

**Q270M-CM-A**  
**Q270M-CM-A/CSM PRO**



# Motherboard

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# Safety information

## Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

## Operation safety

- Before installing the motherboard and adding components, carefully read all the manuals that came with the package.
- Before using the product, ensure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may be exposed to moisture.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

## About this guide

This user guide contains the information you need when installing and configuring the motherboard.

## How this guide is organized

This guide contains the following parts:

- **Chapter 1: Product introduction**  
This chapter describes the features of the motherboard and the new technology it supports. It includes descriptions of the switches, jumpers, and connectors on the motherboard.
- **Chapter 2: BIOS information**  
This chapter discusses changing system settings through the BIOS Setup menus. Detailed descriptions for the BIOS parameters are also provided.

## Where to find more information

Refer to the following sources for additional information and for product and software updates.

### 1. ASUS websites

The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information.

### 2. Optional documentation

Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

## Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.



**DANGER/WARNING:** Information to prevent injury to yourself when completing a task.



**CAUTION:** Information to prevent damage to the components when completing a task.



**IMPORTANT:** Instructions that you **MUST** follow to complete a task.



**NOTE:** Tips and additional information to help you complete a task.

## Typography

**Bold text**

Indicates a menu or an item to select.

*Italics*

Used to emphasize a word or a phrase.

<Key>

Keys enclosed in the less-than and greater-than sign means that you must press the enclosed key.

Example: <Enter> means that you must press the Enter or Return key.

<Key1> + <Key2> + <Key3>

If you must press two or more keys simultaneously, the key names are linked with a plus sign (+).

## Package contents

Check your motherboard package for the following items.

<b>Motherboard</b>	ASUS Q270M-CM-A motherboard
<b>Cables</b>	2 x Serial ATA 6.0 Gb/s cables
<b>Accessories</b>	1 x I/O Shield 1 x M.2 screw package
<b>Application DVD</b>	Support DVD
<b>Documentation</b>	User Guide



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

## Q270M-CM-A specifications summary

<b>CPU</b>	LGA1151 socket for 7th/6th Generation Intel® Core™ i7/ i5/ i3, Pentium®, and Celeron® Processors* Supports 14nm CPU Supports Intel® Turbo Boost Technology 2.0** * <b>The Intel® Turbo Boost Technology 2.0 support depends on the CPU types.</b> ** Refer to <a href="http://www.asus.com">www.asus.com</a> for Intel® CPU support list.
<b>Chipset</b>	Intel® Q270 Chipset
<b>Memory</b>	4 x DIMM, max. 64GB, DDR4 2400MHz, non-ECC, un-buffered memory Dual-channel memory architecture Supports Intel® Extreme Memory Profile (XMP) * <b>Hyper DIMM support is subject to the physical characteristics of individual CPUs. Please refer to Memory QVL for details.</b> ** Refer to <a href="http://www.asus.com">www.asus.com</a> for the latest Memory QVL (Qualified Vendors List).
<b>Graphics</b>	Integrated graphics processor Multi-VGA output support: 2xDP/HDMI/RGB ports - Supports DisplayPort with max. resolution of 4096 x 2304 @60Hz - Supports HDMI with max. resolution of 4096x2160@24Hz / 2560x1600@60Hz - Supports RGB with max. resolution of 1920 x 1200 @60Hz Support up to three displays simultaneously Support Intel® InTru™ 3D, Quick Sync Video, Intel® Clear Video HD Technology, and Intel® Insider™ Maximum shared memory of 1024 MB
<b>Expansion slots</b>	2 x PCI Express 3.0/2.0 x16 slots (1 @x4 mode) 2 x PCI Express 3.0/2.0 x1 slots
<b>LAN</b>	Intel® I219LM Gigabit LAN Controller
<b>Audio</b>	Realtek ALC887 8-channel High Definition Audio CODEC - Supports jack-detection and front panel jack-retasking
<b>USB</b>	8 x USB 3.0 ports Type A (2 ports at midboard, 6 ports at back panel) 1 x USB 3.0 port Type C (1 ports at back panel) 2 x USB 2.0 ports (2 ports at midboard)

(continued on the next page)

## Q270M-CM-A specifications summary

<p><b>Storage</b></p>	<p>Intel® Q270 Chipset:</p> <ul style="list-style-type: none"> <li>- 6 x Serial ATA 6.0 Gb/s connectors (gray)</li> <li>- 2 x M.2 Sockets with M Key, type 2242/2260/2280 storage devices with IRST support, (M.1_1 @ SATA &amp; PCIE x4 mode, M.2_2 @ PCIE x2 mode)</li> <li>- Ready for Intel® Optane Memory*</li> <li>- Supports Raid 0,1,5,10</li> </ul> <p>* Intel® Optane Technology is only supported when using 7th Generation Intel® Processors. Before using Intel® Optane memory modules, ensure that you have updated your motherboard drivers and BIOS to the latest version from ASUS support website.</p>
<p><b>ASUS unique features</b></p>	<p><b>Dependable stability:</b></p> <p><b>ASUS 5X PROTECTION III:</b></p> <ul style="list-style-type: none"> <li>- SafeSlot Core - Fortified PCIe with solid soldering</li> <li>- LANGuard - Surge-protected networking</li> <li>- Overvoltage Protection - World-class circuit-protecting power design</li> <li>- ESD Guards - Electrostatic discharge protection</li> <li>- Stainless Steel Back I/O - 3X corrosion-resistance for greater durability</li> </ul> <p><b>Superb performance:</b></p> <p><b>UEFI BIOS:</b></p> <ul style="list-style-type: none"> <li>- Most advanced options with fast response time</li> </ul> <p><b>Easy PC DIY:</b></p> <p><b>Safe motherboard mounting</b></p> <ul style="list-style-type: none"> <li>- Component-free areas to minimize damage risk</li> </ul> <p><b>Q-Design</b></p> <ul style="list-style-type: none"> <li>- ASUS Q-DIMM</li> <li>- ASUS Q-Slot</li> </ul>
<p><b>Rear panel I/O ports</b></p>	<p>1 x PS/2 keyboard port (purple)</p> <p>1 x PS/2 mouse port (green)</p> <p>1 x D-Sub port</p> <p>1 x HDMI port</p> <p>2 x DisplayPorts</p> <p>1 x LAN (RJ-45) port</p> <p>6 x USB 3.0/2.0 Type A ports</p> <p>1 x USB 3.0/2.0 Type C port</p> <p>3 x Audio jacks support 8-channel audio output*</p> <p>* Use a chassis with HD audio module in the front panel to support an 8-channel audio output.</p>
<p><b>Internal connectors/ switches/ buttons</b></p>	<p>1 x USB 3.0/2.0 connector supports additional 2 USB 3.0 ports</p> <p>1 x USB 2.0/1.1 connector supports additional 2 USB 2.0 ports</p> <p>6 x SATA 6Gb/s connector</p> <p>1 x CPU Fan connector</p> <p>2 x Chassis Fan connectors</p> <p>1 x Front panel audio connector(s) (AAFP)</p> <p>1 x System panel connector</p>

(continued on the next page)

# Q270M-CM-A specifications summary

<b>Internal connectors/ switches/ buttons</b>	1 x 24-pin ATX Power connector 1 x 8-pin ATX 12V Power connector 1 x Speaker connector 2 x COM port header 1 x LPT port header 1 x Chassis Intrusion header 1 x Clear CMOS header 1 x MONO-out header(with Amp IC) 1 x DIS ME jumper 1 x LPC debug header TPM 2.0 IC Onboard
<b>BIOS features</b>	64 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI3.0, WfM2.0, SM BIOS 3.0, ACPI 5.1, Multi-language BIOS, ASUSbackup, LOGO flash, ME update, DMI value edit, BIOS value edit
<b>Manageability</b>	WfM 2.0, DMI 3.0, WOL, WOR, PXE
<b>Support DVD</b>	Drivers
<b>Operating systems</b>	Windows® 10 (64-bit) Windows® 8.1 (64-bit)* Windows® 7 (64-bit/32-bit)* * <b>Windows® 8.1 (64-bit) and Windows® 7 (32/64-bit) are only supported when using 6th Generation Intel® Processors.</b>
<b>Form factor</b>	mATX Form Factor 9.6 x 9.6 inches (24.4 x 24.4 cm)




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Specifications are subject to change without notice.

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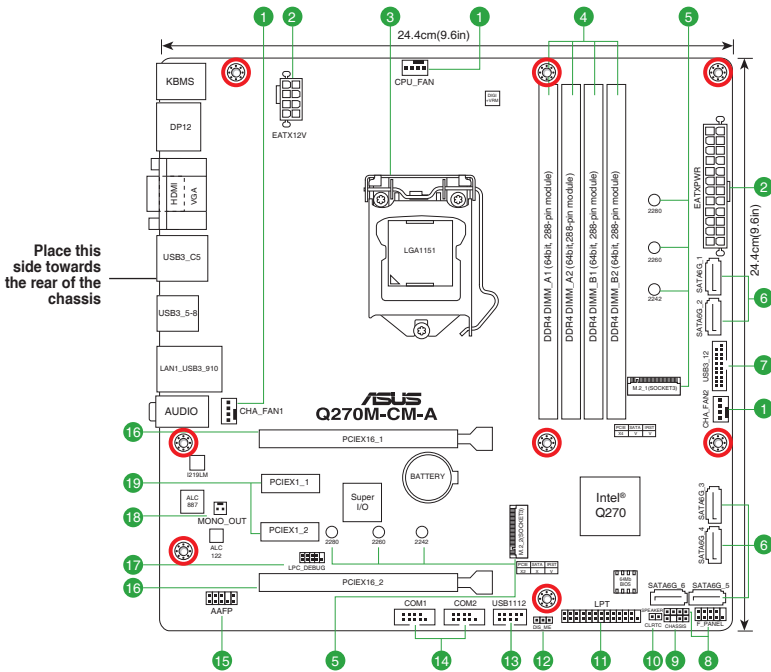
# Product introduction

# 1

## Motherboard overview



- Unplug the power cord from the wall socket before touching any component.
- Before handling components, use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, to avoid damaging them due to static electricity.
- Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components.
- Unplug the power cord before installing or removing the motherboard. Failure to do so can cause you physical injury and damage to motherboard components.



Scan the QR code to get the detailed pin definitions.



## 1 CPU and chassis fan connectors (4-pin CPU\_FAN, 4-pin CHA\_FAN1/2)

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.



Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan connectors! The CPU\_FAN connector supports a CPU fan of maximum 1A (12 W) fan power.

## 2 ATX power connectors (24-pin EATXPWR, 8-pin ATX12V)

Correctly orient the ATX power supply plugs into these connectors and push down firmly until the connectors completely fit.



- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 350 W.
- If you are uncertain about the minimum power supply requirement for your system, refer to the Recommended Power Supply Wattage Calculator at <http://support.asus.com/PowerSupplyCalculator/PSCalculator.aspx?SLanguage=en-us> for details.

## 3 Intel® LGA1151 CPU socket

Install Intel® LGA1151 CPU into this surface mount LGA1151 socket, which is designed for 7th / 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.



For more details, refer to **Central Processing Unit (CPU)**.

## 4 DDR4 DIMM slots

This motherboard comes with four Double Data Rate 4 (DDR4) Dual Inline Memory Module (DIMM) sockets. A DDR4 module is notched differently from a DDR, DDR2, or DDR3 module.



For more details, refer to **System memory**.



DO NOT install a DDR, DDR2, or DDR3 memory module to the DDR4 slot.

## 5 M.2 socket 3

These sockets allow you to install an M.2 (NGFF) SSD module.



These sockets support M Key and 2242/2260/2280 storage devices.

6

### Intel® Q270 Serial ATA 6.0Gb/s connectors (7-pin SATA6G\_1-6)

These connectors connect to Serial ATA 6.0 Gb/s hard disk drives via Serial ATA 6.0 Gb/s signal cables.



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When using hot-plug and NCQ, set the **SATA Mode Selection** item in the BIOS to [AHCI].

---

7

### USB 3.0 connector (20-1 pin USB3\_12)

Connect a USB 3.0 module to this connector for additional USB 3.0 front or rear panel ports. This connector complies with USB 3.0 specifications and provide faster data transfer speeds of up to 5 Gbps, faster charging time for USB-chargeable devices, optimized power efficiency, and backward compatibility with USB 2.0.

8

### System panel connector (10-1 pin F\_PANEL)

This connector supports several chassis-mounted functions.

9

### Speaker connector (4-pin SPEAKER)

The 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system warnings.

10

### Clear RTC RAM (2-pin CLRTC)

This header allows you to unconfigure ME and clear the CMOS RTC RAM data of the system setup information such as date, time, and system passwords.

#### To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Use a metal object such as a screwdriver to short the two pins.
3. Plug the power cord and turn ON the computer.
4. Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data.



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If the steps above do not help, remove the onboard battery and short the two pins again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.

---

11

### LPT connector (26-1 pin LPT)

The LPT (Line Printing Terminal) connector supports devices such as a printer. LPT standardizes as IEEE 1284, which is the parallel port interface on IBM PC-compatible computers.

12

### Intel® ME jumper (3-pin DIS\_ME)

This jumper allows you to enable or disable the Intel® ME function. Set this jumper to pins 1-2 to enable (default) the Intel® ME function and to pins 2-3 to disable it.



---

Disable the Intel® ME function before updating it.

---

**13 USB 2.0 connector (10-1 pin USB1112)**

This connector is for USB 2.0 ports. Connect the USB module cable to this connector, then install the module to a slot opening at the back of the system chassis. This USB connector complies with USB 2.0 specifications and supports up to 480Mbps connection speed.

**14 Serial port connectors (10-1 pin COM1-2)**

These connectors are for serial (COM) ports. Connect the serial port module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis.

**15 Front panel audio connector (10-1 pin AAFP)**

This connector is for a chassis-mounted front panel audio I/O module that supports HD Audio standard. Connect one end of the front panel audio I/O module cable to this connector.



We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.

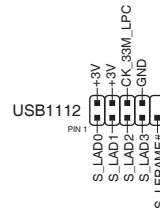
**16 PCI Express 3.0/2.0 x16 slots**

This motherboard has PCI Express 3.0/2.0 x16 slots that support PCI Express 3.0/2.0 x16 graphic cards complying with the PCI Express specifications.

**17 LPC Debug header**

This header allows connection to a LPC debug card.

**LPC\_DEBUG**



**18 Mono out header (2-pin MONO\_OUT)**

This internal mono out header allows connection to an internal, low power speaker for basic system sound capability. The subsystem is capable of driving a speaker load of 2 Ohms at 2 Watts (rms).

**19 PCI Express 3.0/2.0 x1 slots**

This motherboard supports two PCI Express x1 network cards, SCSI cards, and other cards that comply with the PCI Express specifications.

## IRQ assignments for this motherboard

	A	B	C	D
HD Audio Controller	shared	–	–	–
XHCI Controller	shared	–	–	–
SATA Controller	shared	–	–	–
LAN1 I219LM	shared	–	–	–
PCIEx1_1	–	–	shared	–
PCIEx1_2	–	–	–	shared
PCIEx16_1	shared	–	–	–
PCIEx16_1	shared	–	–	–
M.2_1	shared	–	–	–

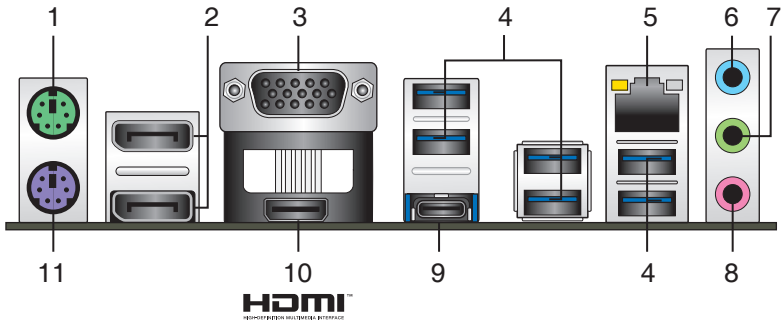


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When using PCI cards on shared slots, ensure that the drivers support “Share IRQ” or that the cards do not need IRQ assignments. Otherwise, conflicts will arise between the two PCI groups, making the system unstable and the card inoperable.

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## Rear panel connectors



1. **PS/2 mouse port (green).** This port is for a PS/2 mouse.
2. **DisplayPorts.** These ports are for DisplayPort-compatible devices.
3. **Video Graphics Adapter (VGA) port.** This 15-pin port is for a VGA monitor or other VGA-compatible devices.
4. **USB 3.0 ports.** These 9-pin Universal Serial Bus (USB) ports are for USB 3.0/2.0 devices.



- USB 3.0 devices can only be used for data storage.
- We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for faster and better performance from your USB 3.0 devices.
- Due to the design of the Intel® 200 series chipset, all USB devices connected to the USB 2.0 and USB 3.0 ports are controlled by the xHCI controller. Some legacy USB devices must update their firmware for better compatibility.

5. **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

### LAN port LED indications

Activity/Link LED		Speed LED	
Status	Description	Status	Description
Off	No link	OFF	10Mbps connection
Orange	Linked	ORANGE	100Mbps connection
Orange (Blinking)	Data activity	GREEN	1Gbps connection
Orange (Blinking then steady)	Ready to wake up from S5 mode	–	–

6. **Line In port (light blue).** This port connects to the tape, CD, DVD player, or other audio sources.
7. **Line Out port (lime).** This port connects to a headphone or a speaker. In the 4.1, 5.1 and 7.1-channel configurations, the function of this port becomes Front Speaker Out.
8. **Microphone port (pink).** This port connects to a microphone.



Refer to the audio configuration table for the function of the audio ports in 2.1, 4.1, 5.1, or 7.1-channel configuration.

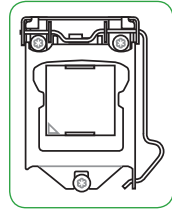
#### Audio 2.1, 4.1, 5.1, or 7.1-channel configuration

Port	Headset 2.1-channel	4.1-channel	5.1-channel	7.1-channel
Light Blue (Rear panel)	Line In	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Lime (Rear panel)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink (Rear panel)	Mic In	Mic In	Bass/Center	Bass/Center
Lime (Front panel)	-	-	-	Side Speaker Out

9. **5Gb/s Type C USB port.** This Universal Serial Bus (USB) Type C port is for Type C USB mobile or peripheral devices.
10. **HDMI port.** This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content.
11. **PS/2 keyboard port (purple).** This port is for a PS/2 keyboard.

# Central Processing Unit (CPU)

This motherboard comes with a surface mount LGA1151 socket designed for 7th / 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.

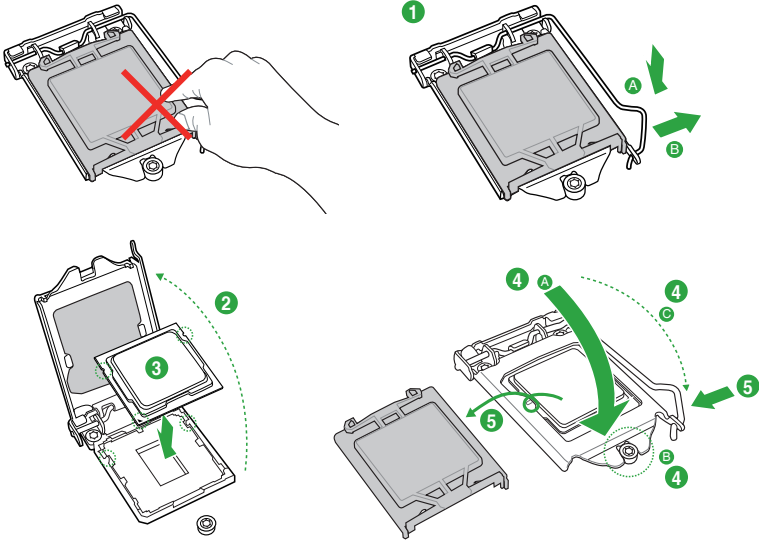


Unplug all power cables before installing the CPU.



- Ensure that you install the correct CPU designed for the LGA1151 socket only. DO NOT install a CPU designed for LGA1150, LGA1155 and LGA1156 sockets on the LGA1151 socket.
- Upon purchase of the motherboard, ensure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components.
- Keep the cap after installing the motherboard. ASUS will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the LGA1151 socket.
- The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/incorrect removal of the PnP cap.

## Installing the CPU



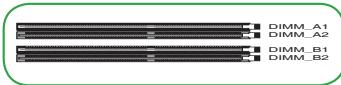
Apply the Thermal Interface Material to the CPU heatsink and CPU before you install the heatsink and fan if necessary.



# System memory

## Overview

This motherboard comes with four Double Data Rate 4 (DDR4) Dual Inline Memory Module (DIMM) sockets. A DDR4 module is notched differently from a DDR, DDR2, or DDR3 module. DO NOT install a DDR, DDR2, or DDR3 memory module to the DDR4 slot.



Channel	Sockets
Channel A	DIMM_A1 & DIMM_A2
Channel B	DIMM_B1 & DIMM_B2

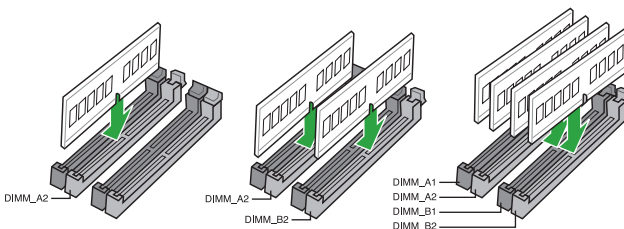


- You may install varying memory sizes in Channel A and Channel B. The system maps the total size of the lower-sized channel for the dual-channel configuration. Any excess memory from the higher-sized channel is then mapped for single-channel operation.
- Always install the DIMMS with the same CAS Latency. For an optimum compatibility, we recommend that you install memory modules of the same version or data code (D/C) from the same vendor. Check with the vendor to get the correct memory modules.
- According to Intel® CPU spec, DIMM voltage below 1.35V is recommended to protect the CPU.
- Due to the memory address limitation on 32-bit Windows® OS, when you install 4GB or more memory on the motherboard, the actual usable memory for the OS can be about 3GB or less. For effective use of memory, we recommend that you do any of the following:
  - Use a maximum of 3 GB system memory if you are using a 32-bit Windows® OS.
  - Install a 64-bit Windows® OS if you want to install 4GB or more on the motherboard.
  - For more details, refer to the Microsoft® support site at <http://support.microsoft.com/kb/929605/en-us>.



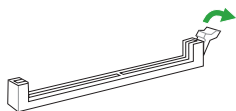
Visit the ASUS website at [www.asus.com](http://www.asus.com) for the latest QVL.

## Recommended memory configurations

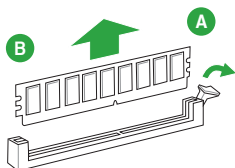


## Installing a DIMM

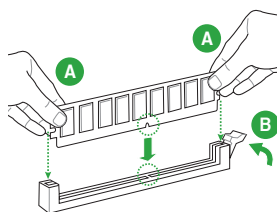
1



To remove a DIMM



2



# BIOS information

# 2



Scan the QR code to view the BIOS update guide.



## BIOS setup program

Use the BIOS Setup program to update the BIOS or configure its parameters. The BIOS screens include navigation keys and brief online help to guide you in using the BIOS Setup program.

### Entering BIOS Setup at startup

#### To enter BIOS Setup at startup:

Press <Delete> or <F2> during the Power-On Self Test (POST). If you do not press <Delete> or <F2>, POST continues with its routines.

### Entering BIOS Setup after POST

#### To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+<Del> simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.



Using the power button, reset button, or the <Ctrl>+<Alt>+<Del> keys to force reset from a running operating system can cause damage to your data or system. We recommend you always shut down the system properly from the operating system.



- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Visit the ASUS website at [www.asus.com](http://www.asus.com) to download the latest BIOS file for this motherboard.
- If the system becomes unstable after changing any BIOS setting, load the default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the Exit menu or press hotkey F5.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. See section **Motherboard overview** for information on how to erase the RTC RAM.

# BIOS menu screen

The screenshot shows the Aptio Setup Utility interface. At the top, a blue menu bar contains the text "Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc." and a list of menu items: "Main", "Ai Tweaker", "Advanced", "Monitor", "Boot", "Tool", and "Exit". The "Main" item is highlighted. Below the menu bar, the main screen is divided into two columns. The left column displays system information under the heading "BIOS Information" and "Processor Information". The right column contains a "General Help" section with instructions on how to navigate the menu. Red boxes and lines are used to highlight and label various elements: "Menu bar" points to the top blue bar; "General Help" points to the right-hand column; "Sub-menu item" points to "System Language"; "Menu items" points to "System Date" and "System Time"; "Configuration fields" points to the values "[English]", "[Sun 07/23/2017]", "[14:44:55]", and "Administrator"; and "Security" points to the "Security" option in the left column.

Menu bar

General Help

```
Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.
Main  Ai Tweaker  Advanced  Monitor  Boot  Tool  Exit

BIOS Information
BIOS Version           0206 x64
Build Date             01/23/2017
ME Firmware Version    11.6.0.1126
PCH Stepping           AO

Processor Information
Brand String           Intel(R)Core(TM)
CPU Speed               3800 MHz
Total Memory           8192 MB
Memory Frequency       2133 MHz

System Language        [English]

System Date             [Sun 07/23/2017]
System Time             [14:44:55]

Access Level           Administrator
Security

-->>>: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F5: Optimized Defaults
F10: Save & Exit
ESC: Exit

Version 2.17.1246 Copyright (C) 2017 American Megatrends, Inc.
```

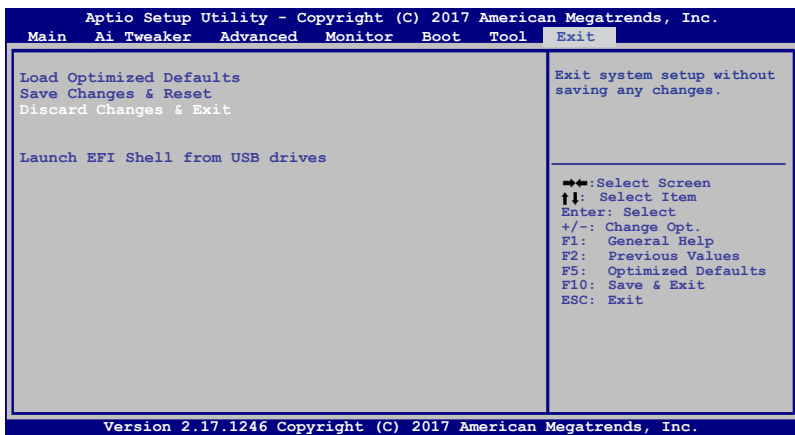
Sub-menu item

Menu items

Configuration fields

## Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items.



### Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select OK to load the default values.

### Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select OK to save changes and exit.

### Discard Changes & Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select OK to discard changes and exit.

### Launch EFI Shell from USB drives

This option allows you to attempt to launch the EFI Shell application (shellx64.efi) from one of the available USB devices.

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# Appendix

## Q-Code table

Code	Description
00	Not used
01	Power on. Reset type detection (soft/hard).
02	AP initialization before microcode loading
03	System Agent initialization before microcode loading
04	PCH initialization before microcode loading
06	Microcode loading
07	AP initialization after microcode loading
08	System Agent initialization after microcode loading
09	PCH initialization after microcode loading
0B	Cache initialization
0C – 0D	Reserved for future AMI SEC error codes
0E	Microcode not found
0F	Microcode not loaded
10	PEI Core is started
11 – 14	Pre-memory CPU initialization is started
15 – 18	Pre-memory System Agent initialization is started
19 – 1C	Pre-memory PCH initialization is started
2B – 2F	Memory initialization
30	Reserved for ASL (see ASL Status Codes section below)
31	Memory Installed
32 – 36	CPU post-memory initialization
37 – 3A	Post-Memory System Agent initialization is started
3B – 3E	Post-Memory PCH initialization is started
4F	DXE IPL is started
50 – 53	Memory initialization error. Invalid memory type or incompatible memory speed
54	Unspecified memory initialization error
55	Memory not installed
56	Invalid CPU type or Speed
57	CPU mismatch
58	CPU self test failed or possible CPU cache error
59	CPU micro-code is not found or micro-code update is failed
5A	Internal CPU error
5B	Reset PPI is not available
5C – 5F	Reserved for future AMI error codes

*(continued on the next page)*

## Q-Code table

Code	Description
E0	S3 Resume is started (S3 Resume PPI is called by the DXE IPL)
E1	S3 Boot Script execution
E2	Video repost
E3	OS S3 wake vector call
E4 – E7	Reserved for future AMI progress codes
E8	S3 Resume Failed
E9	S3 Resume PPI not Found
EA	S3 Resume Boot Script Error
EB	S3 OS Wake Error
EC – EF	Reserved for future AMI error codes
F0	Recovery condition triggered by firmware (Auto recovery)
F1	Recovery condition triggered by user (Forced recovery)
F2	Recovery process started
F3	Recovery firmware image is found
F4	Recovery firmware image is loaded
F5 – F7	Reserved for future AMI progress codes
F8	Recovery PPI is not available
F9	Recovery capsule is not found
FA	Invalid recovery capsule
FB – FF	Reserved for future AMI error codes
60	DXE Core is started
61	NVRAM initialization
62	Installation of the PCH Runtime Services
63 – 67	CPU DXE initialization is started
68	PCI host bridge initialization
69	System Agent DXE initialization is started
6A	System Agent DXE SMM initialization is started
6B – 6F	System Agent DXE initialization (System Agent module specific)
70	PCH DXE initialization is started
71	PCH DXE SMM initialization is started
72	PCH devices initialization
73 – 77	PCH DXE Initialization (PCH module specific)
78	ACPI module initialization
79	CSM initialization
7A – 7F	Reserved for future AMI DXE codes

*(continued on the next page)*



## Q-Code table

Code	Description
90	Boot Device Selection (BDS) phase is started
91	Driver connecting is started
92	PCI Bus initialization is started
93	PCI Bus Hot Plug Controller Initialization
94	PCI Bus Enumeration
95	PCI Bus Request Resources
96	PCI Bus Assign Resources
97	Console Output devices connect
98	Console input devices connect
99	Super IO Initialization
9A	USB initialization is started
9B	USB Reset
9C	USB Detect
9D	USB Enable
9E – 9F	Reserved for future AMI codes
A0	IDE initialization is started
A1	IDE Reset
A2	IDE Detect
A3	IDE Enable
A4	SCSI initialization is started
A5	SCSI Reset
A6	SCSI Detect
A7	SCSI Enable
A8	Setup Verifying Password
A9	Start of Setup
AA	Reserved for ASL (see ASL Status Codes section below)
AB	Setup Input Wait
AC	Reserved for ASL (see ASL Status Codes section below)
AD	Ready To Boot event
AE	Legacy Boot event
AF	Exit Boot Services event
B0	Runtime Set Virtual Address MAP Begin
B1	Runtime Set Virtual Address MAP End
B2	Legacy Option ROM Initialization
B3	System Reset

*(continued on the next page)*

## Q-Code table

Code	Description
B4	USB hot plug
B5	PCI bus hot plug
B6	Clean-up of NVRAM
B7	Configuration Reset (reset of NVRAM settings)
B8– BF	Reserved for future AMI codes
D0	CPU initialization error
D1	System Agent initialization error
D2	PCH initialization error
D3	Some of the Architectural Protocols are not available
D4	PCI resource allocation error. Out of Resources
D5	No Space for Legacy Option ROM
D6	No Console Output Devices are found
D7	No Console Input Devices are found
D8	Invalid password
D9	Error loading Boot Option (LoadImage returned error)
DA	Boot Option is failed (StartImage returned error)
DB	Flash update is failed
DC	Reset protocol is not available

## ACPI/ASL Checkpoints (under OS)

Code	Description
03	System is entering S3 sleep state
04	System is entering S4 sleep state
05	System is entering S5 sleep state
30	System is waking up from the S3 sleep state
40	System is waking up from the S4 sleep state
AC	System has transitioned into ACPI mode. Interrupt controller is in PIC mode.
AA	System has transitioned into ACPI mode. Interrupt controller is in APIC mode.

## Notices

### Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B 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 equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



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The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

---

## Compliance Statement of Innovation, Science and Economic Development Canada (ISED)

This Class B digital apparatus complies with Canadian ICES-003, RSS-210, and CAN ICES-3(B)/NMB-3(B).

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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VCCI-B

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DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.



DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

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## Regional notice for California



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## ASUS contact information

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Support Fax +49-2102-959911  
Online support <http://qr.asus.com/techserv>

# DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)



**Responsible Party Name:** **Asus Computer International**

**Address:** **800 Corporate Way, Fremont, CA 94539.**

**Phone/Fax No:** **(510)739-3777/(510)608-4555**

hereby declares that the product

**Product Name : Motherboard**

**Model Number : Q270M-CM-A**

Conforms to the following specifications:

FCC Part 15, Subpart B, Unintentional Radiators

## **Supplementary Information:**

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.

Representative Person's Name : Steve Chang / President

A handwritten signature in blue ink that reads "Steve Chang". The signature is written in a cursive style and is placed over a light blue rectangular background.

Signature :

Date : Mar. 1, 2017

Ver. 140331