

The background of the cover is black with several bright blue, angular, and layered geometric shapes that create a sense of depth and movement, resembling a stylized 'X' or a series of overlapping planes.

**ASRock®**

***J4005DC-ITX***

User Manual

Version 1.2

Published January 2020

Copyright©2020 ASRock INC. All rights reserved.

## Copyright Notice:

No part of this documentation may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRock Inc.

Products and corporate names appearing in this documentation may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

## Disclaimer:

Specifications and information contained in this documentation are furnished for informational use only and subject to change without notice, and should not be constructed as a commitment by ASRock. ASRock assumes no responsibility for any errors or omissions that may appear in this documentation.

With respect to the contents of this documentation, ASRock does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.

In no event shall ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRock has been advised of the possibility of such damages arising from any defect or error in the documentation or product.



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.

## CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.

“Perchlorate Material-special handling may apply, see [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)”

**ASRock Website:** <http://www.asrock.com>

## AUSTRALIA ONLY

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage caused by our goods. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. If you require assistance please call ASRock Tel : +886-2-28965588 ext.123 (Standard International call charges apply)

The terms HDMI® and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.



# Contents

<b>Chapter 1 Introduction</b>	<b>1</b>
1.1 Package Contents	1
1.2 Specifications	2
1.3 Motherboard Layout	5
1.4 I/O Panel	7
<b>Chapter 2 Installation</b>	<b>8</b>
2.1 Installation of Memory Modules (SO-DIMM)	9
2.2 Expansion Slot (PCI Express Slot)	11
2.3 Jumpers Setup	12
2.4 Onboard Headers and Connectors	13
2.5 M.2 WiFi/BT Module and Intel® CNVi (Integrated WiFi/BT) Installation Guide	17
<b>Chapter 3 Software and Utilities Operation</b>	<b>19</b>
3.1 Installing Drivers	19
<b>Chapter 4 UEFI SETUP UTILITY</b>	<b>20</b>
4.1 Introduction	20
4.1.1 UEFI Menu Bar	20
4.1.2 Navigation Keys	21
4.2 Main Screen	22
4.3 Advanced Screen	23
4.3.1 CPU Configuration	24
4.3.2 Chipset Configuration	25

4.3.3	Storage Configuration	27
4.3.4	Super IO Configuration	28
4.3.5	ACPI Configuration	30
4.3.6	Trusted Computing	32
4.4	Tools	34
4.5	Hardware Health Event Monitoring Screen	36
4.6	Security Screen	37
4.7	Boot Screen	38
4.8	Exit Screen	40

# Chapter 1 Introduction

Thank you for purchasing ASRock J4005DC-ITX motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

In this manual, Chapter 1 and 2 contains the introduction of the motherboard and step-by-step installation guides. Chapter 3 contains the operation guide of the software and utilities. Chapter 4 contains the configuration guide of the BIOS setup.



*Because the motherboard specifications and the BIOS software might be updated, the content of this documentation will be subject to change without notice. In case any modifications of this documentation occur, the updated version will be available on ASRock's website without further notice. If you require technical support related to this motherboard, please visit our website for specific information about the model you are using. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website <http://www.asrock.com>.*

## 1.1 Package Contents

- ASRock J4005DC-ITX Motherboard (Mini-ITX Form Factor)
- ASRock J4005DC-ITX Quick Installation Guide
- ASRock J4005DC-ITX Support CD
- 1 x I/O Panel Shield
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x SATA Power Cable (Optional)
- 1 x Screw for M.2 Socket (Optional)

## 1.2 Specifications

- Platform**
- Mini-ITX Form Factor
  - Solid Capacitor design

- CPU**
- Intel® Dual-Core Processor J4025 (up to 2.9 GHz) / J4005 (up to 2.7 GHz)

- Memory**
- Dual Channel DDR4 Memory Technology
  - 2 x DDR4 SO-DIMM Slots
  - \* 2GB DRAM per module is not supported.
  - Supports DDR4 2400/2133 non-ECC, un-buffered memory
  - Max. capacity of system memory: 8GB

- Expansion Slot**
- 1 x PCI Express 2.0 x1 Slot
  - 1 x M.2 Socket (Key E), supports type 2230 WiFi/BT module and Intel® CNVi (Integrated WiFi/BT)

- Graphics**
- Integrated Intel® UHD Graphics 600: 12 EUs inside (Up to 700MHz)
  - DX12, OpenGL 4.3, OGL ES 3.0, OpenCL 2.0
  - HW Acceleration Decode: HEVC (H.265) 8 bit, HEVC (H.265)10 bit, H.264 @ Lvl5.2 (AVC), JPEG/MJPEG, VP8, VP9 8bit, VP9 10 bit
  - HW Acceleration Encode: HEVC (H.265) 8 bit, HEVC (H.265)10 bit, H.264 @ Lvl5.2 (AVC), JPEG/MJPEG, VP8, VP9 8bit
  - Dual graphics output: support D-Sub and HDMI ports by independent display controllers
  - Supports HDMI with max. resolution up to 4K x 2K (4096x2160) @ 30Hz
  - Supports D-Sub with max. resolution up to 2048x1536 @ 60Hz
  - Supports Auto Lip Sync, xvYCC and HBR (High Bit Rate Audio) with HDMI Port (Compliant HDMI monitor is required)
  - Supports HDCP with HDMI Port
  - Supports Full HD 1080p Blu-ray (BD) playback with HDMI Port

- Audio**
- 7.1 CH HD Audio (Realtek ALC887/897 Audio Codec)
  - Supports Surge Protection

- LAN**
- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
  - Realtek RTL8111H
  - Supports Wake-On-LAN
  - Supports Lightning/ESD Protection
  - Supports Energy Efficient Ethernet 802.3az
  - Supports PXE

- Rear Panel I/O**
- 1 x DC Jack (Compatible with the 19V power adapter)
  - 1 x PS/2 Mouse/Keyboard Port
  - 1 x Serial Port: COM1
  - 1 x D-Sub Port
  - 1 x HDMI Port
  - 2 x USB 2.0 Ports (Supports ESD Protection)
  - 2 x USB 3.1 Gen1 Ports (Supports ESD Protection)
  - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED)
  - HD Audio Jacks: Line in / Front Speaker / Microphone

- Storage**
- 2 x SATA3 6.0 Gb/s Connectors, support NCQ, AHCI and Hot Plug

- Connector**
- 1 x Print Port Header
  - 1 x COM Port Header
  - 1 x Chassis Intrusion Header
  - 1 x CPU Fan Connector (4-pin)
  - 1 x Chassis Fan Connector (4-pin)
  - 1 x SATA Power Connector
  - 1 x Front Panel Audio Connector
  - 1 x Internal Speaker Header
  - 1 x 3W Audio AMP Output Wafer Header
  - 1 x USB 3.1 Gen1 Header (Supports 2 USB 3.1 Gen1 ports) (Supports ESD Protection)

- BIOS Feature**
- AMI UEFI Legal BIOS with GUI support
  - Supports Plug and Play
  - ACPI 5.0 compliant wake up events
  - Supports jumperfree
  - SMBIOS 3.0 support

**Hardware  
Monitor**

- CPU/Chassis temperature sensing
- CPU/Chassis Fan Tachometer
- CPU/Chassis Quiet Fan (Auto adjust chassis fan speed by CPU temperature)
- CPU/Chassis Fan multi-speed control
- CASE OPEN detection
- Voltage monitoring: +12V, +5V, +3.3V, CPU Vcore

**OS**

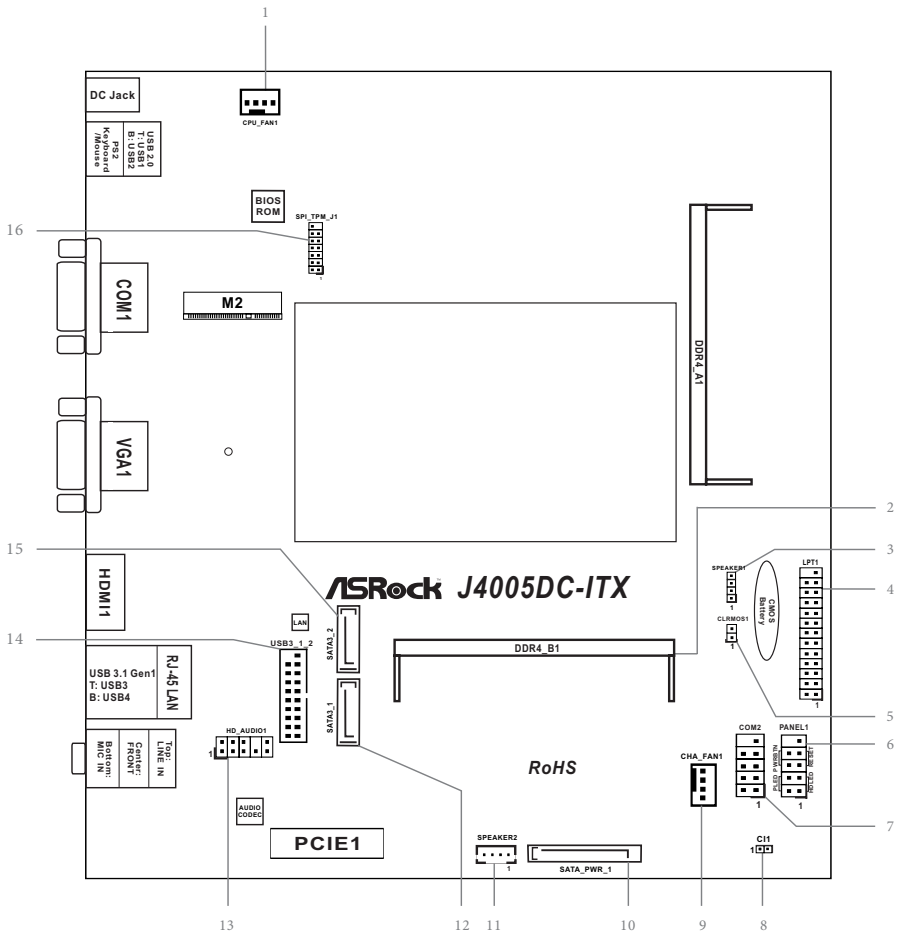
- Microsoft® Windows® 10 64-bit
- \* Supports UEFI mode only

**Certifica-  
tions**

- FCC, CE
- ErP/EuP ready (ErP/EuP ready power supply is required)

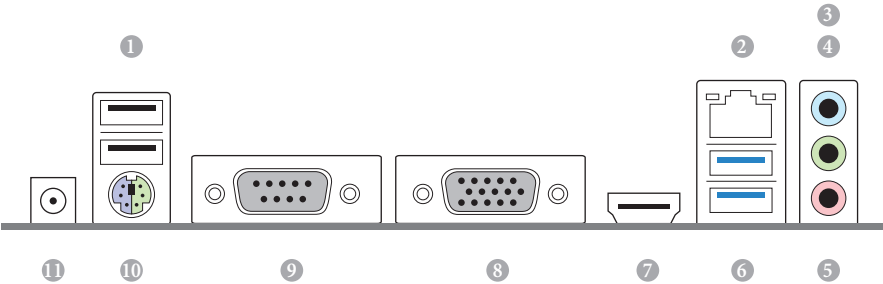
\* For detailed product information, please visit our website: <http://www.asrock.com>

### 1.3 Motherboard Layout



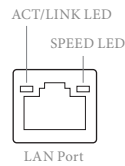
No.	Description
1	CPU Fan Connector (CPU_FAN1)
2	2 x 260-pin DDR4 SO-DIMM Slots (DDR4_A1, DDR4_B1)
3	Chassis Speaker Header (SPEAKER1)
4	Print Port Header (LPT1)
5	Clear CMOS Jumper (CLRMOS1)
6	System Panel Header (PANEL1)
7	COM Port Header (COM2)
8	Chassis Intrusion Header (CI1)
9	Chassis Fan Connector (CHA_FAN1)
10	SATA Power Connector (SATA_PWR_1)
11	3W Audio AMP Output Wafer Header (SPEAKER2)
12	SATA3 Connector (SATA3_1)
13	Front Panel Audio Header (HD_AUDIO1)
14	USB 3.1 Gen1 Header (USB3_1_2)
15	SATA3 Connector (SATA3_2)
16	SPI TPM Header (SPI_TPM_J1)

1.4 I/O Panel



No.	Description	No.	Description
1	USB 2.0 Ports (USB_1_2)	7	HDMI Port
2	LAN RJ-45 Port*	8	D-Sub Port
3	Line In (Light Blue)	9	COM Port
4	Front Speaker (Lime)	10	PS/2 Mouse/Keyboard Port
5	Microphone (Pink)	11	DC Jack
6	USB 3.1 Gen1 Ports (USB3_3_4)		

\* There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.



Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

## Chapter 2 Installation

This is a Mini-ITX form factor motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

### Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

- Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a carpet. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
- Hold components by the edges and do not touch the ICs.
- Whenever you uninstall any components, place them on a grounded anti-static pad or in the bag that comes with the components.
- When placing screws to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

## 2.1 Installation of Memory Modules (SO-DIMM)

This motherboard provides two 260-pin DDR4 (Double Data Rate 4) SO-DIMM slots, and supports Dual Channel Memory Technology.



- 1. It is not allowed to install a DDR, DDR2 or DDR3 memory module into a DDR4 slot; otherwise, this motherboard and SO-DIMM may be damaged.
- 2. The SO-DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the SO-DIMM if you force the SO-DIMM into the slot at incorrect orientation.

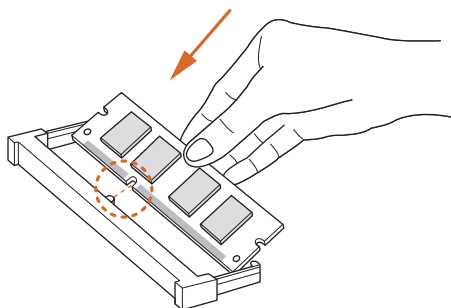
### Supported DDR4 Non ECC SODIMM

Raw Card
A (1Rx8)
B (2Rx8)
C (1Rx16)

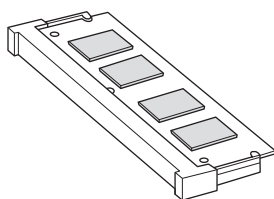
### Dual Channel Memory Configuration

DDR4_A1	Populated
DDR4_B1	Populated

1



2



## 2.2 Expansion Slot (PCI Express Slot)

There is 1 PCI Express slot 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 slot:**

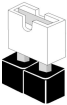
PCIE1 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.

### **Warning:**

To ensure better graphics compability, the BIOS is set to "boot from Onboard VGA" as default even the user install a VGA card on PCIe slot.

## 2.3 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”.



Short



Open

\*The jumper cap is not provided.

---

Clear CMOS Jumper  
(CLRCMOS1)  
(see p.5, No. 5)



2-pin Jumper

Short: Clear CMOS  
Open: Default

---

CLRCMOS1 allows you to clear the data in CMOS. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. There are two ways for you to clear and reset the system parameters to the default setup. Please turn off the computer and unplug the power cord, then you may either short the solder points on CLRCMOS1 by using metal material, e.g., a paper clip for 3 seconds; or you may use a jumper cap to short the pin on CLRCMOS1 for 3 seconds. Please remember to remove the paper clip or the jumper cap after clearing the CMOS.



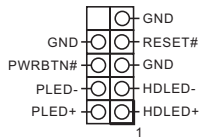
*If you clear the CMOS, the case open may be detected. Please adjust the BIOS option “Clear Status” to clear the record of previous chassis intrusion status.*

## 2.4 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)  
(see p.5, No. 6)



Connect the power button, reset button 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 Button):**

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

**RESET (Reset Button):**

Connect to the reset button on the chassis front panel. Press the reset button 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 button, reset button, 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.

Serial ATA3 Connectors  
(SATA3\_1:  
see p.5, No. 12)  
(SATA3\_2:  
see p.5, No. 15)



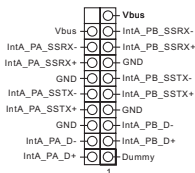
These two SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.

SATA Power Connector  
(SATA\_PWR\_1)  
(see p.5, No. 10)



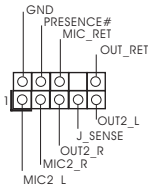
Please connect a SATA power cable.

USB 3.1 Gen1 Header  
(19-pin USB3\_1\_2)  
(see p.5, No. 14)



There is one header on this motherboard. This USB 3.1 Gen1 header can support two ports.

Front Panel Audio Header  
(9-pin HD\_AUDIOI1)  
(see p.5, No. 13)

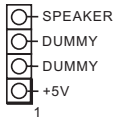


This header is for connecting audio devices to the front audio panel.



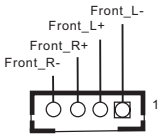
1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
2. If you use an AC'97 audio panel, please install it to the front panel audio header by the 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 Speaker Header  
(4-pin SPEAKER1)  
(see p.5, No. 3)



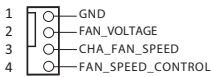
Please connect the chassis speaker to this header.

3W Audio AMP Output  
Wafer Header  
(4-pin SPEAKER2)  
(see p.5, No. 11)



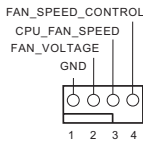
Please connect the chassis speaker to this header.

Chassis Fan Connector  
(4-pin CHA\_FAN1)  
(see p.5, No. 9)



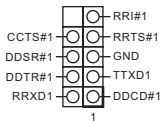
Please connect fan cable to the fan connector and match the black wire to the ground pin.

CPU Fan Connector  
(4-pin CPU\_FAN1)  
(see p.5, No. 1)



Please connect the CPU fan cable to the connector and match the black wire to the ground pin.

Serial Port Header  
(9-pin COM2)  
(see p.5, No. 7)



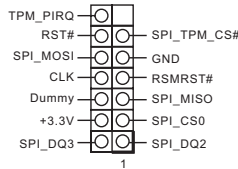
This COM2 header supports a serial port module.

Chassis Intrusion Header  
(2-pin CII)  
(see p.5, No. 8)



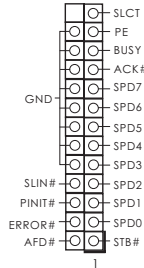
This motherboard supports CASE OPEN detection feature that detects if the chassis cover has been removed. This feature requires a chassis with chassis intrusion detection design.

SPI TPM Header  
(13-pin SPI\_TPM\_J1)  
(see p.5, No. 16)



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.

Print Port Header  
(25-pin LPT1)  
(see p.5, No. 4)



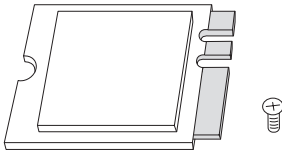
This is an interface for print port cable that allows convenient connection of printer devices.

## 2.5 M.2 WiFi/BT Module and Intel® CNVi (Integrated WiFi/BT) 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 M.2 Socket (Key E) supports type 2230 WiFi/BT module and Intel® CNVi (Integrated WiFi/BT).

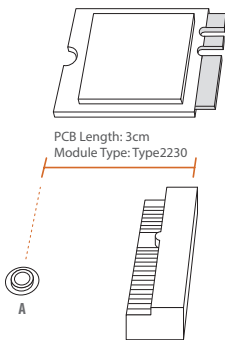
\* The M.2 socket does not support SATA M.2 SSDs.

### Installing the WiFi/BT module



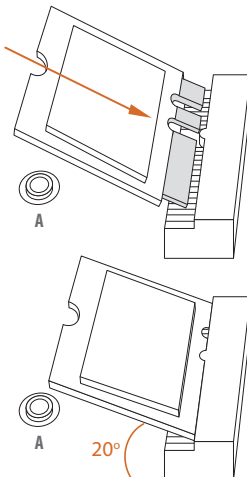
#### Step 1

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



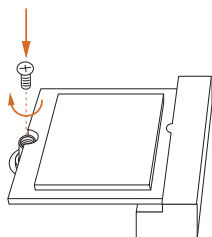
#### Step 2

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.

## Chapter 3 Software and Utilities Operation

### 3.1 Installing Drivers

The Support CD that comes with the motherboard contains necessary drivers and useful utilities that enhance the motherboard's features.

#### Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu does not appear automatically, locate and double click on the file "ASRSETUP.EXE" in the Support CD to display the menu.

#### Drivers Menu

The drivers compatible to your system will be auto-detected and listed on the support CD driver page. Please click **Install All** or follow the order from top to bottom to install those required drivers. Therefore, the drivers you install can work properly.

#### Utilities Menu

The Utilities Menu shows the application software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

# Chapter 4 UEFI SETUP UTILITY

## 4.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. You may run the UEFI SETUP UTILITY by pressing <F2> or <Del> right after you power on the computer, otherwise, the Power-On-Self-Test (POST) will continue with its test routines. If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.



*Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.*

### 4.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

<b>Main</b>	For setting system time/date information
<b>Advanced</b>	For advanced system configurations
<b>Tool</b>	Useful tools
<b>H/W Monitor</b>	Displays current hardware status
<b>Security</b>	For security settings
<b>Boot</b>	For configuring boot settings and boot priority
<b>Exit</b>	Exit the current screen or the UEFI Setup Utility

## 4.1.2 Navigation Keys

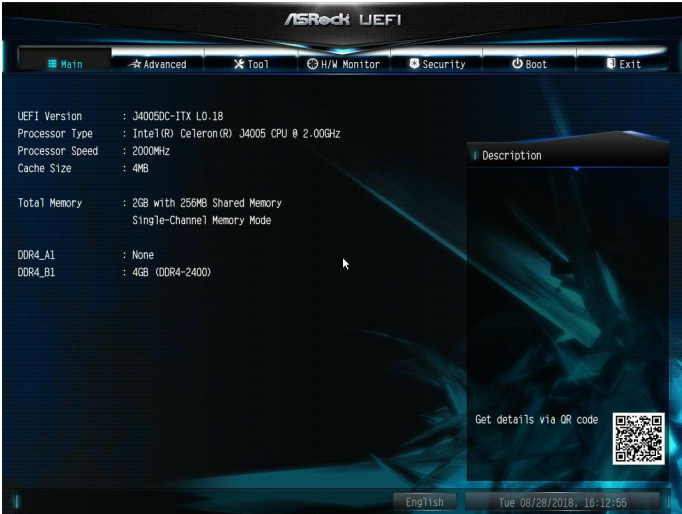
Use <←> key or <→> key to choose among the selections on the menu bar, and use <↑> key or <↓> key to move the cursor up or down to select items, then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

Please check the following table for the descriptions of each navigation key.

Navigation Key(s)	Description
+ / -	To change option for the selected items
<Tab>	Switch to next function
<PGUP>	Go to the previous page
<PGDN>	Go to the next page
<HOME>	Go to the top of the screen
<END>	Go to the bottom of the screen
<F1>	To display the General Help Screen
<F7>	Discard changes and exit the SETUP UTILITY
<F9>	Load optimal default values for all the settings
<F10>	Save changes and exit the SETUP UTILITY
<F12>	Print screen
<ESC>	Jump to the Exit Screen or exit the current screen

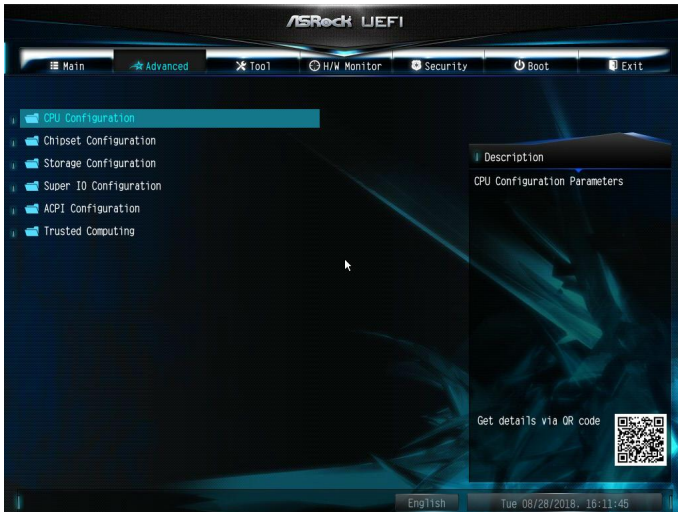
# 4.2 Main Screen

When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.



## 4.3 Advanced Screen

In this section, you may set the configurations for the following items:  
CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration and Trusted Computing..



*Setting wrong values in this section may cause the system to malfunction.*

## 4.3.1 CPU Configuration



### Intel SpeedStep Technology

Intel SpeedStep technology allows processors to switch between multiple frequencies and voltage points for better power saving and heat dissipation.

### CPU C States Support

Enable CPU C States Support for power saving. It is recommended to keep C1 and C6 all enabled for better power saving.

### Enhanced Halt State (C1E)

Enable Enhanced Halt State (C1E) for lower power consumption.

### Intel Turbo Boost Technology

Intel Turbo Boost Technology enables the processor to run above its base operating frequency when the operating system requests the highest performance state.

### VT-d

Intel® Virtualization Technology for Directed I/O helps your virtual machine monitor better utilize hardware by improving application compatibility and reliability, and providing additional levels of manageability, security, isolation, and I/O performance.

## 4.3.2 Chipset Configuration



### Primary Graphics Adapter

Select a primary VGA.

### Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

### Onboard HD Audio

Enable/disable onboard HD audio. Set to Auto to enable onboard HD audio and automatically disable it when a sound card is installed.

### Front Panel

Enable/disable front panel HD audio.

### Onboard LAN

Enable or disable the onboard network interface controller.

### PCI-E Link Speed

Select the link speed for PCI-E1.

### ASPM

This option enables/disables the ASPM support.

## WAN Radio

Enable/disable the WiFi module's connectivity.

## BT Enabled

Enable/disable the Bluetooth module's connectivity.

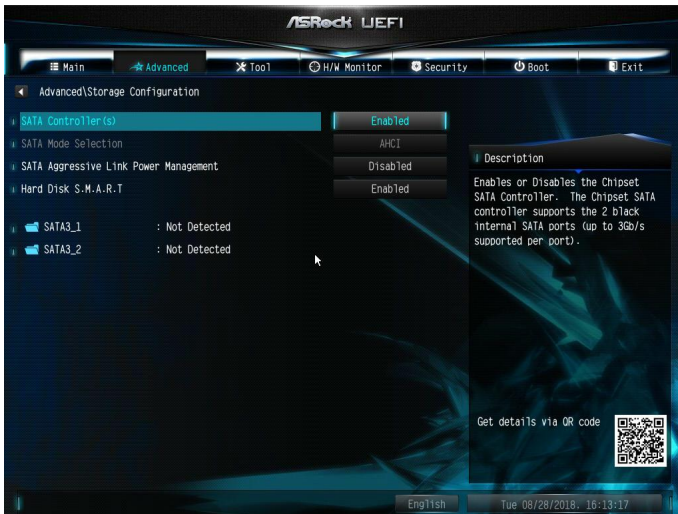
## Deep S5

Configure deep sleep mode for power saving when the computer is shut down.

## Restore on AC/Power Loss

Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

### 4.3.3 Storage Configuration



#### SATA Controller(s)

Enable/disable the SATA controllers.

#### SATA Mode Selection

AHCI: Supports new features that improve performance.



*AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance.*

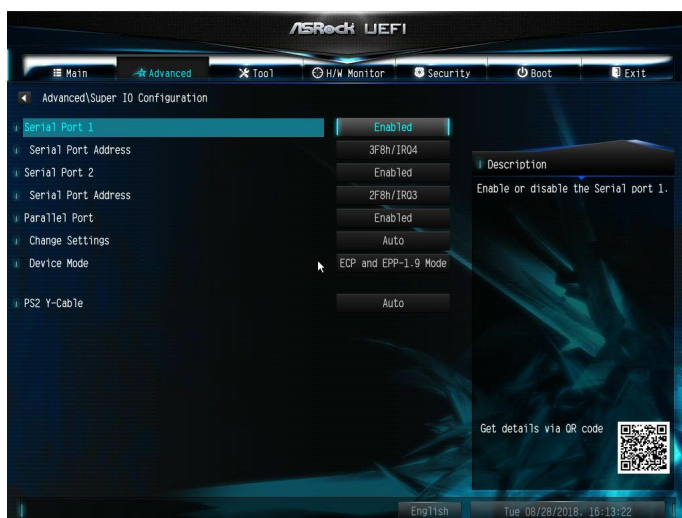
#### SATA Aggressive Link Power Management

SATA Aggressive Link Power Management allows SATA devices to enter a low power state during periods of inactivity to save power. It is only supported by AHCI mode.

#### Hard Disk S.M.A.R.T.

S.M.A.R.T stands for Self-Monitoring, Analysis, and Reporting Technology. It is a monitoring system for computer hard disk drives to detect and report on various indicators of reliability.

## 4.3.4 Super IO Configuration



### Serial Port 1

Enable or disable the Serial port 1.

### Serial Port Address

Select the address of the Serial port.

### Serial Port 2

Enable or disable the Serial port 2.

### Serial Port Address

Select the address of the Serial port.

### Parallel Port

Enable or disable the Parallel port.

### Change Settings

Select the address of the Parallel port.

### Device Mode

Select the device mode according to your connected device.

## PS2 Y-Cable

Enable the PS2 Y-Cable or set this option to Auto.

### 4.3.5 ACPI Configuration



#### Suspend to RAM

It is recommended to select auto for ACPI S3 power saving.

#### ACPI HPET Table

Enable the High Precision Event Timer for better performance and to pass WHQL tests.

#### PS/2 Keyboard Power On

Allow the system to be waked up by a PS/2 Keyboard.

#### PCIE Device Power On

Allow the system to be waked up by a PCIE device and enable wake on LAN.

#### Ring-In Power On

Allow the system to be waked up by onboard COM port modem Ring-In signals.

#### RTC Alarm Power On

Allow the system to be waked up by the real time clock alarm. Set it to By OS to let it be handled by your operating system.

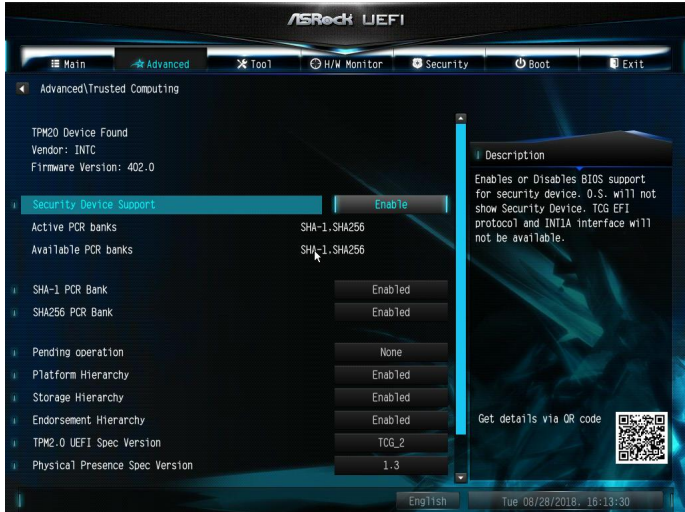
### USB Keyboard/Remote Power On

Allow the system to be waked up by an USB keyboard or remote controller.

### USB Mouse Power On

Allow the system to be waked up by an USB mouse.

## 4.3.6 Trusted Computing



NOTE: Options vary depending on the version of your connected TPM module.

### Security Device Support

Use this item to enable or disable BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

### SHA-1 PCR Bank

Use this item to enable or disable SHA-1 PCR Bank.

### SHA256 PCR Bank

Use this item to enable or disable SHA256 PCR Bank.

### Pending Operation

Schedule an Operation for the Security Device.

NOTE: Your computer will reboot during restart in order to change State of the Device.

### Platform Hierarchy

Use this item to enable or disable Platform Hierarchy.

### Storage Hierarchy

Use this item to enable or disable Storage Hierarchy.

### Endorsement Hierarchy

Use this item to enable or disable Endorsement Hierarchy.

## TPM2.0 UEFI Spec Version

Use this item to select the TCG2 spec. version supported.

The optional settings: [TCG\_1\_2]; [TCG\_2].

[TCG\_1\_2]: compatible mode for Win8/Win10.

[TCG\_2]: for TCG2 newer spec. compatible mode for Win10

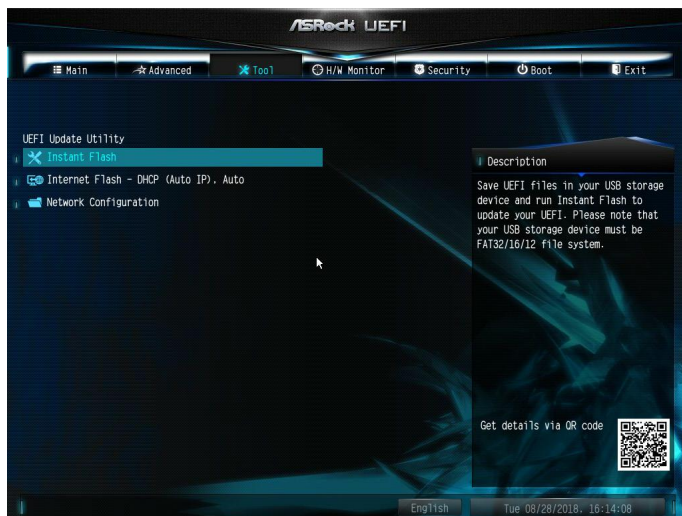
## Physical Presence Spec version

Select this item to tell OS to support PPI spec version 1.2 or 1.3. Please note that some HCK tests might not support version 1.3.

## Device Select

Use this item to select the TPM device to be supported. TPM 1.2 will restrict support to TPM 1.2 devices. TPM 2.0 will restrict support to TPM 2.0 devices. Auto will support both with the default set to TPM 2.0 devices. If TPM 2.0 devices are not found, TPM 1.2 devices will be enumerated.

## 4.4 Tools



### Instant Flash

Save UEFI files in your USB storage device and run Instant Flash to update your UEFI.

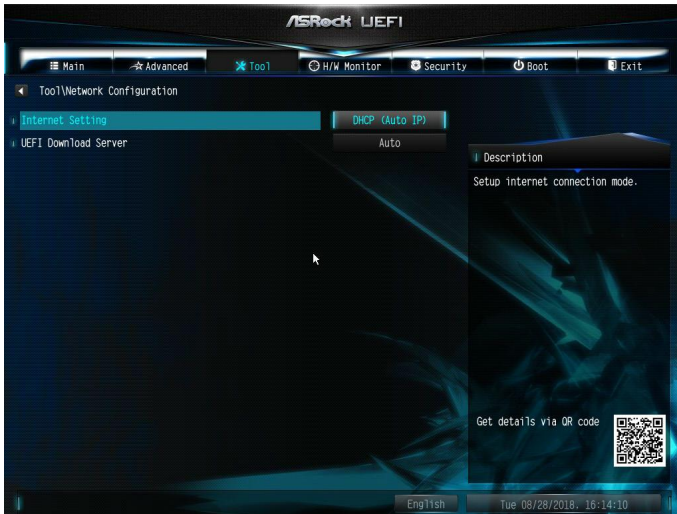
### Internet Flash

ASRock Internet Flash downloads and updates the latest UEFI firmware version from our servers for you. Please setup network configuration before using Internet Flash.

\*For BIOS backup and recovery purpose, it is recommended to plug in your USB pen drive before using this function.

## Network Configuration

Use this to configure internet connection settings for Internet Flash.



### Internet Setting

Enable or disable sound effects in the setup utility.

### UEFI Download Server

Select a server to download the UEFI firmware.

# 4.5 Hardware Health Event Monitoring Screen

This section allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, fan speed and voltage.



## CPU Fan 1 Setting

This allows you to set CPU fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On].

## Chassis Fan 1 Setting

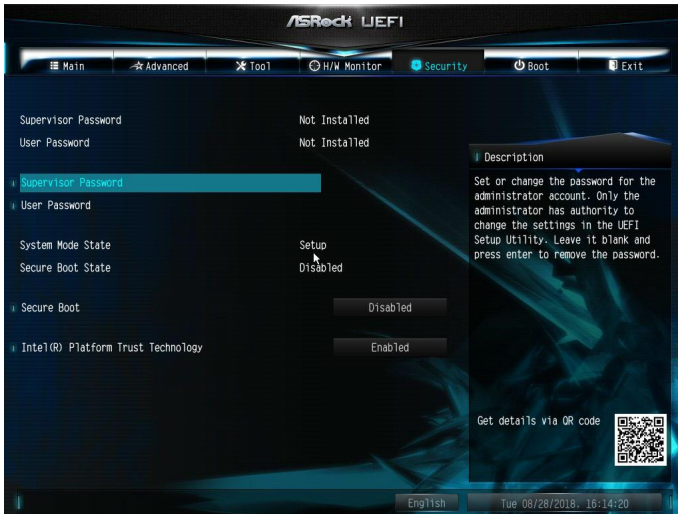
This allows you to set chassis fan 1's speed. Configuration options: [Full On], [Automatic Mode] and [Manual]. The default value is [Full On].

## Case Open Feature

Enable or disable Case Open Feature to detect whether the chassis cover has been removed.

## 4.6 Security Screen

In this section you may set or change the supervisor/user password for the system. You may also clear the user password.



### Supervisor Password

Set or change the password for the administrator account. Only the administrator has authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

### User Password

Set or change the password for the user account. Users are unable to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

### Secure Boot

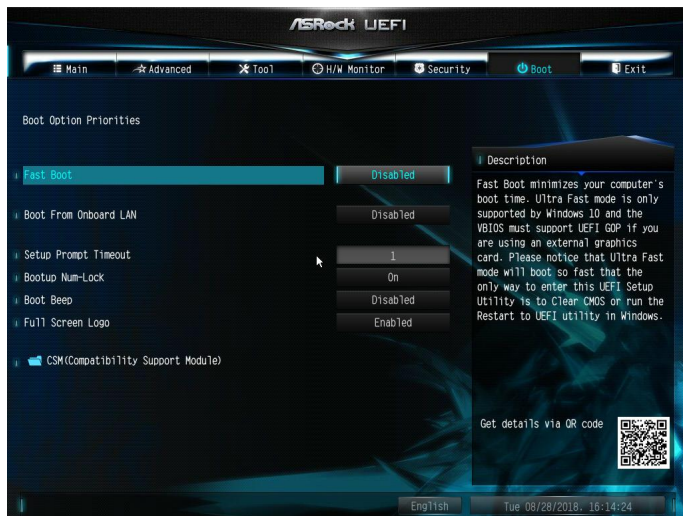
Enable to support Secure Boot.

### Intel(R) Platform Trust Technology

Enable/disable Intel PTT in ME. Disable this option to use discrete TPM Module.

## 4.7 Boot Screen

This section displays the available devices on your system for you to configure the boot settings and the boot priority.



### Fast Boot

Fast Boot minimizes your computer's boot time. In fast mode you may not boot from an USB storage device. The VBIOS must support UEFI GOP if you are using an external graphics card. Please notice that Ultra Fast mode will boot so fast that the only way to enter this UEFI Setup Utility is to Clear CMOS or run the Restart to UEFI utility in Windows.

### Boot From Onboard LAN

Allow the system to be waked up by the onboard LAN.

### Setup Prompt Timeout

Configure the number of seconds to wait for the setup hot key.

### Bootup Num-Lock

Select whether Num Lock should be turned on or off when the system boots up.

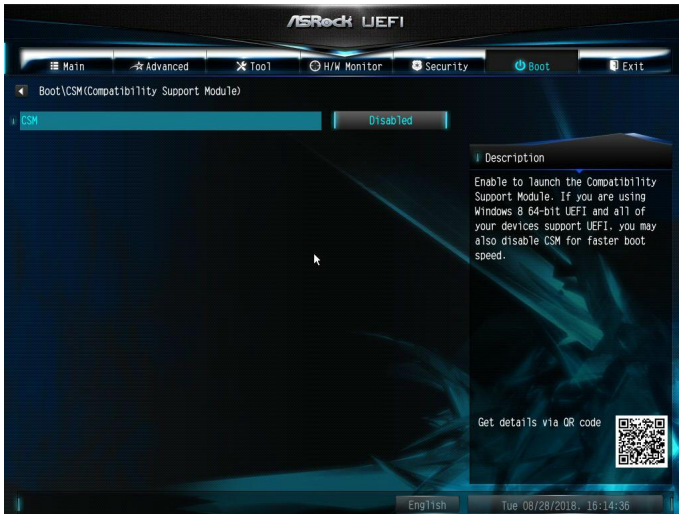
### Boot Beep

Select whether the Boot Beep should be turned on or off when the system boots up. Please note that a buzzer is needed.

## Full Screen Logo

Enable to display the boot logo or disable to show normal POST messages.

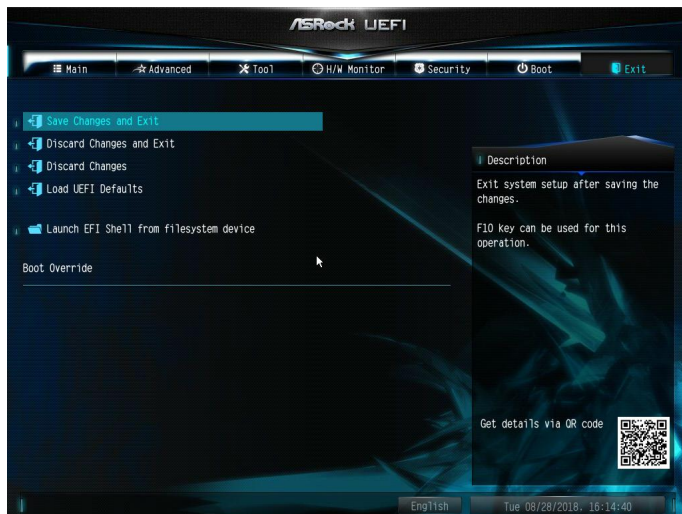
## CSM (Compatibility Support Module)



## CSM

Enable to launch the Compatibility Support Module. Please do not disable unless you're running a WHCK test.

## 4.8 Exit Screen



### Save Changes and Exit

When you select this option the following message, “Save configuration changes and exit setup?” will pop out. Select [OK] to save changes and exit the UEFI SETUP UTILITY.

### Discard Changes and Exit

When you select this option the following message, “Discard changes and exit setup?” will pop out. Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

### Discard Changes

When you select this option the following message, “Discard changes?” will pop out. Select [OK] to discard all changes.

### Load UEFI Defaults

Load UEFI default values for all options. The F9 key can be used for this operation.

### Launch EFI Shell from filesystem device

Copy shellx64.efi to the root directory to launch EFI Shell.

---

## Contact Information

If you need to contact ASRock or want to know more about ASRock, you're welcome to visit ASRock's website at <http://www.asrock.com>; or you may contact your dealer for further information. For technical questions, please submit a support request form at <https://event.asrock.com/tsd.asp>

### **ASRock Incorporation**

2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District,  
Taipei City 112, Taiwan (R.O.C.)

### **ASRock EUROPE B.V.**

Bijsterhuizen 11-11

6546 AR Nijmegen

The Netherlands

Phone: +31-24-345-44-33

Fax: +31-24-345-44-38

### **ASRock America, Inc.**

13848 Magnolia Ave, Chino, CA91710

U.S.A.

Phone: +1-909-590-8308

Fax: +1-909-590-1026

# DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



**Responsible Party Name:** ASRock Incorporation

**Address:** 13848 Magnolia Ave, Chino, CA91710

**Phone/Fax No:** +1-909-590-8308/+1-909-590-1026

hereby declares that the product

**Product Name : Motherboard**

**Model Number : J4005DC-ITX**

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: James

Signature:

A handwritten signature in black ink, appearing to read 'James', with a long, sweeping horizontal stroke extending to the right.

Date : May 12, 2017

# EU Declaration of Conformity



For the following equipment:

**Motherboard**

(Product Name)

**J4005DC-ITX/ ASRock**

(Model Designation / Trade Name)

**ASRock Incorporation**

(Manufacturer Name)

**2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District, Taipei City 112, Taiwan (R.O.C.)**

(Manufacturer Address)

☒ **EMC —Directive 2014/30/EU (from April 20th, 2016)**

☐ EN 55022:2010/AC:2011 Class B

☒ EN 55024:2010/A1:2015

☒ EN 55032:2012+AC:2013 Class B

☒ EN 61000-3-3:2013

☒ EN 61000-3-2:2014

☐ **LVD —Directive 2014/35/EU (from April 20th, 2016)**

☐ EN 60950-1 : 2011+ A2: 2013

☐ EN 60950-1 : 2006/A12: 2011

☒ RoHS — Directive 2011/65/EU

☒ CE marking

(EU conformity marking)



**ASRock EUROPE B.V.**

(Company Name)

**Bijsterhuizen 1111 6546 AR Nijmegen The Netherlands**

(Company Address)

Person responsible for making this declaration:

(Name, Surname)

**A.V.P**

(Position / Title)

**January 19, 2020**

(Date)

P/N: 15G0621280M2AK V1.2