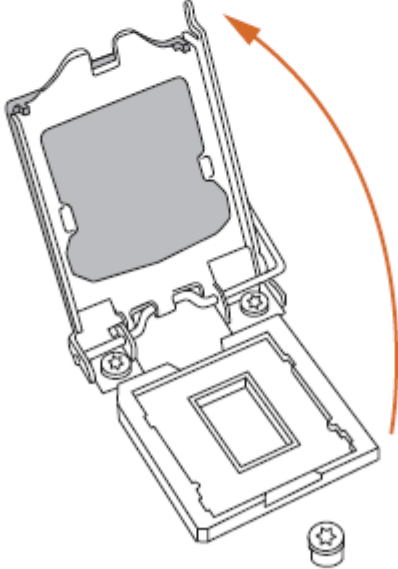
No.	Description	No.	Description
1	LAN RJ-45 Port*	6	USB 3.2 Gen1 Ports (USB3_3_4)
2	Line In (Light Blue)**	7	USB 3.2 Gen1 Ports (USB3_1_2)
3	Front Speaker (Lime)**	8	HDMI Port
4	Microphone (Pink)**	9	DisplayPort 1.4
5	USB 3.2 Gen2 Ports (USB31_TA_1_2)		

Installing the CPU

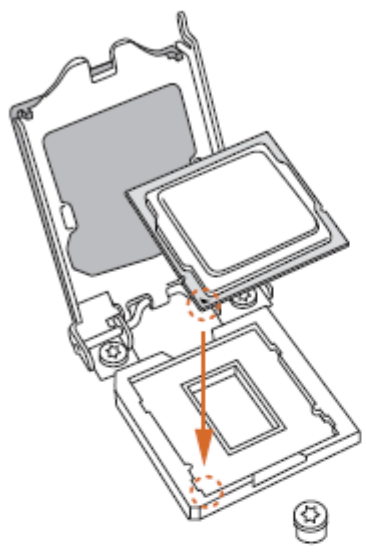
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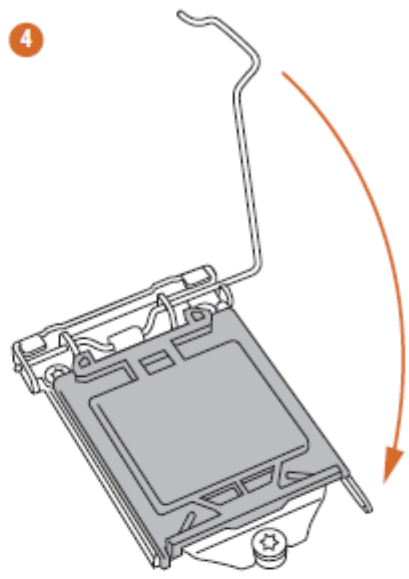
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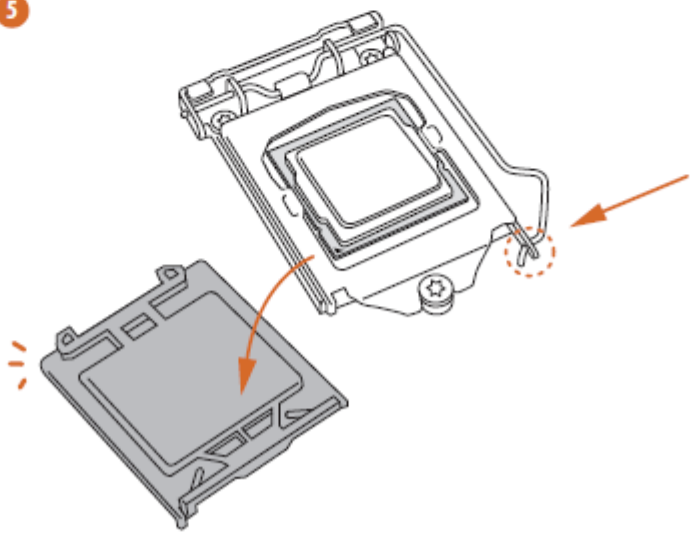
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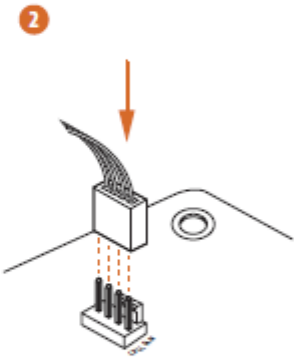
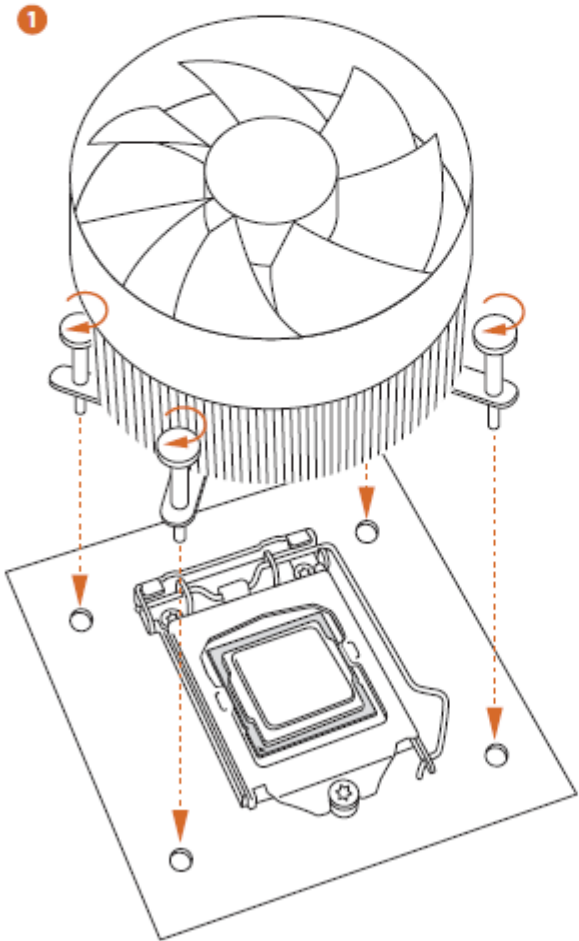
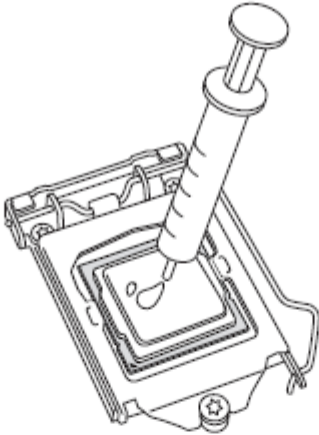
4



5



Installing Memory Modules (DIMM)



Installing Memory Modules (DIMM)

This motherboard provides four 288-pin DDR4 (Double Data Rate 4) DIMM slots, and supports Dual Channel Memory Technology.



1. For dual channel configuration, you always need to install identical (the same brand, speed, size and chip-type) DDR4 DIMM pairs.
2. It is unable to activate Dual Channel Memory Technology with only one or three memory module installed.
3. It is not allowed to install a DDR, DDR2 or DDR3 memory module into a DDR4 slot; otherwise, this motherboard and DIMM may be damaged.

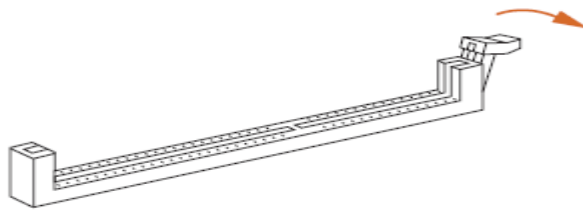
Dual Channel Memory Configuration

Priority	DDR4_A1	DDR4_A2	DDR4_B1	DDR4_B2
1		Populated		Populated
2	Populated	Populated	Populated	Populated

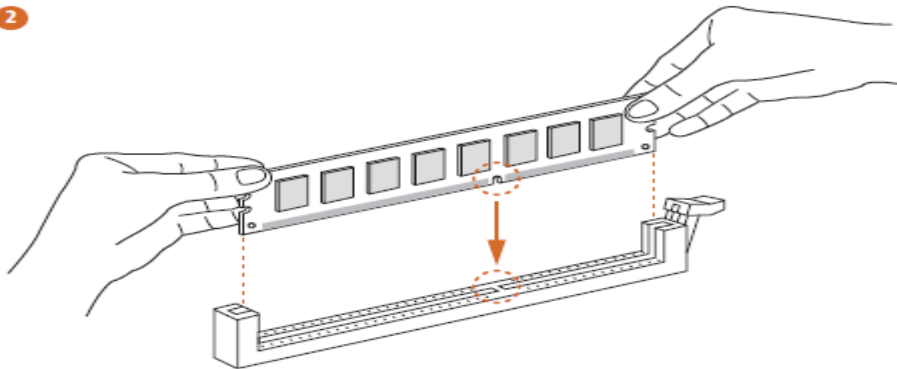


The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

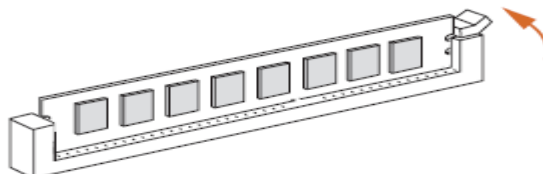
1



2



3



Expansion Slots (PCI Express Slots)

There are 3 PCI Express slots on the motherboard.



Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.

PCIe slots:

11th Gen Intel® Core™ Processors:

PCIe1 (PCIe 4.0 x16 slot) is used for PCI Express x16 lane width graphics cards.

PCIe2 (PCIe 3.0 x1 slot) is used for PCI Express x1 lane width cards.

PCIe3 (PCIe 3.0 x4 slot) is used for PCI Express x4 lane width graphics cards.

10th Gen Intel® Core™ Processors:

PCIe1 (PCIe 3.0 x16 slot) is used for PCI Express x16 lane width graphics cards.

PCIe2 (PCIe 3.0 x1 slot) is used for PCI Express x1 lane width cards.

PCIe3 (PCIe 3.0 x4 slot) is used for PCI Express x4 lane width graphics cards.

11th Gen Intel® Core™ Processors:

	PCIe1	PCIe3
Single Graphics Card	Gen4x16	N/A

Two Graphics Cards in CrossFireX™ Mode	Gen4x16	Gen3x4
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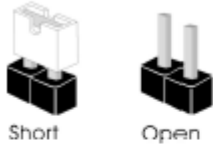
10th Gen Intel® Core™ Processors:

	PCIe1	PCIe3
Single Graphics Card	Gen3x16	N/A

Two Graphics Cards in CrossFireX™ Mode	Gen3x16	Gen3x4
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Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".



Clear CMOS Jumper
(CLRMOS1)



CLRMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short the pins on CLRMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, and user default profile will be cleared only if the CMOS battery is removed. Please remember to remove the jumper cap after clearing the CMOS.



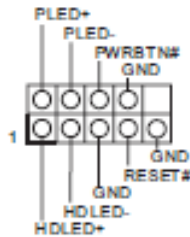
If you clear the CMOS, the case open may be detected. Please adjust the BIOS option "Clear Status" to clear the record of previous chassis intrusion status.

Onboard Headers and Connectors



Onboard headers and connectors are **NOT** jumpers. Do **NOT** place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage to the motherboard.

System Panel Header (9-pin PANEL1)



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.



PWRBTN (Power Switch):

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

RESET (Reset Switch):

Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

PLED (System Power LED):

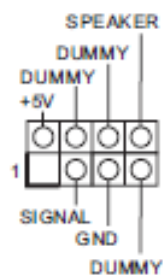
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Chassis Intrusion and Speaker Header (7-pin SPK_CI1)



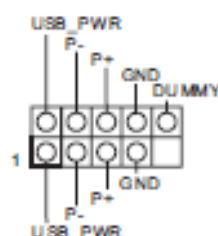
Please connect the chassis intrusion and the chassis speaker to this header.

Serial ATA3 Connectors



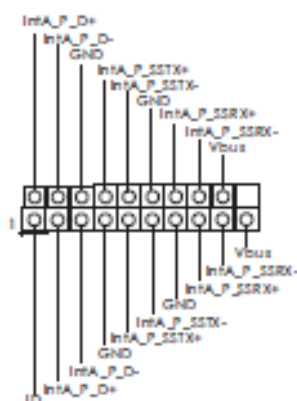
These four SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.
* If M2_2 is occupied by a SATA-type M.2 device, SATA3_1 will be disabled.

USB 2.0 Headers



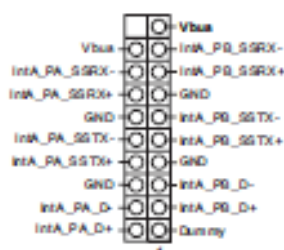
There are two USB 2.0 headers on this motherboard. Each USB 2.0 header can support two ports.

USB 3.2 Gen1 Headers (19-pin USB3_5_6)

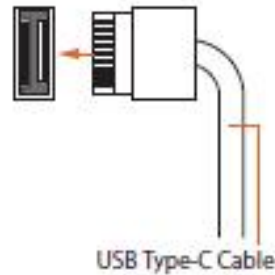


There are two USB 3.2 Gen1 headers on this motherboard. Each USB 3.2 Gen1 header can support two ports.

(19-pin USB3_7_8)

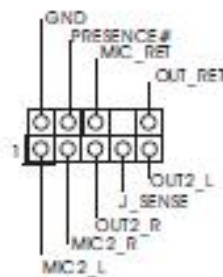


Front Panel Type C USB
3.2 Gen1 Header
(20-pin USB3_TC_1)



There is one Front Panel Type C USB 3.2 Gen1 Header on this motherboard. This header is used for connecting a USB 3.2 Gen1 module for additional USB 3.2 Gen1 ports.

Front Panel Audio Header
(9-pin HD_AUDIO1)

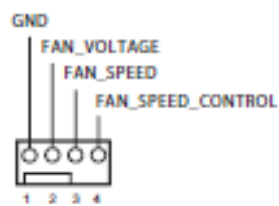


This header is for connecting audio devices to the front audio panel.



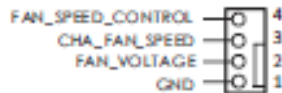
1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
2. If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:
 - A. Connect Mic_IN (MIC) to MIC2_L.
 - B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
 - C. Connect Ground (GND) to Ground (GND).
 - D. MIC_RET and OUT_RET are for the HD audio panel only. You don't need to connect them for the AC'97 audio panel.
 - E. To activate the front mic, go to the "FrontMic" Tab in the Realtek Control panel and adjust "Recording Volume".

Chassis/Water Pump Fan
Connectors
(4-pin CHA_FAN1/WP)



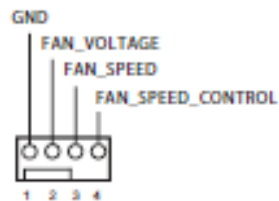
This motherboard provides four 4-Pin water cooling chassis fan connectors. If you plan to connect a 3-Pin chassis water cooler fan, please connect it to Pin 1-3.

(4-pin CHA_FAN2/WP)

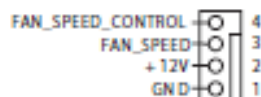


(4-pin CHA_FAN3/WP)

(4-pin CHA_FAN4/WP)

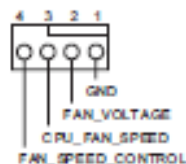


CPU Fan Connector
(4-pin CPU_FAN1)



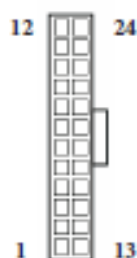
This motherboard provides a 4-Pin CPU fan (Quiet Fan) connector. If you plan to connect a 3-Pin CPU fan, please connect it to Pin 1-3.

CPU/Water Pump Fan
Connector
(4-pin CPU_FAN2/WP)



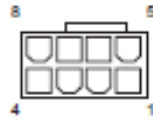
This motherboard provides a 4-Pin water cooling CPU fan connector. If you plan to connect a 3-Pin CPU water cooler fan, please connect it to Pin 1-3.

ATX Power Connector
(24-pin ATXPWR1)



This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

ATX 12V Power
Connector
(8-pin ATX12V1)



This motherboard provides a 8-pin ATX 12V power connector. To use a 4-pin ATX power supply, please plug it along Pin 1 and Pin 5.

***Warning: Please make sure that the power cable connected is for the CPU and not the graphics card. Do not plug the PCIe power cable to this connector.**

ATX 12V Power
Connector
(4-pin ATX12V2)

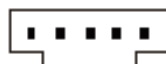


Please connect an ATX 12V power supply to this connector.

*The power supply plug fits into this connector in only one orientation.

*Connecting an ATX 12V 4-pin cable to ATX12V2 is optional. For advanced overclocking, we suggest using this connector together with ATX12V1.

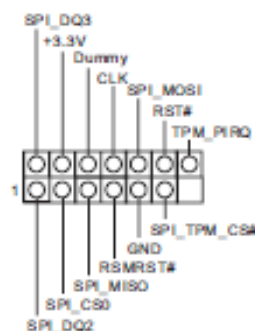
Thunderbolt AIC
Connector
(5-pin TB1)



Please connect a Thunderbolt™ add-in card (AIC) to this connector via the GPIO cable.

*Please install the Thunderbolt™ AIC card to PCIE4 (default slot).

SPI TPM Header
(13-pin SPI_TPM_J1)



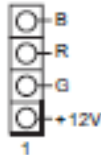
This connector supports SPI Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.

RGB LED Headers
(4-pin RGB_LED1)



RGB LED headers are used to connect RGB LED extension cables which allow users to choose from various LED lighting effects.

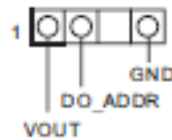
(4-pin RGB_LED2)



Caution: Never install the RGB LED cable in the wrong orientation; otherwise, the cable may be damaged.

*Please refer to page 49 for further instructions on this header.

Addressable LED Headers
(3-pin ADDR_LED1)



The headers are used to connect Addressable LED extension cables which allow users to choose from various LED lighting effects.

(3-pin ADDR_LED2)



Caution: Never install the Addressable LED cable in the wrong orientation; otherwise, the cable may be damaged.

*Please refer to page 50 for further instructions on this header.

M.2_SSD Module Installation Guide

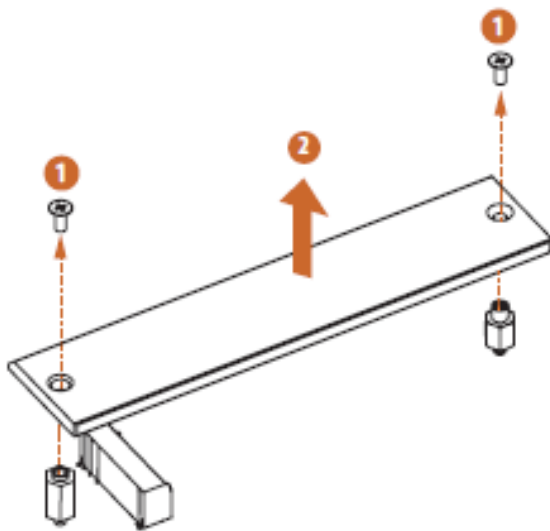
The M.2, also known as the Next Generation Form Factor (NGFF), is a small size and versatile card edge connector that aims to replace mPCIe and mSATA. The Hyper M.2 Socket (M2_1) supports M Key type 2280 M.2 PCI Express module up to Gen4x4 (64 Gb/s) (Only supported with 11th Gen Intel® Core™ Processors).

Installing the M.2_SSD (NGFF) Module



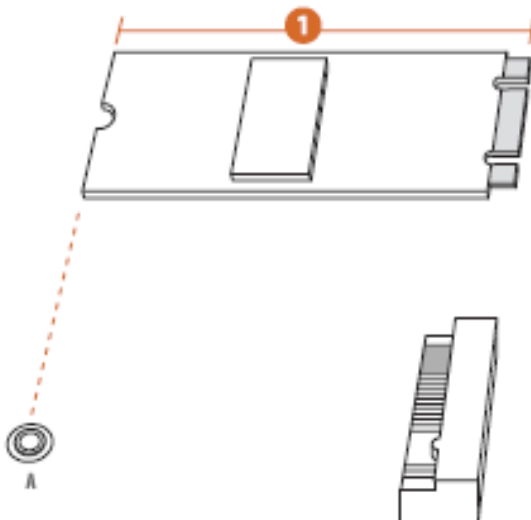
Step 1

Prepare a M.2_SSD (NGFF) module and the screw.



Step 2

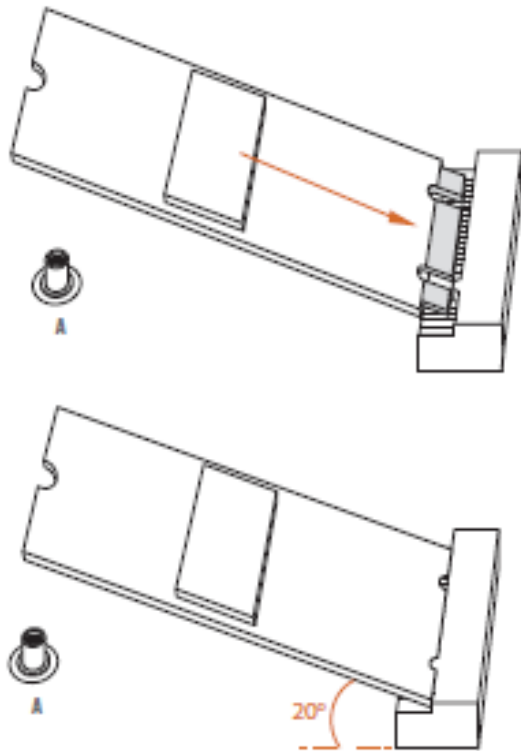
Before installing a M.2 (NGFF) SSD module, please loosen the screws to remove the M.2 heatsink.



Step 3

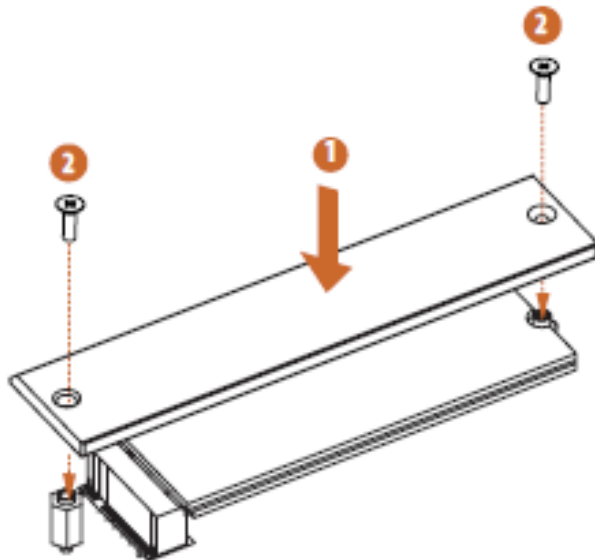
Depending on the PCB type and length of your M.2_SSD (NGFF) module, find the corresponding nut location to be used.

No.	1
Nut Location	A
PCB Length	8cm
Module Type	Type2280



Step 4

Align and gently insert the M.2 (NGFF) SSD module into the M.2 slot. Please be aware that the M.2 (NGFF) SSD module only fits in one orientation.

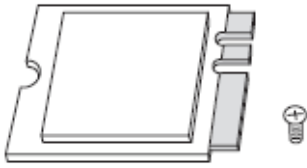


Step 5

Tighten the screw with a screwdriver to secure the module and M.2 heatsink into place. Please do not overtighten the screw as this might damage the module and M.2 heatsink.

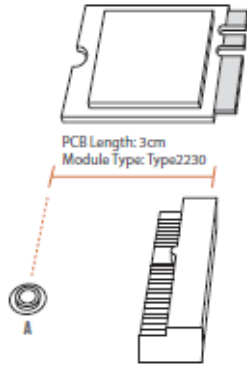
M.2 WiFi/BT Module and Intel® CNVi (Integrated WiFi/BT) Installation Guide

Installing the WiFi/BT module



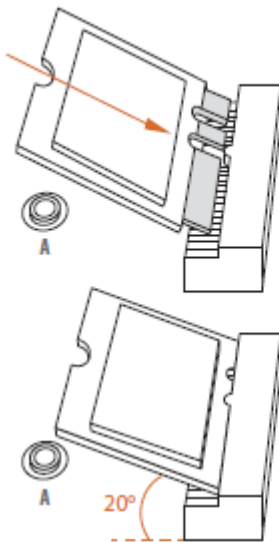
Step 1

Prepare a type 2230 WiFi/BT module or Intel® CNVi (Integrated WiFi/BT) and the screw.



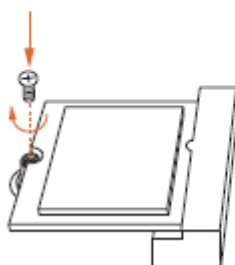
Step 2

Find the nut location to be used.



Step 3

Gently insert the WiFi/BT module or Intel® CNVi (Integrated WiFi/BT) into the M.2 slot. Please be aware that the module only fits in one orientation.



Step 4

Tighten the screw with a screwdriver to secure the module into place. Please do not overtighten the screw as this might damage the module.

Setting up the system

Pre-installation requirements

Selecting a site

Before unpacking and installing the system, select a suitable site for the system for maximum efficiency. Consider the following factors when choosing a site for the system:

- Near a grounded power outlet.
- Clean and dust-free
- Stable surface free from vibration.
- Well-ventilated and away from sources of heat.
- Secluded from electromagnetic fields produced by electrical devices such as air conditioners, radio and TV transmitters, etc.

Checking the package contents

Check the following items from the package:

- System unit
- Accessory box

If any of the above items is damaged or missing, contact your dealer immediately.

Save the boxes and packing materials for future use.

Turning on the system

After making sure that you have properly set up the system, applied power and connected all the necessary peripherals, you can now power on the system. Follow the procedure below.

Press the power button .

The system starts up and displays a welcome message on the monitor. After that, a series of power-on self-test (POST) messages appears. The POST messages indicate if the system is running well or not.



Note: If the system does not turn on or boot after pressing the power button, go to the next section for the possible causes of the boot failure

Aside from the POST messages, you can determine if the system is in good condition by checking if the following occurred.

- The power status indicator on the front panel lights up blue.
- The Num Lock, Caps Lock and Scroll Lock indicators on the keyboard light up.

Power-on problems

If the system fails to boot after you have applied power, check the following factors that might have caused the boot failure.

- The external power cord may be loosely connected.
- Check the power cord connection from the power outlet to the power cord socket on the rear panel. Make sure that the cord is properly connected to the power outlet and to the power cord socket.

No power comes from the grounded power outlet. Have an electrician check your power outlet.

- Loose or improperly connected internal power cables.
Check the internal cable connections. If you are not confident to perform this step, ask a qualified technician to assist you.



Warning! Make sure all power cords are disconnected from the electrical outlet before performing this task.



Note: If you have gone through the preceding actions and the system still fails to boot, ask your dealer or a qualified technician for assistance.

Turning off the system

There are two ways to turn off the Workstation—via software or via hardware. The software procedure below applies to a system running on a Windows OS. For other shutdown procedures, refer to the related user documentation.

To turn off the system via software:

1. Press <Ctrl> + <Alt> + <Delete> on the attached keyboard or click **Start** on the Windows taskbar.
2. Select **Shut Down**.
3. Select Shut Down from the drop-down menu, then click **OK**.

To turn off the system via hardware

If you cannot shut down the Workstation via software, press the power button for at least four seconds. Quickly pressing the button may put the Workstation in a Suspend mode only.

System troubleshooting

Resetting the system

Before going through in-depth troubleshooting, attempt first to reset the system using one of the methods below.

Perform	Purpose	To do this
Soft boot	To clear the system memory and reload the operating system.	Press <Ctrl> + <Alt> +
Cold boot	To clear the system memory, restart POST, and reload the operating system. This will halt power to all peripherals.	Turn the system off and then on again.

Initial system startup problems

Problems that occur at initial system startup are usually caused by an incorrect installation or configuration. Hardware failure is a less possible cause. If the problem you are experiencing is with a specific application.

Initial troubleshooting checklist

- AC power is available at the wall outlet?
- Is the power supply module properly installed?
- Is the system power cord properly plugged into the power supply module socket? and connected to a NEMA 5-15R outlet for 100-120 V or a NEMA 6-15R outlet for 200-240 V?
- Are all peripheral cables correctly connected and secured?
- Did you press the system power button to turn the Workstation on (power on indicator should be lit green)?
- Are all device drivers properly installed?
- Are hard disk drive(s) properly formatted and configured?
- Are the BIOS configuration settings in the BIOS Setup Utility correct?
- Is the operating system properly loaded?
Refer to the operating system documentation.
- Are all hardware components compliant with the tested components lists?
- Are all internal cables correctly connected and secured?
- Is the processor properly seated in its mainboard socket?
- Are all standoffs in the proper location and not touching any components, causing a potential short?
- Are all add-in expansion cards fully seated in their mainboard slots?
- Are all system jumpers correctly set?
- Are all switch settings on add-in boards and peripheral devices correct?

To check these settings, refer to the manufacturer's documentation that comes with them. If applicable, ensure that there are no conflicts (e.g., two add-in boards sharing the same interrupt).

Hardware diagnostic testing

This section provides a detailed approach to identifying a hardware problem and its cause.

Checking the boot-up status



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Caution: Before disconnecting any peripheral cables from the Workstation, turn off the system and any peripheral devices. Failure to do so can cause permanent damage to the system and/or the peripheral device.

1. Turn off the system and all external peripheral devices.
2. Disconnect all peripheral devices from the system, except for the keyboard and the display monitor.
3. Make sure the system power cord is plugged into a properly grounded AC outlet and in the power supply module cord socket.
4. Make sure the display monitor and keyboard are correctly connected to the system.
5. Turn on the display monitor.
6. Set the display brightness and contrast controls to at least two thirds of their maximum range.
Refer the documentation that came with your display monitor.
7. If the operating system normally loads from the hard drive, make sure there is no diskette in floppy drive and no disc in the optical drive.
8. If the power indicator is lit, attempt to boot from a disc.
9. Turn on the system.

Verifying the condition of the storage devices

As POST determines the system configuration, it tests for the presence of each mass storage device installed in the system. As each device is checked, its activity indicator should turn blue briefly. Check the activity indicators for the hard drive(s), DVD-ROM drive, and any other 5.25" device you may have installed.

If any of these indicators fail to light up, refer to related problems listed in the Specific problems and corrective actions section.

Specific problems and corrective actions

Listed below are specific problems that may arise during the use of your Workstation and their possible solutions

Confirming loading of the operating system

Once the system boots up, the operating system prompt appears on the screen. The prompt varies according to the operating system. If the operating system prompt does not appear.

Specific problems and corrective actions

Listed below are specific problems that may arise during the use of your Workstation and their possible solutions

Specific problems and corrective actions

Listed below are specific problems that may arise during the use of your Workstation and their possible solutions.

Power indicator does not light.

Do the following:

- Make sure the power supply module is properly installed.
- Make sure the power cord is connected correctly.
- Make sure that the wall outlet has power. Test it by plugging in another device.
- Make sure the power indicator on the front panel is lit up.
- Remove all add-in cards and see if the system boots.
If reboot is successful, install the cards back in one at a time with a reboot between each addition to determine if one of them is causing the problem.
- Make sure that you have properly installed system compliant memory modules, and that they are populated according to the system guidelines.
- Make sure that you have installed system compliant processors, and that they are populated according to the system guidelines.

Optical drive activity indicator does not light

Do the following:

- Make sure the SATA and power cables are properly connected.
- Check that relevant switches and jumpers on the drive are set correctly.
- Check that the drive is properly configured.

Optical drive tray cannot be ejected

Insert the tip of a paperclip into the small hole on the optical drive. Slowly pull the tray out from the drive until the tray is fully extended.

Optical drive cannot read a disc

Do the following:

- Make sure you are using the correct type of disc.
- Make sure the disc is properly seated in the drive.
- Make sure the disc is unscratched.
- Make sure the drive's cables are properly connected.

Newly installed memory modules are not detected.

Do the following:

- Make sure the memory modules specifications comply with the system requirements.
- Make sure the memory modules have been populated according to the system guidelines.
- Make sure the memory modules are properly installed on their mainboard slots.

Network activity indicators do not light.

Do the following:

- Make sure the correct network drivers are loaded on the system.
- Network might be idle.

Peripheral device connected to a USB port does not work.

Do the following:

- Reduce the number of external devices connected to a USB hub.
- Refer to the documentation that came with the device

There is problem with the software program.

Do the following:

- Verify that the software is properly configured for the system.
- Refer to the software installation and operation documentation for instructions on setting up and using the software. Try a different version of the software to see if the problem is with the copy you are using. If the other version runs correctly on the system, contact your vendor about the defective software.

No characters appear on the display monitor.

Do the following:

- Is the keyboard functioning? Test it by turning the Num Lock function on and off to check if the Num Lock indicator lights up.
- Is the display monitor plugged in and turned on? If you are using a switch box, is it switched to the correct system?
- Are the brightness and contrast controls on the video monitor properly adjusted?
- Is the display monitor signal cable properly connected?
- Does this display monitor work correctly if plugged into a different system?
- Remove all add-in cards and see if the system boots.
If reboot is successful, install the cards back in one at a time with a reboot between each addition to determine if one of them is causing the problem.
- Make sure that you have properly installed system-compliant memory modules, and that they are populated according to the system guidelines.
- Make sure that you have installed system compliant processors, and that they are populated according to the system guidelines.

If you are using an add-in video controller card, do the following:

1. Verify that the display monitor works using the onboard video controller.
2. Verify that the add-in video controller card is fully seated in its slot.
3. Reboot the system for the changes to take effect.
4. If there are still no characters on the screen after you reboot the system, reboot it again. Take note of the beep codes emitted during POST. This information may be required if you seek technical assistance.

If POST does not emit any beep code and characters still do not appear, the display monitor or the video controller may be defective. Contact your local Altos representative or authorized dealer for technical assistance.



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Note: If POST does not emit any beep code and characters still do not appear, the

display monitor or the video controller may be defective. Contact your local Altos representative or authorized dealer for technical assistance.

Notices

Information for your safety and comfort

Safety instructions

Read these instructions carefully. Keep this document for future reference. Follow all warnings and instructions marked on the product.

Turning the product off before cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

CAUTION for plug as disconnecting device

Observe the following guidelines when connecting and disconnecting power to the power supply unit:

- Install the power supply unit before connecting the power cord to the AC power outlet.
- Unplug the power cord before removing the power supply unit from the computer.
- If the system has multiple sources of power, disconnect power from the system by unplugging all power cords from the power supplies.

CAUTION for accessibility

Be sure that the power outlet you plug the power cord into is easily accessible and located as close to the equipment operator as possible. When you need to disconnect power to the equipment, be sure to unplug the power cord from the electrical outlet.

Warnings

- Do not use this product near water.
- Do not place this product on an unstable cart, stand or table. If the product falls, it could be seriously damaged.
- Slots and openings are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.

- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind onto or into the product.
- To avoid damage of internal components and to prevent battery leakage, do not place the product on a vibrating surface.
- Never use it under sporting, exercising, or any vibrating environment which will probably cause unexpected short current or damage rotor devices, HDD, Optical drive, and even exposure risk from lithium battery pack.
- This product is not suitable for use with visual display workplace devices according to §2 of the German Ordinance for Work with Visual Display Units.

Using electrical power

- This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where people will walk on the cord.
- If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
- Do not overload a power outlet, strip or receptacle by plugging in too many devices. The overall system load must not exceed 80% of the branch circuit rating. If power strips are used, the load should not exceed 80% of the power strip's input rating.
- This product's power supply is equipped with a three-wire grounded plug. The plug only fits in a grounded power outlet. Make sure the power outlet is properly grounded before inserting the power supply plug. Do not insert the plug into a non-grounded power outlet. Contact your electrician for details.



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Warning ! The grounding pin is a safety feature. Using a power outlet that is not properly grounded may result in electric shock and/or injury.



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Note: The grounding pin also provides good protection from unexpected noise produced by other nearby electrical devices that may interfere with the performance of this product.

- Use the product only with the supplied power supply cord set. If you need to replace the power cord set, make sure that the new power cord meets the following requirements: detachable type, UL listed/CSA certified, VDE approved or its equivalent, 4.6 meters (15 feet) maximum length.

Product servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel when:

- the power cord or plug is damaged, cut or frayed
- liquid was spilled into the product
- the product was exposed to rain or water
- the product has been dropped or the case has been damaged
- the product exhibits a distinct change in performance, indicating a need for service
- the product does not operate normally after following the operating instructions



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Notes : Adjust only those controls that are covered by the operating instructions, since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.

This Workstation should be located in a restricted access location or an area with similar instruction.



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Caution: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Disposal instructions

Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle.



Regulations and safety notices

Laser compliance statement

The CD or DVD drive used with this computer is a laser product.

The CD or DVD drive's classification label (shown below) is located on the drive.

CLASS 1 LASER PRODUCT

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

Declaration of Conformity for EU countries

Hereby, Altos, declares that this system is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

List of applicable countries

This device must be used in strict accordance with the regulations and constraints in the country of use. For further information, please contact local office in the country of use. Please see <http://ec.europa.eu/enterprise/rtte/implem.htm> or the latest country list.



Note: The following sections are applicable only to Class A systems

FCC notice Class B

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations. In compliance with FCC regulations, use shielded cables to connect to other computing devices.

Notice: Peripheral devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class A limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Caution

Changes or modifications not expressly approved by the manufacture could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Operation conditions

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.

Notice: Canadian users

This Class A digital apparatus complies with Canadian ICES-003.