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(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"

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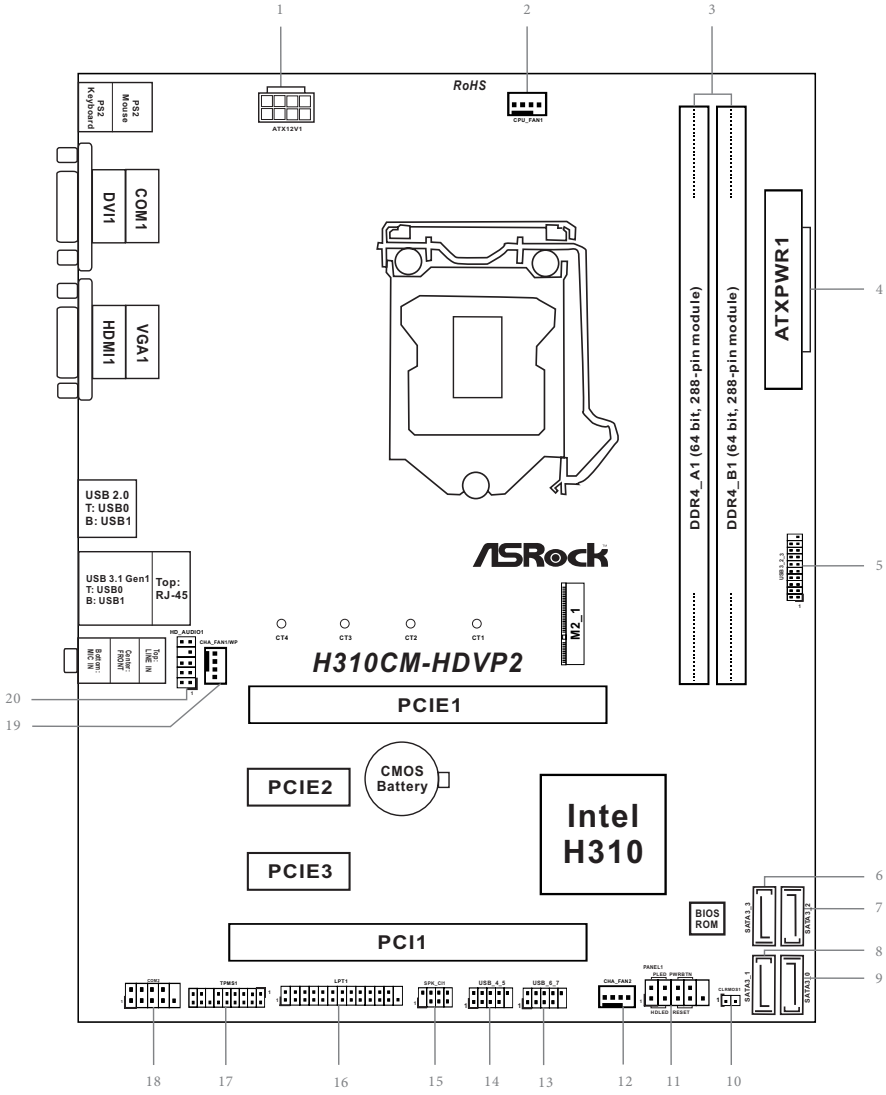
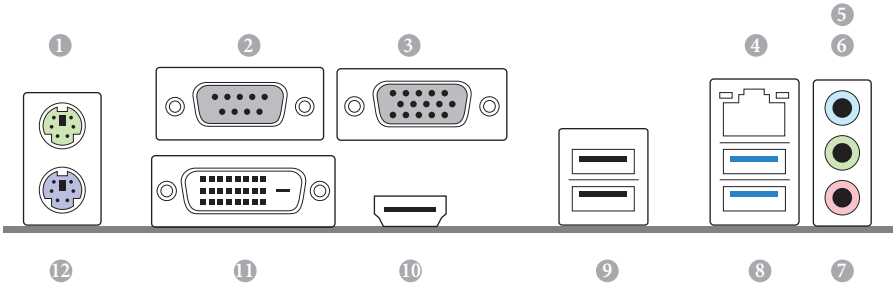
Motherboard Layout



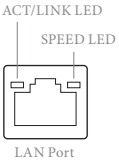
No.	Description
1	ATX 12V Power Connector (ATX12V1)
2	CPU Fan Connector (CPU_FAN1)
3	2 x 288-pin DDR4 DIMM Slots (DDR4_A1, DDR4_B1)
4	ATX Power Connector (ATXPWR1)
5	USB 3.1 Gen1 Header (USB3_2_3)
6	USB 2.0 Header (USB_8_9) (shared with USB3_2_3)
7	SATA3 Connector (SATA3_3)
8	SATA3 Connector (SATA3_2)
9	SATA3 Connector (SATA3_1)
10	SATA3 Connector (SATA3_0)
11	Clear CMOS Jumper (CLRMOS1)
12	System Panel Header (PANEL1)
13	Chassis Fan Connector (CHA_FAN2)
14	USB 2.0 Header (USB_4_5)
15	Chassis Intrusion and Speaker Header (SPK_CI1)
16	Print Port Header (LPT1)
17	TPM Header (TPMS1)
18	COM Port Header (COM2)
19	Chassis/Water Pump Fan Connector (CHA_FAN1/WP)
20	Front Panel Audio Header (HD_AUDIO1)

I/O Panel



No.	Description	No.	Description
1	PS/2 Mouse Port	7	Microphone (Pink)**
2	COM Port	8	USB 3.1 Gen1 Ports (USB01)
3	D-Sub Port	9	USB 2.0 Ports (USB01)
4	LAN RJ-45 Port*	10	HDMI Port
5	Line In (Light Blue)**	11	DVI-D Port
6	Front Speaker (Lime)**	12	PS/2 Keyboard Port

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

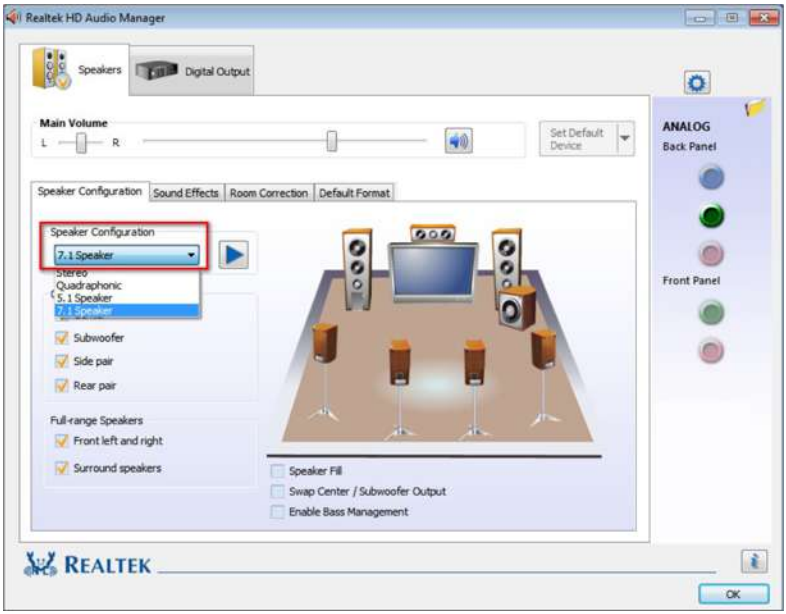


Activity / Link LED		Speed LED	
Status	**Description**	**Status**	**Description**
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

English

*** To configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.*

Please set Speaker Configuration to "7.1 Speaker" in the Realtek HD Audio Manager.



Function of the Audio Ports in 7.1-channel Configuration:

Port	Function
Light Blue (Rear panel)	Rear Speaker Out
Lime (Rear panel)	Front Speaker Out
Pink (Rear panel)	Central /Subwoofer Speaker Out
Lime (Front panel)	Side Speaker Out

Chapter 1 Introduction

Thank you for purchasing ASRock H310CM-HDVP2 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.

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 H310CM-HDVP2 Motherboard (Micro ATX Form Factor)
- ASRock H310CM-HDVP2 Quick Installation Guide
- ASRock H310CM-HDVP2 Support CD
- 1 x I/O Panel Shield
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x Screw for M.2 Socket (Optional)

English

1.2 Specifications

Platform	• Micro ATX Form Factor • Solid Capacitor design
CPU	• Supports 8th Generation Intel® Core™ Processors (Socket 1151) • 4 Power Phase design • Supports Intel® Turbo Boost 2.0 Technology
Chipset	• Intel® H310
Memory	• Dual Channel DDR4 Memory Technology • 2 x DDR4 DIMM Slots • Supports DDR4 2666/2400/2133 non-ECC, un-buffered memory • Max. capacity of system memory: 32GB • Supports Intel® Extreme Memory Profile (XMP) 2.0 • 15µ Gold Contact in DIMM Slots
Expansion Slot	• 1 x PCI Express 3.0 x16 Slot (PCIE1: x16 mode)* * Supports NVMe SSD as boot disks • 2 x PCI Express 2.0 x1 Slots • 1 x PCI Slot
Graphics	• Intel® UHD Graphics Built-in Visuals and the VGA outputs can be supported only with processors which are GPU integrated. • Supports Intel® UHD Graphics Built-in Visuals : Intel® Quick Sync Video with AVC, MVC (S3D) and MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® UHD Graphics • DirectX 12 • HWAEncode/Decode: AVC/H.264, HEVC/H.265 8-bit, HEVC/H.265 10-bit, VP8, VP9 8-bit, VP9 10-bit (Decode only), MPEG2, MJPEG, VC-1 (Decode only)

	• Three graphics output options: D-Sub, DVI-D and HDMI * Supports up to 2 displays simultaneously • Supports HDMI with max. resolution up to 4K x 2K (4096x2160) @ 30Hz • Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz • Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz • Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI Port (Compliant HDMI monitor is required) • Supports HDCP with DVI-D and HDMI Ports • Supports 4K Ultra HD (UHD) playback with HDMI Port
Audio	• 7.1 CH HD Audio (Realtek ALC887 Audio Codec) * To configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver. • Supports Surge Protection • ELNA Audio Caps
LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111GN • Supports Wake-On-LAN • Supports Lightning/ESD Protection • Supports Energy Efficient Ethernet 802.3az • Supports PXE
Rear Panel I/O	• 1 x PS/2 Mouse Port • 1 x PS/2 Keyboard Port • 1 x Serial Port: COM1 • 1 x D-Sub Port • 1 x DVI-D 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	• 4 x SATA3 6.0 Gb/s Connectors, support NCQ, AHCI and Hot Plug * If M2_1 is occupied by a SATA-type M.2 device, SATA3_3 will be disabled. • 1 x M.2 Socket (M2_1), supports M Key type 2230/2242/2260/2280 M.2 SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen2 x2 (10 Gb/s)** ** Supports NVMe SSD as boot disks ** Supports ASRock U.2 Kit
Connector	• 1 x Print Port Header • 1 x COM Port Header • 1 x TPM Header • 1 x Chassis Intrusion and Speaker Header • 1 x CPU Fan Connector (4-pin) * The CPU Fan Connector supports the CPU fan of maximum 1A (12W) fan power. • 1 x Chassis Fan Connector (4-pin) • 1 x Chassis/Water Pump Fan Connector (4-pin) (Smart Fan Speed Control) * The Chassis/Water Pump Fan supports the water cooler fan of maximum 2A (24W) fan power. * CHA_FAN1/WP can auto detect if 3-pin or 4-pin fan is in use. • 1 x 24 pin ATX Power Connector • 1 x 8 pin 12V Power Connector • 1 x Front Panel Audio Connector • 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection) • 1 x USB 3.1 Gen1 Header (Supports 2 USB 3.1 Gen1 ports) (Supports ESD Protection)
BIOS Feature	• AMI UEFI Legal BIOS with multilingual GUI support • Supports Secure Backup UEFI Technology • ACPI 6.0 Compliant wake up events • SMBIOS 2.7 Support

	• CPU, GT_CPU, DRAM, PCH 1.05V Voltage Multi-adjustment
Hardware Monitor	• Temperature Sensing: CPU, Chassis, Chassis/Water Pump Fans • Fan Tachometer: CPU, Chassis, Chassis/Water Pump Fans • Quiet Fan (Auto adjust chassis fan speed by CPU temperature): CPU, Chassis, Chassis/Water Pump Fans • Fan Multi-Speed Control: CPU, Chassis, Chassis/Water Pump Fans • CASE OPEN detection • Voltage monitoring: +12V, +5V, +3.3V, CPU Vcore, DRAM, PCH 1.05V
OS	• Microsoft® Windows® 10 64-bit
Certifications	• FCC, CE • ErP/EuP ready (ErP/EuP ready power supply is required)

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

Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.

Chapter 2 Installation

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

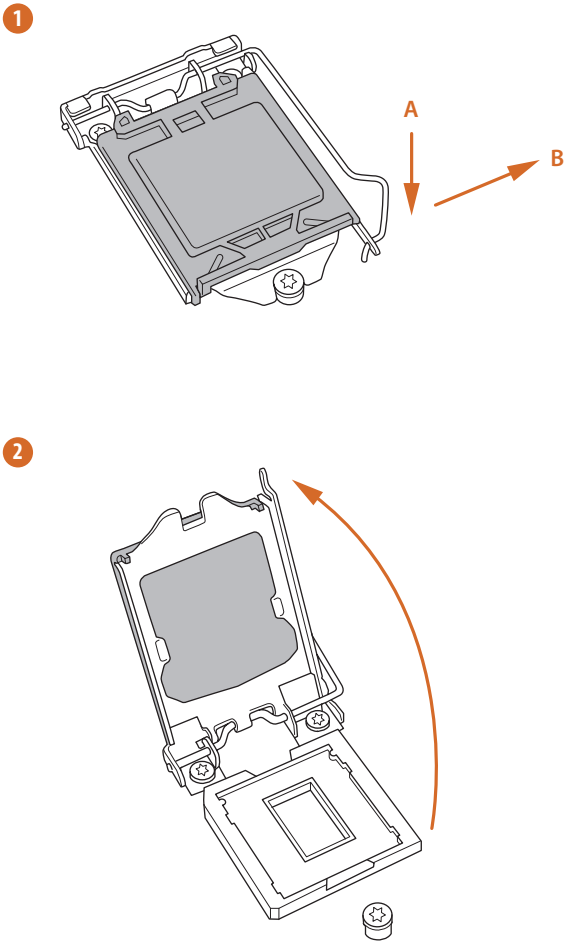
Pre-installation Precautions

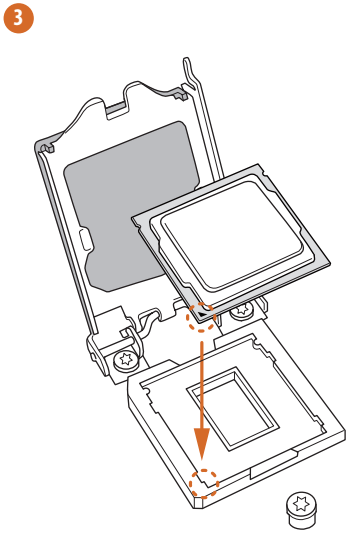
Take note of the following precautions before you install motherboard components or change any motherboard settings.

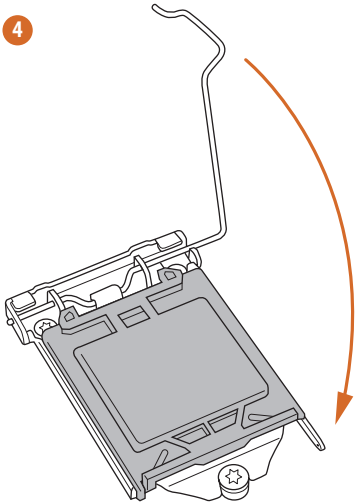
- Make sure to unplug the power cord before installing or removing the motherboard components. Failure to do so may cause physical injuries and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly 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.

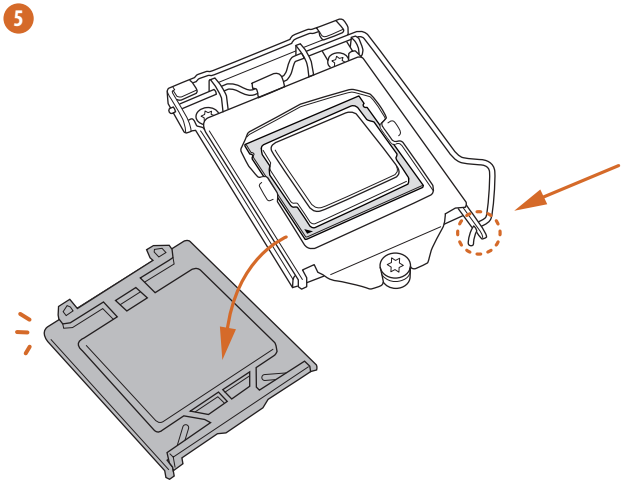
2.1 Installing the CPU

1. *Before you insert the 1151-Pin CPU into the socket, please check if the **PnP cap** is on the socket, if the CPU surface is unclean, or if there are any **bent pins** in the socket. Do not force to insert the CPU into the socket if above situation is found. Otherwise, the CPU will be seriously damaged.*
2. *Unplug all power cables before installing the CPU.*



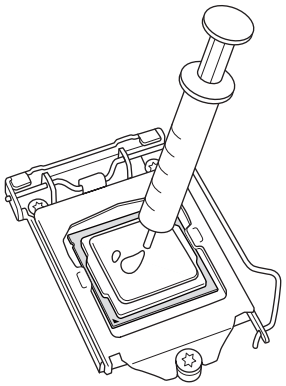


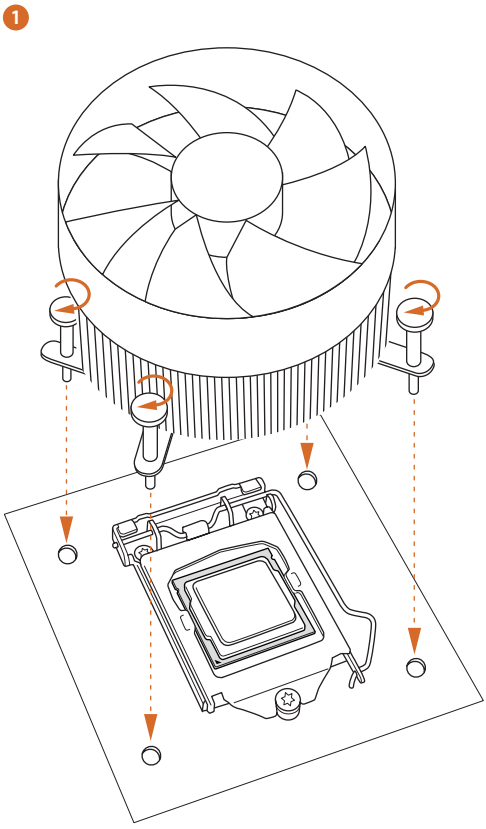




Please save and replace the cover if the processor is removed. The cover must be placed if you wish to return the motherboard for after service.

2.2 Installing the CPU Fan and Heatsink



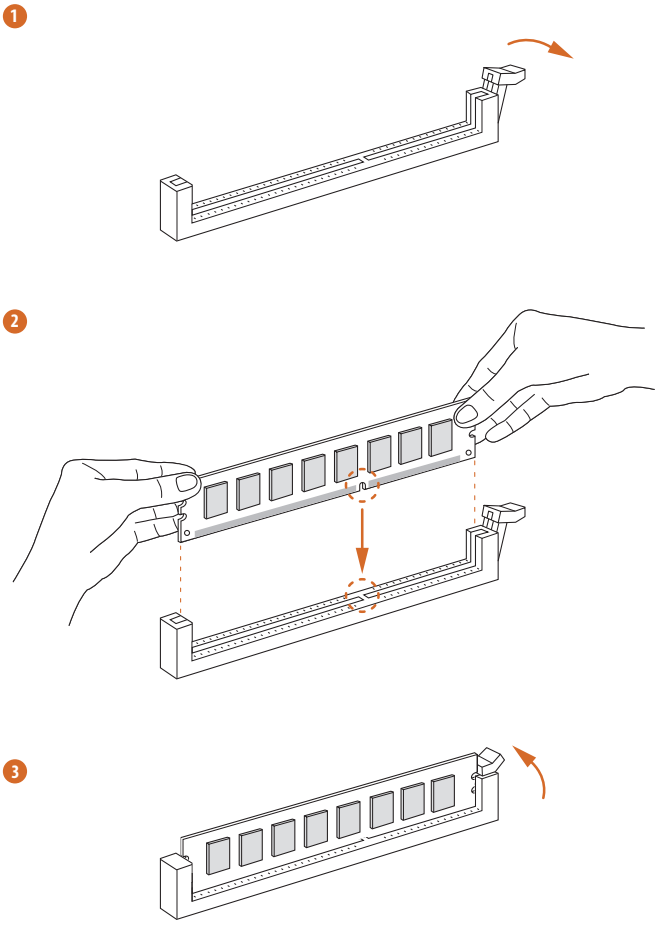


2.3 Installing Memory Modules (DIMM)

This motherboard provides two 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 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.*

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.



2.4 Expansion Slots (PCI and PCI Express Slots)

There are 1 PCI slot and 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.

PCI slot:

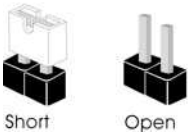
The PCI1 slot is used to install expansion cards that have 32-bit PCI interface.

PCIe slots:

PCIE1 (PCIe 3.0 x16 slot) is used for PCI Express x16 lane width graphics cards.
PCIE2 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.
PCIE3 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.

2.5 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 (CLRCMOS1) (see p.1, No. 11)	2-pin Jumper	Short: Clear CMOS Open: Default

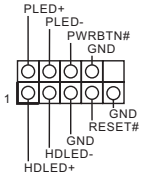
CLRCMOS1 allows you to clear the data in CMOS. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord, then use a jumper cap to short the pins on CLRCMOS1 for 3 seconds. Please remember to remove the jumper cap after clearing the CMOS. 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.

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.

2.6 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.1, No. 12)



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.

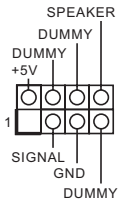
RESET (Reset Button):
Connect to the reset button on the chassis front panel. Press the reset button to restart the computer if the computer freezes and fails to perform a normal restart.

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.

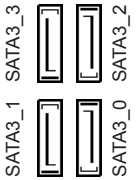
The front panel design may differ by chassis. A front panel module mainly consists of power button, reset button, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Chassis Intrusion and Speaker Header
(7-pin SPK_CI1)
(see p.1, No. 15)



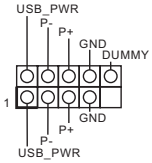
Please connect the chassis power LED and the chassis speaker to this header.

Serial ATA3 Connectors
(SATA3_0:
see p.1, No. 9)
(SATA3_1:
see p.1, No. 8)
(SATA3_2:
see p.1, No. 7)
(SATA3_3:
see p.1, No. 6)



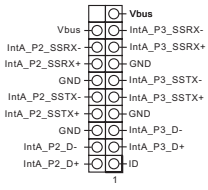
These four SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.
* If M2_1 is occupied by a SATA-type M.2 device, SATA3_3 will be disabled.

USB 2.0 Headers
(9-pin USB_4_5)
(see p.1, No. 14)
(9-pin USB_6_7)
(see p.1, No. 13)



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

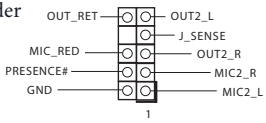
USB 3.1 Gen1 Header
(19-pin USB_2_3)
(see p.1, No. 5)



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

English

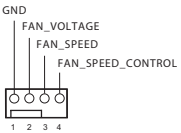
Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.1, No. 20)



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

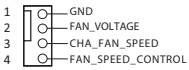
1. *High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.*
2. *If you use an AC'97 audio panel, please install it to the front panel audio header by 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 Fan Connector
(4-pin CHA_FAN2)
(see p.1, No. 13)



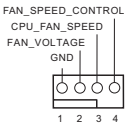
Please connect fan cables to the fan connectors and match the black wire to the ground pin.

Chassis/Water Pump Fan Connector
(4-pin CHA_FAN1/WP)
(see p.1, No. 19)



This motherboard provides a 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.

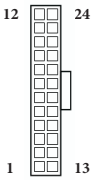
CPU Fan Connector
(4-pin CPU_FAN1)
(see p.1, No. 2)



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.

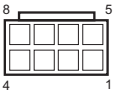
English

ATX Power Connector
(24-pin ATXPWR1)
(see p.1, No. 4)



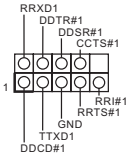
This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

ATX 12V Power Connector
(8-pin ATX12V1)
(see p.1, No. 1)



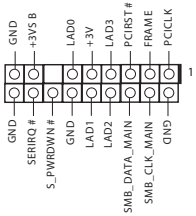
This motherboard provides an 8-pin ATX 12V power connector. To use a 4-pin ATX power supply, please plug it along Pin 1 and Pin 5.

Serial Port Header
(9-pin COM2)
(see p.1, No. 18)



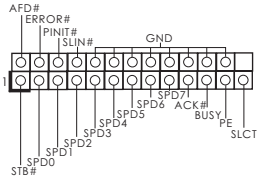
This COM2 header supports a serial port module.

TPM Header
(17-pin TPMS1)
(see p.1, No. 17)



This connector supports 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.1, No. 16)



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

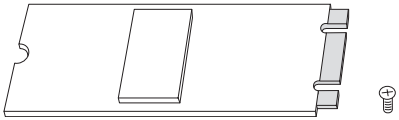
English

2.7 M.2_SSD (NGFF) 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 M.2 Socket (M2_1) supports SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen2 x2 (10 Gb/s).

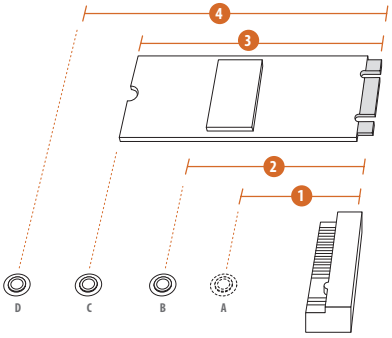
* If M2_1 is occupied by a SATA-type M.2 device, SATA3_3 will be disabled.

Installing the M.2_SSD (NGFF) Module



Step 1

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

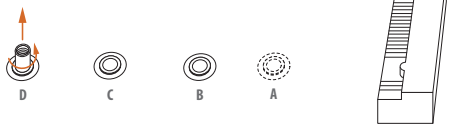


Step 2

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

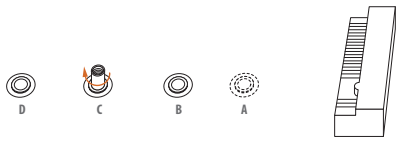
No.	1	2	3	4
Nut Location	A	B	C	D
PCB Length	3cm	4.2cm	6cm	8cm
Module Type	Type2230	Type 2242	Type2260	Type 2280

English



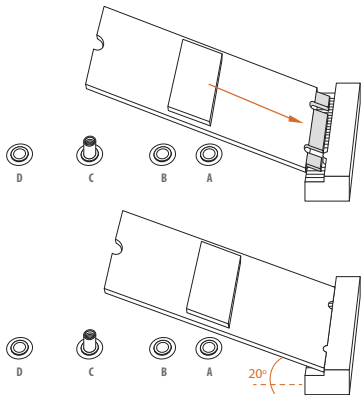
Step 3

Move the standoff based on the module type and length.
The standoff is placed at the nut location D by default. Skip Step 3 and 4 and go straight to Step 5 if you are going to use the default nut. Otherwise, release the standoff by hand.



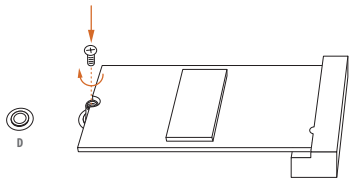
Step 4

Peel off the yellow protective film on the nut to be used. Hand tighten the standoff into the desired nut location on the motherboard.



Step 5

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 6

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

For the latest updates of M.2_SSD (NFGG) module support list, please visit our website for details: http://www.asrock.com

1 개요

ASRock H310CM-HDVP2 마더보드를 구입해 주셔서 감사합니다 . 이 마더보드는 ASRock 의 일관되고 엄격한 품질관리 하에 생산되어 신뢰성이 우수하며 , 품질과 내구성에 대한 ASRock 의 기준에 부합하는 우수한 성능과 견고한 설계를 제공합니다 .

마더보드 규격과 BIOS 소프트웨어를 업데이트할 수도 있기 때문에 , 이 문서의 내용은 예고 없이 변경될 수 있습니다 . 이 설명서가 변경될 경우 , 업데이트된 버전은 ASRock 의 웹사이트에서 추가 통지 없이 제공됩니다 . 이 마더보드와 관련하여 기술적 지원이 필요한 경우 , 당사의 웹사이트를 방문하여 사용 중인 모델에 대한 구체적 정보를 구하십시오 . ASRock 의 웹사이트에서는 최신 VGA 카드와 CPU 지원 목록도 찾을 수 있습니다 . ASRock 웹사이트 http://www.asrock.com.

1.1 포장 내용물

- ASRock H310CM-HDVP2 마더보드 (Micro ATX 폼팩터)
- ASRock H310CM-HDVP2 간편 설치 안내서
- ASRock H310CM-HDVP2 지원 CD
- 시리얼 ATA (SATA) 데이터 케이블 2 개 (선택 품목)
- I/O 패널 실드 1 개

1.2 규격

플랫폼	• Micro ATX 폼 팩터 • 솔리드 콘덴서 구조
CPU	• 8 세대 Intel® Core™ 프로세서 지원 (소켓 1151) • 4 개 전원 위상 구조 • Intel® Turbo Boost 2.0 기술 지원
칩세트	• Intel® H310
메모리	• 듀얼 채널 DDR4 메모리 기술 • DDR4 DIMM 슬롯 2 개 • DDR4 2666/2400/2133 비 ECC, 비버퍼링 메모리 지원 • 시스템 메모리 최대 용량 : 32GB • Intel® Extreme Memory Profile (XMP) 2.0 지원 • DIMM 슬롯에 15 μ Gold Contact 장착
확장 슬롯	• PCI Express 3.0 x16 슬롯 1 개 (PCIE1:x16 모드)* * NVMe SSD 를 부팅 디스크로 사용 가능하도록 지원 • PCI Express 2.0 x1 슬롯 2 개 • PCI 슬롯 1 개
그래픽	• Intel® UHD 그래픽스 빌트 - 인 비주얼과 VGA 출력은 GPU 통합 프로세서로만 지원할 수 있습니다 . • Intel® UHD 그래픽스 빌트 - 인 비주얼 지원 : AVC, MVC (S3D) 및 MPEG-2 풀 HW Encode1 지원 Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® 클리어 비디오 HD 기술 , Intel® Insider™, Intel® UHD 그래픽스 • DirectX 12 • HWA 인코드 / 디코드 : AVC/H.264, HEVC/H.265 8- 비트 , HEVC/H.265 10- 비트 , VP8, VP9 8- 비트 , VP9 10- 비트 (디코딩 전용), MPEG2, MJPEG, VC-1 (디코딩 전용) • 그래픽 출력 옵션 세 개 : D-Sub, DVI-D 및 HDMI * 최대 2 개의 디스플레이를 동시에 지원

- HDMI 지원 (최대 해상도 4K x 2K (4096x2160) @ 30Hz)
- DVI-D 지원 (최대 해상도 1920x1200 @ 60Hz)
- D-Sub 지원 (최대 해상도 1920x1200 @ 60Hz)
- Auto Lip Sync, Deep Color (12bpc), xvYCC 및 HBR (High Bit Rate Audio)(HDMI 포트 포함) 지원 (HDMI 호환 모니터 필요)
- DVI-D 및 HDMI 포트를 이용한 HDCP 지원
- HDMI 포트를 이용한 4K Ultra HD(UHD) 재생 지원

오디오

- 7.1 CH HD 오디오 (Realtek ALC887 오디오 코덱)

* 7.1 CH HD 오디오를 구성하려면 HD 전면 패널 오디오 모듈을 사용하고 다채널 오디오 기능을 오디오 드라이버로 활성화해야 합니다 .

- 서비 보호 지원
- ELNA 오디오 캡

LAN

- PCIE 1 개 , Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111GN
- Wake-On-LAN 지원
- 번개 /ESD 보호 지원
- 절전형 이더넷 802.3az 지원
- PXE 지원

후면 패널 I/O

- PS/2 마우스 포트 1 개
- PS/2 키보드 포트 1 개
- 직렬 포트 1 개 COM1
- D-Sub 포트 1 개
- DVI-D 포트 1 개
- HDMI 포트 1 개
- USB 2.0 포트 2 개 (ESD 보호 지원)
- USB 3.1 Gen1 포트 2 개 (ESD 보호 지원)
- LED 장착 RJ-45 LAN 포트 1 개 (ACT/LINK LED 및 SPEED LED)
- HD 오디오 잭 : 라인 입력 / 전면 스피커 / 마이크

- LED 장착 RJ-45 LAN 포트 1 개 (ACT/LINK LED 및 SPEED LED)
- HD 오디오 잭 : 라인 입력 / 전면 스피커 / 마이크

저장 장치

- SATA3 6.0 Gb/s 커넥터 4 개 , NCQ, AHCI 및 “ 핫 플러그 ” 지원

* SATA- 타입 M.2 장치에서 M2_1 을 사용 중이면 , SATA3_3 이 비활성화됩니다 .

- M.2 소켓 (M2_1) 1 개 , M 키 타입 2230/2242/2260/2280 M.2 SATA3 6.0 Gb/s 모듈 및 Gen2 M.2 PCI Express 모듈을 2 개 (10 Gb/s) 까지 지원 **

** NVMe SSD 를 부팅 디스크로 사용 가능하도록 지원
** ASRock U.2 키트 지원

커넥터

- 인쇄 포트 헤더 1 개
- COM 포트 헤더 1 개
- TPM 헤더 1 개
- 섀시 침입 및 스피커 헤더 1 개
- CPU 팬 커넥터 (4 핀) 1 개

* CPU 팬 커넥터는 팬 전력이 최대 1A(12W) 인 CPU 팬을 지원합니다 .

- 섀시 팬 커넥터 (4 핀) 1 개
- 섀시 / 워터 펌프 팬 커넥터 (4 핀) 1 개 (스마트 팬 속도 제어)

* 섀시 / 워터 펌프 팬은 팬 전력이 최대 2A(24W) 인 수냉식 쿨러 팬을 지원합니다 .
* 3 핀 또는 4 핀 팬이 사용 중인 경우 , CHA_FAN1/WP 가 자동으로 감지할 수 있습니다 .

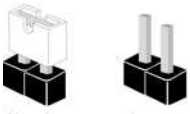
- 24 핀 ATX 전원 커넥터 1 개
- 8 핀 12V 전원 커넥터 1 개
- 전면 패널 오디오 커넥터 1 개
- USB 2.0 헤더 2 개 (USB 2.0 포트 4 개 지원) (ESD 보호 지원)
- USB 3.1 Gen1 헤더 1 개 (USB 3.1 Gen1 포트 2 개 지원) (ESD 보호 지원)

OS

- Microsoft® Windows® 10 64- 비트

1.3 점퍼 설정

그림은 점퍼를 어떻게 설정하는지 보여줍니다 . 점퍼 캡을 핀에 씌우면 점퍼가 "단락" 됩니다 . 점퍼 캡을 핀에 씌우지 않으면 점퍼가 "단선"됩니다 . 그림은 3 핀 점퍼를 보여주며 핀 1 과 핀 2 는 점퍼 캡을 씌울 때 "단락"됩니다 .



Clear CMOS 점퍼 (CLRMOS1) (1 페이지 , 10 번 항목 참조)	 2 핀 점퍼	단락 : Clear CMOS 단선 : 기본값

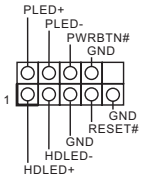
CLRCMOS1 을 사용하여 CMOS 에 저장된 데이터를 지울 수 있습니다 . CMOS 에 저장된 데이터에는 시스템 암호 , 날짜 , 시간 및 시스템 설정 파라미터와 같은 시스템 설정 정보가 포함됩니다 . 시스템 파라미터를 지우고 기본 설정으로 초기화하려면 컴퓨터를 끄고 전원 코드를 뽑은 다음 점퍼 캡을 사용하여 CLRCMOS1 의 핀을 3 초 동안 단락시키시십오 . CMOS 를 지운 후 반드시 점퍼 캡을 제거하십시오 . BIOS 업데이트를 완료한 직후 CMOS 를 지워야 할 경우 , 우선 시스템을 부팅한 후 바이오스 업데이트를 종료한 다음 CMOS 지우기 작업을 해야 합니다 .

CMOS 를 지울 경우 케이스 열림이 감지될 수도 있습니다 . BIOS 옵션 "Clear Status(상태 지우기)"를 조절하여 이전의 섀시 침입 상태에 대한 기록을 지우십시오 .

1.4 온보드 헤더 및 커넥터

온보드 헤더와 커넥터는 점퍼가 아닙니다 . 점퍼 캡을 온보드 헤더와 커넥터에 씌우지 마십시오 . 점퍼 캡을 온보드 헤더와 커넥터에 씌우면 마더보드가 영구적으로 손상됩니다 .

시스템 패널 헤더
(9 핀 PANEL1)
(1 페이지 , 11 번 항목 참조)



섀시의 전원 스위치 , 리셋 스위치 , 시스템 상태 표시등을 아래의 핀 할당에 따라 이 헤더에 연결합니다 . 케이블을 연결하기 전에 양극 핀과 음극 핀을 기록합니다 .

PWRBTN(*전원 스위치* ***):***
섀시 전면 패널의 전원 스위치에 연결합니다 . 전원 스위치를 이용해 시스템을 끄는 방법을 구성할 수 있습니다 .

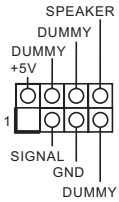
RESET(*리셋 스위치* ***):***
섀시 전면 패널의 리셋 스위치에 연결합니다 . 컴퓨터가 정지하고 정상적 재시작을 수행하지 못할 경우 리셋 스위치를 눌러 컴퓨터를 재시작합니다 .

PLED(*시스템 전원* ***LED):***
섀시 전면 패널의 전원 상태 표시등에 연결합니다 . 시스템이 작동하고 있을 때는 LED 가 켜져 있습니다 . 시스템이 S1/S3 대기 상태에 있을 때는 LED 가 계속 깜박입니다 . 시스템이 S4 대기 상태 또는 전원 꺼짐 (S5) 상태에 있을 때는 LED 가 꺼져 있습니다 .

HDLED(*하드 드라이브 동작* ***LED):***
섀시 전면 패널의 하드 드라이브 동작 LED 에 연결합니다 . 하드 드라이브가 데이터를 읽거나 쓰고 있을 때 LED 가 켜져 있습니다 .

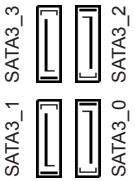
전면 패널 디자인은 섀시별로 다를 수 있습니다 . 전면 패널 모듈은 주로 전원 스위치 , 리셋 스위치 , 전원 LED, 하드 드라이브 동작 LED, 스피커 등으로 구성되어 있습니다 . 섀시 전면 패널 모듈을 이 헤더에 연결할 때 와이어 할당과 핀 할당이 정확히 일치하는지 확인합니다 .

섀시 침입 및 스피커 헤더
(7 핀 SPK_CI1)
(1 페이지 , 15 번 항목 참조)



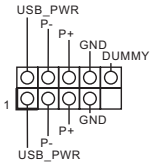
섀시 침입 및 섀시 스피커를 이 헤더에 연결하십시오 .

시리얼 ATA3 커넥터
(SATA3_0:
1 페이지 , 9 번 항목 참조)
(SATA3_1:
1 페이지 , 8 번 항목 참조)
(SATA3_2:
1 페이지 , 7 번 항목 참조)
(SATA3_3:
1 페이지 , 6 번 항목 참조)



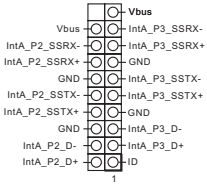
이들 네 개의 SATA3 커넥터는 최대 6.0 Gb/s 데이터 전송 속도를 제공하는 내부 저장 장치용 SATA 데이터 케이블을 지원합니다 .

USB 2.0 헤더
(9 핀 USB_4_5)
(1 페이지 , 14 번 항목 참조)
(9 핀 USB_6_7)
(1 페이지 , 13 번 항목 참조)



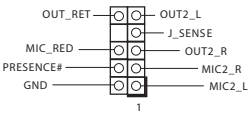
이 마더보드에는 두의 헤더가 있습니다 . 이 USB 2.0 헤더는 포트 두 개를 지원할 수 있습니다 .

USB 3.0 헤더
(19 핀 USB3_2_3)
(1 페이지 , 5 번 항목 참조)



I/O 패널에 USB 3.0 포트 두 개가 탑재되어 있을 뿐 아니라 마더보드에 헤더 한 개가 탑재되어 있습니다 . 각 USB 3.0 헤더는 포트 두 개를 지원할 수 있습니다 .

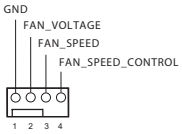
전면 패널 오디오 헤더
(9 핀 HD_AUDIO1)
(1 페이지 , 20 번 항목 참조)



이 헤더는 오디오 장치를 전면 오디오 패널에 연결하는 데 사용됩니다 .

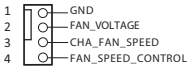
1. 고음질 오디오는 잭 감지를 지원하지만 올바르게 작동하려면 섀시의 패널 와이어가 HDA 를 지원해야 합니다 . 설명서 및 섀시 설명서에 나와 있는 지침을 따라 시스템을 설치하십시오 .
2. AC'97 오디오 패널을 사용할 경우 아래와 같은 절차를 따라 전면 패널 오디오 헤더에 설치하십시오 :
A. Mic_IN (MIC) 를 MIC2_L 에 연결합니다 .
B. Audio_R (RIN) 을 OUT2_R 에 연결하고 Audio_L (LIN) 을 OUT2_L 에 연결합니다 .
C. 접지 (GND) 를 접지 (GND) 에 연결합니다 .
D. MIC_RET 및 OUT_RET 는 HD 오디오 패널에만 사용됩니다 . AC'97 오디오 패널용으로 연결할 필요가 없습니다 .
E. 전면 마이크를 활성화하려면 Realtek 제어판에서 "FrontMic" 탭으로 가서 "Recording Volume(녹음 볼륨)" 을 조정합니다 .

섀시 팬 커넥터
(4 핀 CHA_FAN2)
(1 페이지 , 12 번 항목 참조)



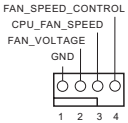
팬 케이블을 팬 커넥터에 연결하고 검은색 와이어를 접지핀에 연결하십시오 .

섀시 / 워터 펌프 팬 커넥터
(4 핀 CHA_FAN1/WP)
(1 페이지 , 19 번 항목 참조)



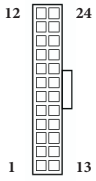
이 마더보드에는 4 핀 수냉식 섀시 팬 커넥터 3 개가 탑재되어 있습니다 . 3 핀 CPU 섀시 수냉식 쿨러 팬을 연결하려는 경우 핀 1-3 에 연결하십시오 .

CPU 팬 커넥터
(4 핀 CPU_FAN1)
(1 페이지 , 2 번 항목 참조)



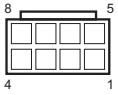
이 마더보드에는 4 핀 CPU 팬 (저소음 팬) 커넥터가 탑재되어 있습니다 . 3 핀 CPU 팬을 연결하려는 경우 핀 1-3 에 연결하십시오 .

ATX 전원 커넥터
(24 핀 ATXPWR1)
(1 페이지 , 4 번 항목 참조)



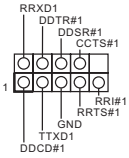
이 마더보드에는 24 핀 ATX 전원 커넥터가 탑재되어 있습니다 . 20 핀 ATX 전원공급장치를 사 용하려면 핀 1 과 핀 13 을 따라 연결하십시오 .

ATX 12V 전원 커넥터
(4 핀 ATX12V1)
(1 페이지 , 1 번 항목 참조)



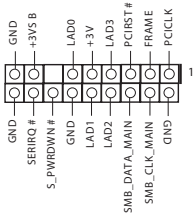
이 마더보드에는 4 핀 ATX 12V 전원 커넥터가 탑재되어 있습니다 .

시리얼 포트 헤더
(9 핀 COM2)
(1 페이지 ,18 번 항목 참조)



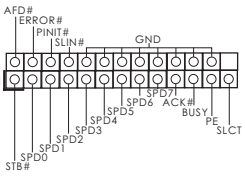
이 COM2 헤더는 시리얼 포트 모듈을 지원합니다 .

TPM 헤더
(17 핀 TPMS1)
(1 페이지 , 17 번 항목 참조)



이 커넥터는 키 , 디지털 인증서 , 암호 및 데이터를 안전하게 보관할 수 있는 TPM(Trusted Platform Module) 시스템을 지원합니다 . TPM 시스템은 네트워크 보안을 강화하고 , 디지털 신원을 보호하며 플랫폼 무결성을 유지합니다 .

인쇄 포트 헤더
(25 핀 LPT1)
(1 페이지 , 16 번 항목 참조)



프린터 장치의 간편한 연결을 가능하게 하는 인쇄 포트 케이블용 인터페이스입니다 .

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

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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 : H310M-HDVP2

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 :

Date : **May 12, 2017**

EU Declaration of Conformity

For the following equipment:

Motherboard

(Product Name)

H310CM-HDVP2 / 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)

CE

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)

July27, 2018

(Date)

P/N: 15G062116000AK V1.0