

Version 1.0

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“Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate”

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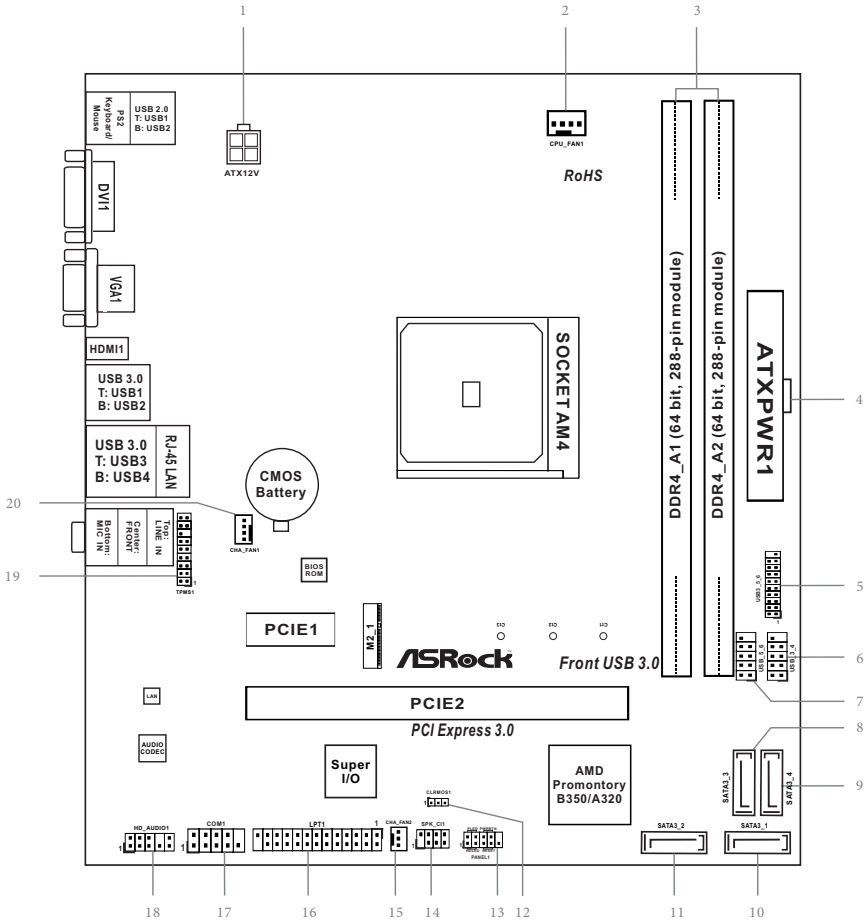
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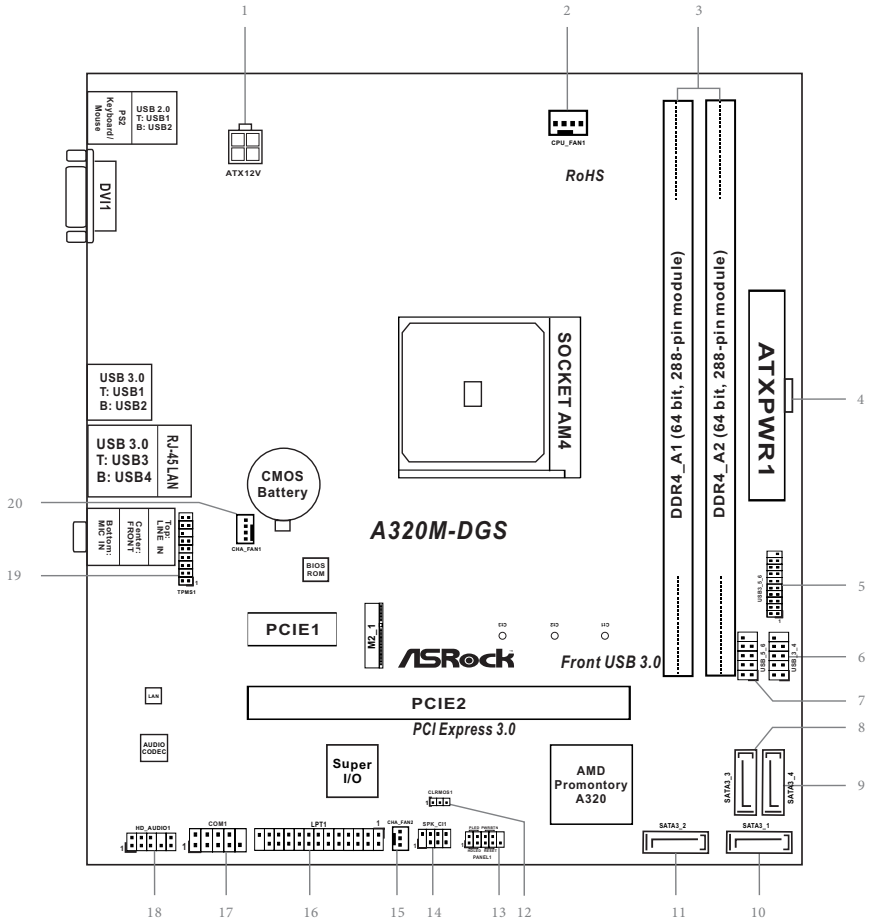


Motherboard Layout

AB350M-HDV / A320M-HDV:



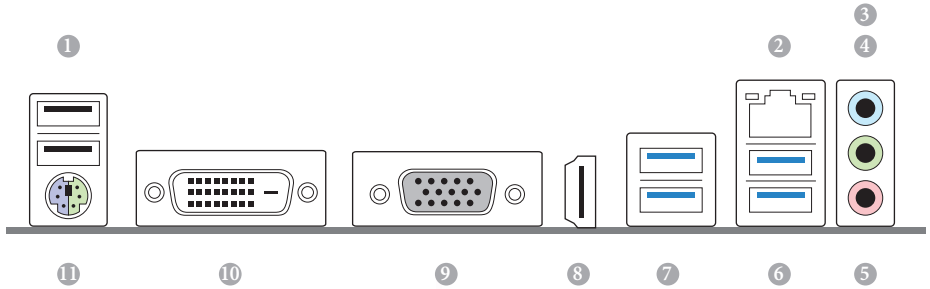
A320M-DGS:



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_A2)
4	ATX Power Connector (ATXPWR1)
5	USB 3.0 Header (USB3_5_6)
6	USB 2.0 Header (USB_3_4)
7	USB 2.0 Header (USB_5_6)
8	SATA3 Connector (SATA3_3)
9	SATA3 Connector (SATA3_4)
10	SATA3 Connector (SATA3_1)
11	SATA3 Connector (SATA3_2)
12	Clear CMOS Jumper (CLRCMOS1)
13	System Panel Header (PANEL1)
14	Chassis Intrusion and Speaker Header (SPK_C11)
15	Chassis Fan Connector (CHA_FAN2)
16	Print Port Header (LPT1)
17	COM Port Header (COM1)
18	Front Panel Audio Header (HD_AUDIO1)
19	TPM Header (TPMS1)
20	Chassis Fan Connector (CHA_FAN1)

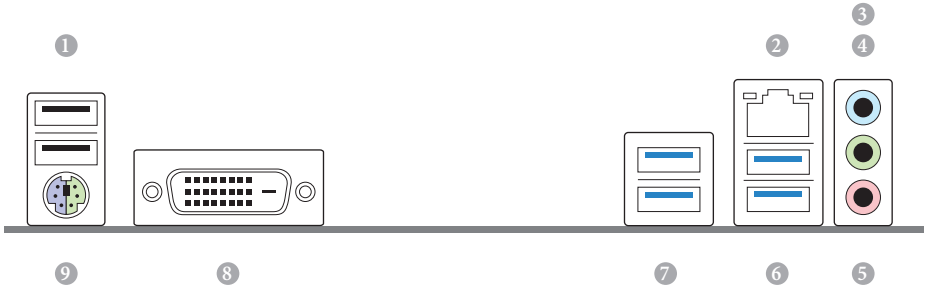
I/O Panel

AB350M-HDV/A320M-HDV:



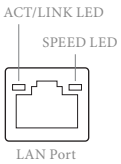
No.	Description	No.	Description
1	USB 2.0 Ports (USB12)	7	USB 3.0 Ports (USB3_12)
2	LAN RJ-45 Port*	8	HDMI Port
3	Line In (Light Blue)**	9	D-Sub Port
4	Front Speaker (Lime)**	10	DVI-D Port (DVI_CON1)
5	Microphone (Pink)**	11	PS/2 Mouse/Keyboard Port
6	USB 3.0 Ports (USB3_34)		

A320M-DGS:



No.	Description	No.	Description
1	USB 2.0 Ports (USB12)	6	USB 3.0 Ports (USB3_34)
2	LAN RJ-45 Port*	7	USB 3.0 Ports (USB3_12)
3	Line In (Light Blue)**	8	DVI-D Port (DVI_CON1)
4	Front Speaker (Lime)**	9	PS/2 Mouse/Keyboard Port
5	Microphone (Pink)**		

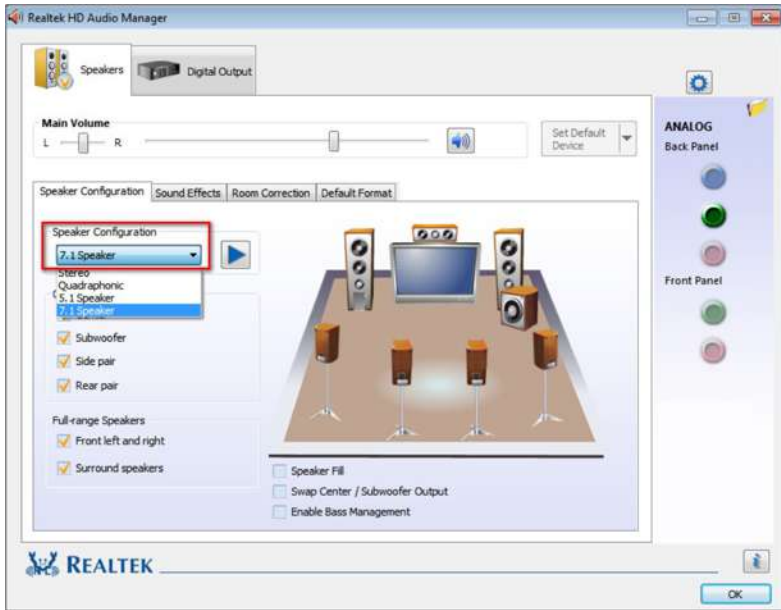
* There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.



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

** 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 AB350M-HDV/A320M-HDV/A320M-DGS 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 manual will be subject to change without notice. In case any modifications of this manual 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 AB350M-HDV/A320M-HDV/A320M-DGS Motherboard (Micro ATX Form Factor)
- ASRock AB350M-HDV/A320M-HDV/A320M-DGS Quick Installation Guide
- ASRock AB350M-HDV/A320M-HDV/A320M-DGS Support CD
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x I/O Panel Shield

1.2 Specifications

- Platform**
- Micro ATX Form Factor
 - Solid Capacitor design

- CPU**
- Supports AMD Socket AM4 A-Series APUs (Bristol Ridge) and Ryzen Series CPUs (Summit Ridge)
 - Digi Power design
 - 7 Power Phase design
 - Supports CPU up to 65W

- Chipset**
- AMD Promontory B350 (AB350M-HDV)
 - AMD Promontory A320 (A320M-HDV/A320M-DGS)

- Memory**
- Dual Channel DDR4 Memory Technology
 - 2 x DDR4 DIMM Slots
 - AMD Ryzen series CPUs support DDR4 3200+(OC)/2933 (OC)/2667/2400/2133 ECC & non-ECC, un-buffered memory*
 - AMD 7th Gen A-Series APUs support DDR4 2400/2133 ECC & non-ECC, un-buffered memory*
- * Please refer to Memory Support List on ASRock's website for more information. (<http://www.asrock.com/>)
- * Please refer to page 23 for DDR4 UDIMM maximum frequency support.
- Max. capacity of system memory: 32GB
 - 15 μ Gold Contact in DIMM Slots

- Expansion Slot**
- 1 x PCI Express 3.0 x16 Slot (PCIE2 @ x16 mode)*
- * Supports NVMe SSD as boot disks
- * AMD Ryzen series CPUs support PCIE2: x16 mode
- * AMD 7th A-Series APUs support PCIE2: x8 mode
- 1 x PCI Express 2.0 x1 Slot

- Graphics**
- Integrated AMD Radeon™ R7 Series Graphics in A-series / E-series APU
 - DirectX 12, Pixel Shader 5.0
 - Max. shared memory 2GB
- AB350M-HDV/A320M-HDV:**
- Three graphics output options: D-Sub, DVI-D and HDMI

- Supports Triple Monitor
- Supports HDMI with max. resolution up to 4K x 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz
- Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz
- Supports D-Sub with max. resolution up to 2048x1536 @ 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 Full HD 1080p Blu-ray (BD) playback with DVI-D and HDMI Ports

A320M-DGS:

- Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz
- Supports HDCP with DVI-D Port
- Supports Full HD 1080p Blu-ray (BD) playback with DVI-D 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 RTL8111GR
- Supports Wake-On-LAN
- Supports Lightning/ESD Protection
- Supports LAN Cable Detection
- Supports Energy Efficient Ethernet 802.3az
- Supports PXE

Rear Panel I/O

- 1 x PS/2 Mouse/Keyboard Port
- 2 x USB 2.0 Ports (Supports ESD Protection)
- 4 x USB 3.0 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

AB350M-HDV/A320M-HDV:

- 1 x D-Sub Port
- 1 x DVI-D Port

1 x HDMI Port

A320M-DGS:

- 1 x DVI-D Port

Storage

- 4 x SATA3 6.0 Gb/s Connectors, support RAID (RAID 0, RAID 1 and RAID 10), NCQ, AHCI and Hot Plug
- 1 x Ultra M.2 Socket, supports type 2242/2260/2280 M.2 SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen3 x4 (32 Gb/s) (with Ryzen Series CPU) or Gen3 x2 (16 Gb/s) (with A-Series APU)*

* 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)
- 2 x Chassis Fan Connectors (1 x 4-pin, 1 x 3-pin)

* The CPU Fan Connector supports the CPU fan of maximum 1A (12W) fan power.

- 1 x 24 pin ATX Power Connector
- 1 x 4 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 3.0 Header (Supports 2 USB 3.0 ports) (Supports ESD Protection)

**BIOS
Feature**

- AMI UEFI Legal BIOS with GUI support
- Supports "Plug and Play"
- ACPI 5.1 compliance wake up events
- Supports jumperfree
- SMBIOS 2.3 support
- DRAM Voltage multi-adjustment

**Hardware
Monitor**

- CPU/Chassis temperature sensing
- CPU/Chassis Fan Tachometer
- CPU/Chassis Quiet Fan
- CPU/Chassis Fan multi-speed control
- CASE OPEN detection
- Voltage monitoring: +12V, +5V, +3.3V, Vcore

OS

- Microsoft® Windows® 10 64-bit
- * For the updated Windows® 10 driver, please visit ASRock's website for details: <http://www.asrock.com>

**Certifica-
tions**

- FCC, CE, WHQL
- 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.

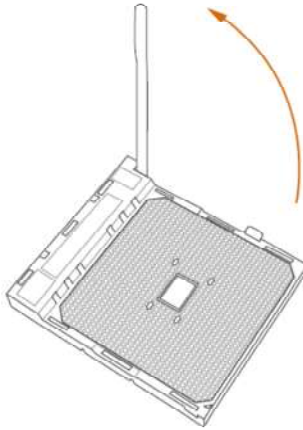
- Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a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



Unplug all power cables before installing the CPU.

1



2



3



2.2 Installing the CPU Fan and Heatsink

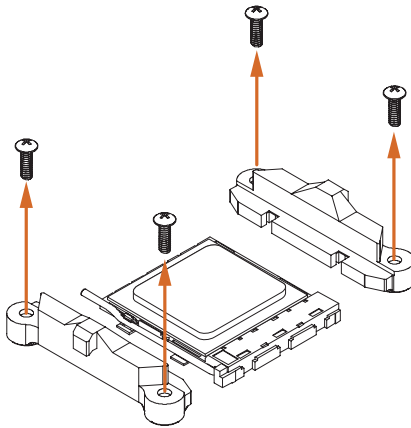
After you install the CPU into this motherboard, it is necessary to install a larger heatsink and cooling fan to dissipate heat. You also need to spray thermal grease between the CPU and the heatsink to improve heat dissipation. Make sure that the CPU and the heatsink are securely fastened and in good contact with each other.



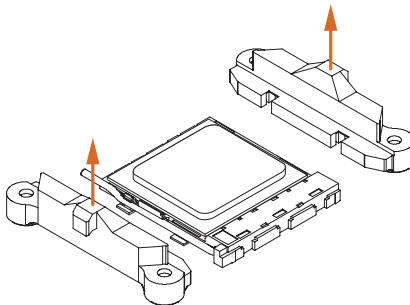
Please turn off the power or remove the power cord before changing a CPU or heatsink.

Installing the CPU Box Cooler SR1

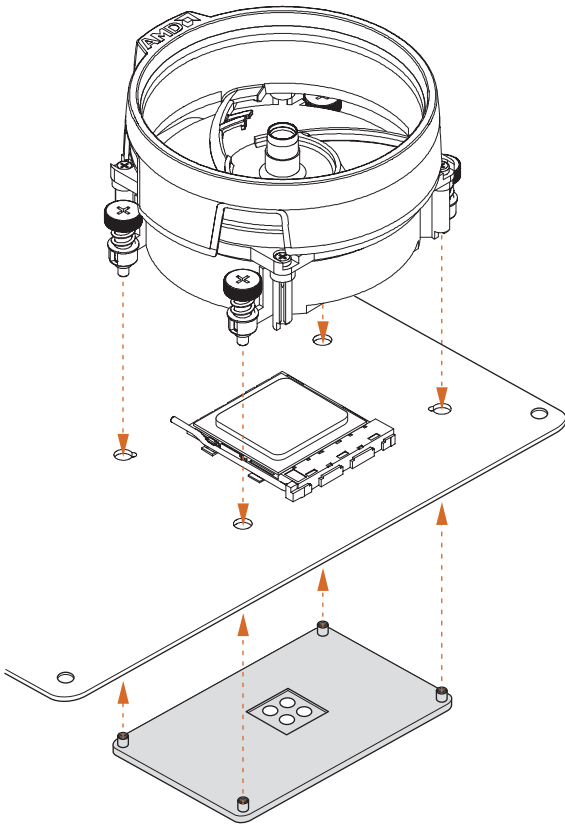
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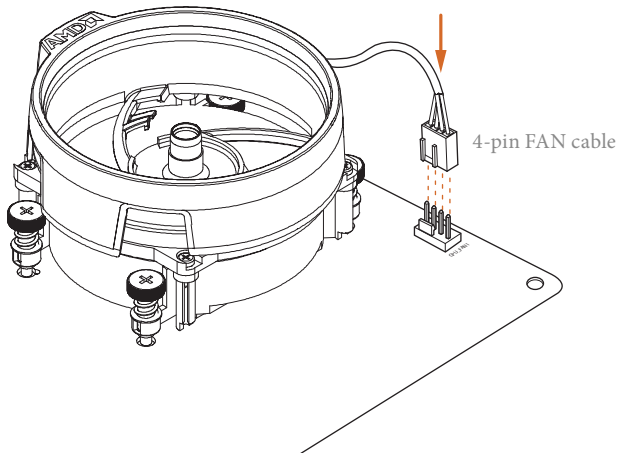
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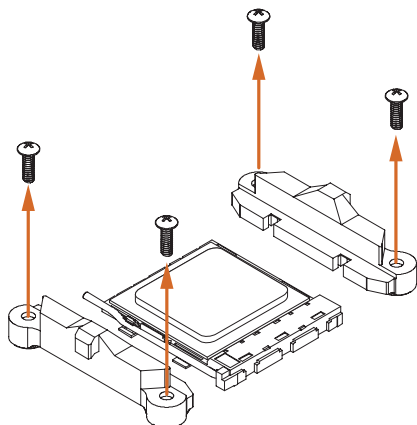
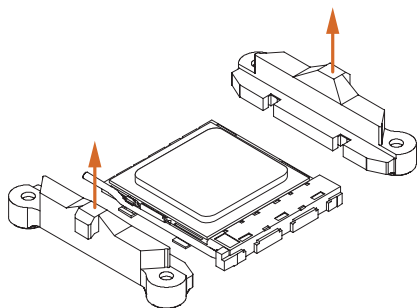
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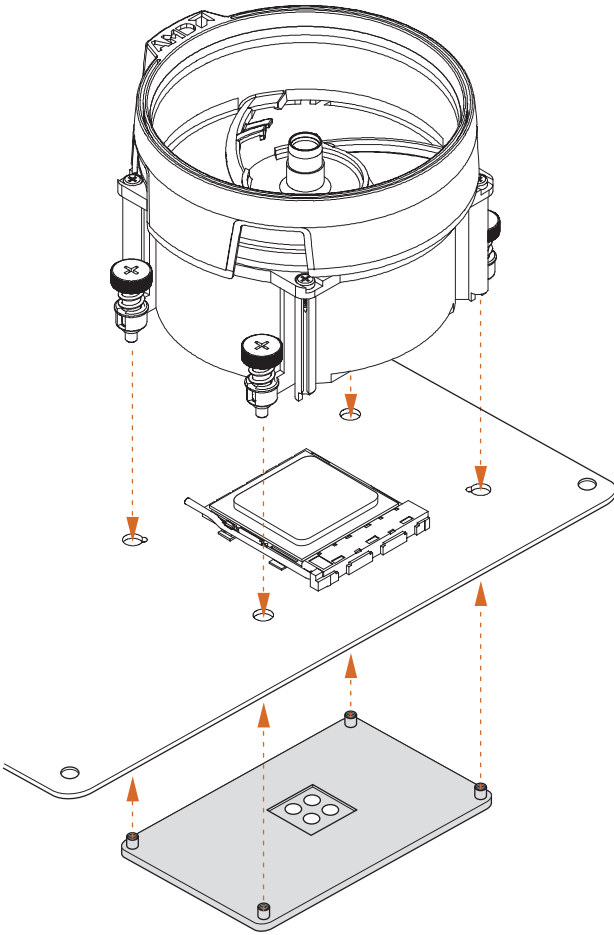
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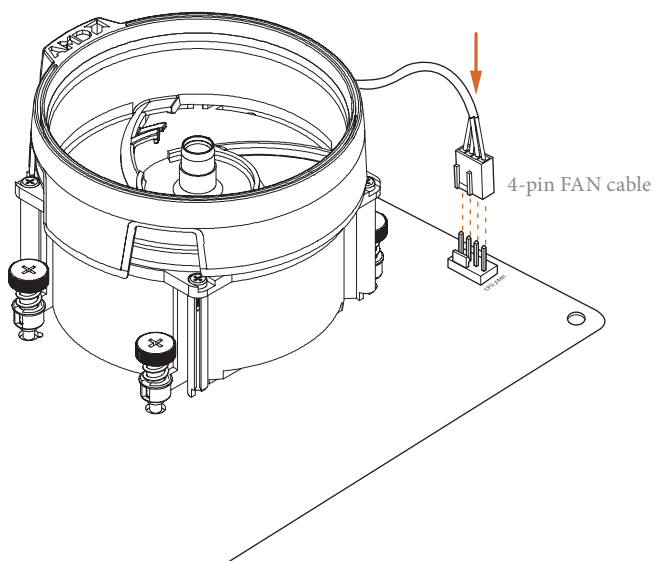
Installing the AM4 Box Cooler SR2

1**2**

3

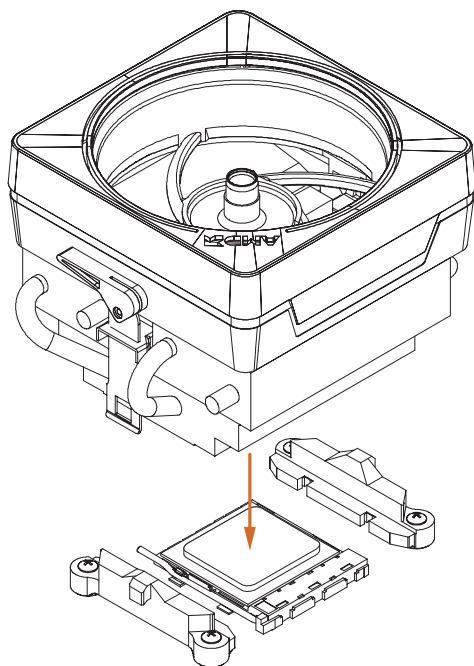


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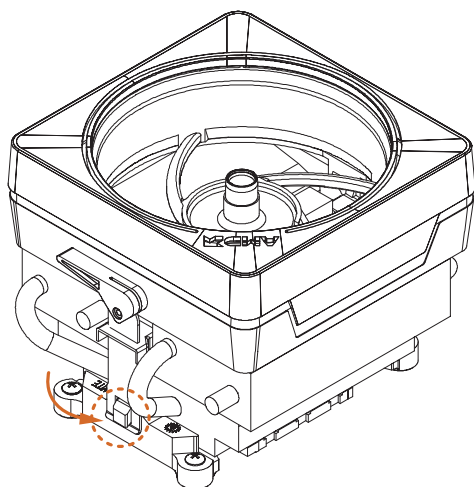


Installing the AM4 Box Cooler SR3

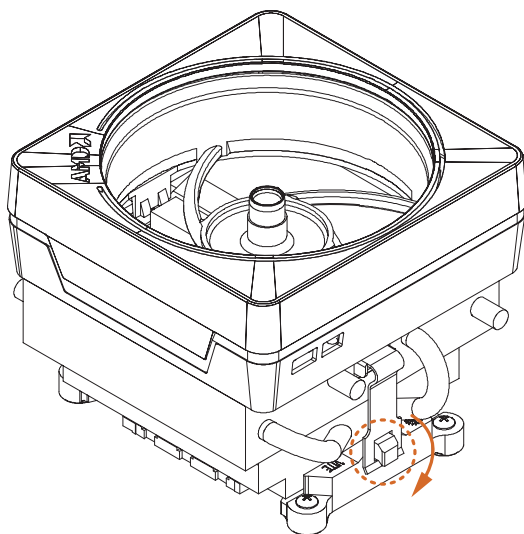
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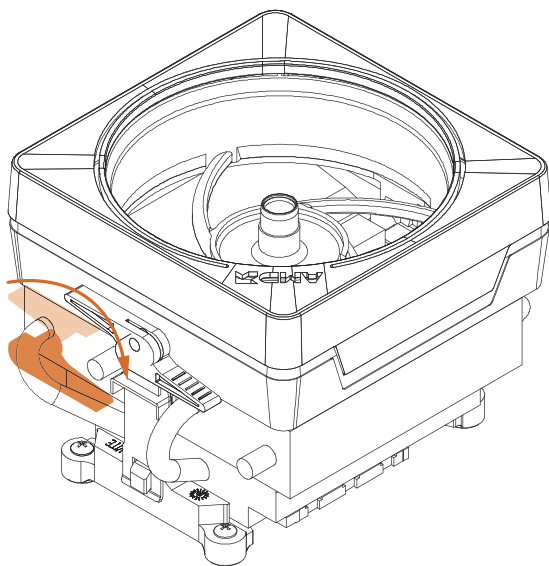
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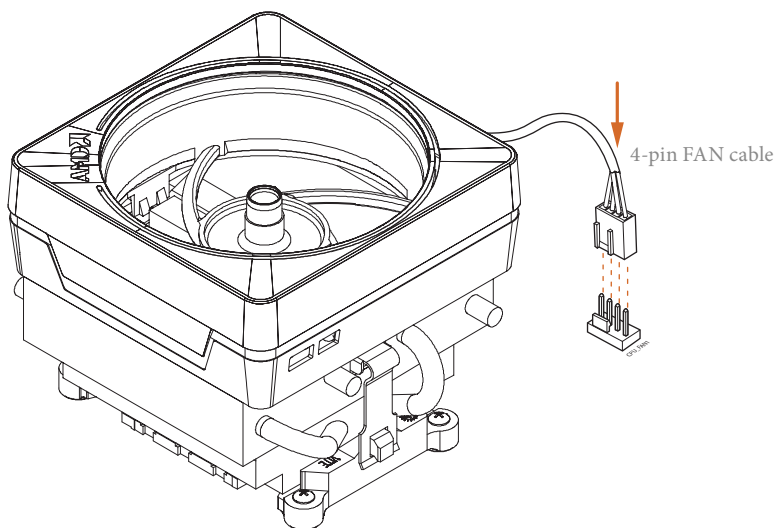
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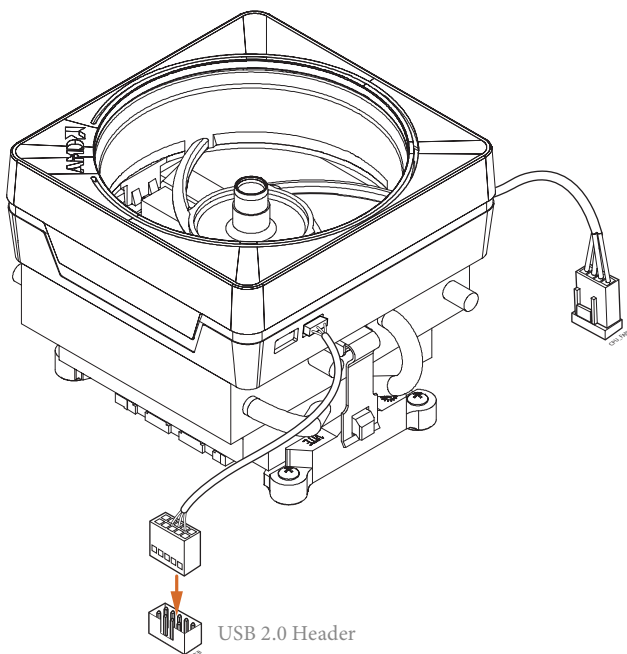
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5



6



Please note that this connector is the interface to the LED control board on the SR3, it requires the AMD utility "SR3 Settings Software" to control the LED.

*The diagram shown here are for reference only. Please refer to page 28 for the orientation of USB Header.

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.

DDR4 UDIMM Maximum Frequency Support

A-Series APUs:

UDIMM Memory Slot		Frequency (Mhz)
A1	B1	
-	SR	2400
SR	-	2400
-	DR	2400
DR	-	2400
SR	SR	2400
DR	DR	2400

Ryzen CPUs:

UDIMM Memory Slot		Frequency (Mhz)
A1	B1	
-	SR	2667
SR	-	2667
-	DR	2667
DR	-	2667
SR	SR	2667
DR	DR	2667

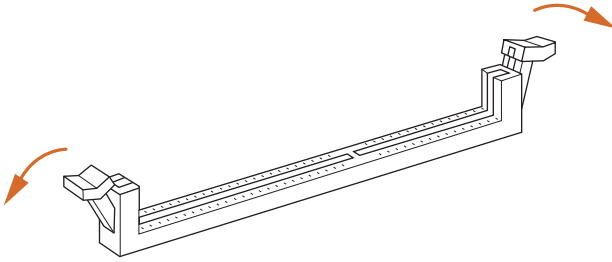
SR: Single rank DIMM, 1Rx4 or 1Rx8 on DIMM module label

DR: Dual rank DIMM, 2Rx4 or 2Rx8 on DIMM module label

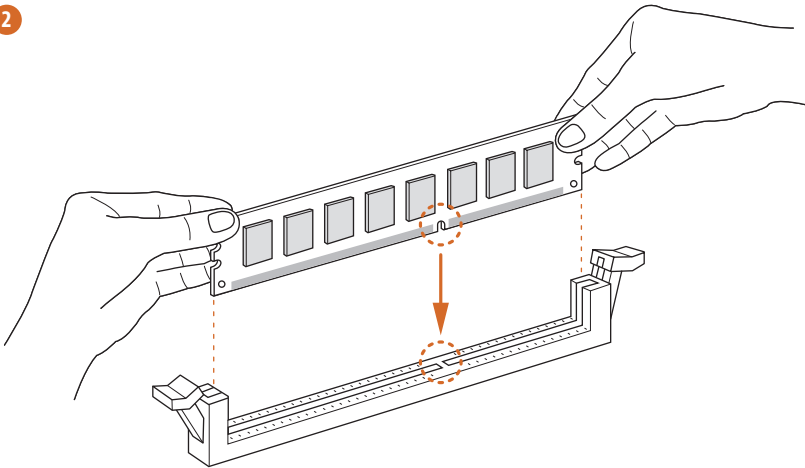


The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

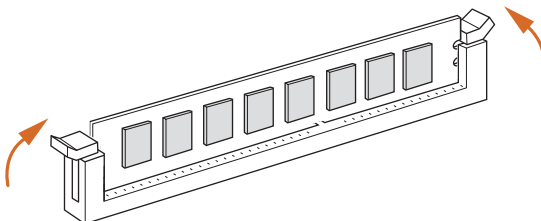
1



2



3



2.4 Expansion Slots (PCI Express Slots)

There are 2 PCI Express slots on the motherboard.



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

PCIe slots:

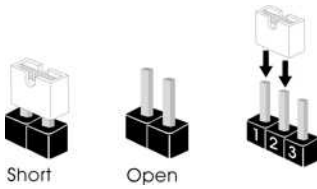
PCIE1 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards

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

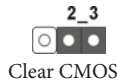
* PCIE2 will downgrade to x8 mode when A-Series APU is installed.

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”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when a jumper cap is placed on these 2 pins.



Clear CMOS Jumper
(CLR CMOS1)
(see p.1, 2, No. 12)



CLR CMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLR CMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, and user default profile will be cleared only if the CMOS battery is removed.



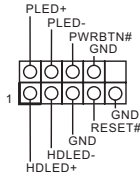
If you clear the CMOS, the case open may be detected. Please adjust the BIOS option “Clear Status” to clear the record of previous chassis intrusion status.

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, 2, No. 13)



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



PWRBTN (Power Switch):

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

RESET (Reset Switch):

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

PLED (System Power LED):

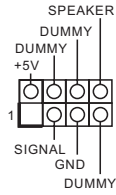
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

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

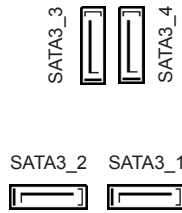
The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Chassis Intrusion and Speaker Header
(7-pin SPK_CI1)
(see p.1, 2, No. 14)



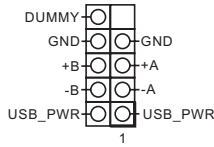
Please connect the chassis intrusion and the chassis speaker to this header.

Serial ATA3 Connectors
(SATA3_1:
see p.1, 2, No. 10)
(SATA3_2:
see p.1, 2, No. 11)
(SATA3_3:
see p.1, 2, No. 8)
(SATA3_4:
see p.1, 2, No. 9)



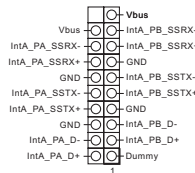
These four SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.

USB 2.0 Header
(9-pin USB_3_4)
(see p.1, 2, No. 6)
(9-pin USB_5_6)
(see p.1, 2, No. 7)



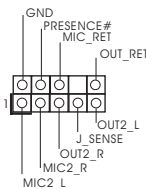
Besides two USB 2.0 ports on the I/O panel, there are two headers on this motherboard. Each USB 2.0 header can support two ports.

USB 3.0 Header
(19-pin USB3_5_6)
(see p.1, 2, No. 5)



Besides four USB 3.0 ports on the I/O panel, there is one header on this motherboard. Each USB 3.0 header can support two ports.

Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.1, 2, No. 18)

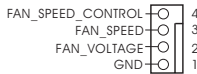


This header is for connecting audio devices to the front audio panel.



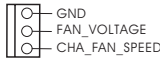
1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
2. If you use an AC'97 audio panel, please install it to the front panel audio header by the 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 and Power Fan Connectors
 (4-pin CHA_FAN1)
 (see p.1, 2, No. 20)

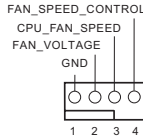


Please connect fan cables to the fan connectors and match the black wire to the ground pin.

(3-pin CHA_FAN2)
 (see p.1, 2, No. 15)

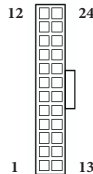


CPU Fan Connector
 (4-pin CPU_FAN1)
 (see p.1, 2, No. 2)



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.

ATX Power Connector
 (24-pin ATXPWR1)
 (see p.1, 2, No. 4)



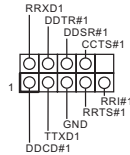
This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

ATX 12V Power Connector
(4-pin ATX12V1)
(see p.1, 2, No. 1)



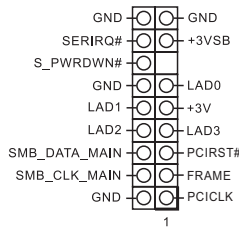
Please connect an ATX 12V power supply to this connector.

Serial Port Header
(9-pin COM1)
(see p.1, 2, No. 17)



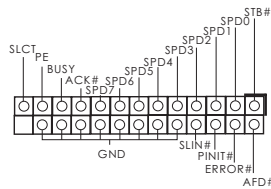
This COM1 header supports a serial port module.

TPM Header
(17-pin TPMS1)
(see p.1, 2, No. 19)



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, 2, No. 16)

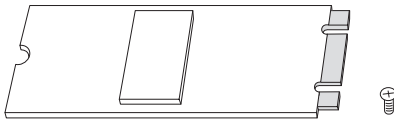


This is an interface for print port cable that allows convenient connection of printer devices.

2.7 M.2_SSD (NGFF) Module Installation Guide

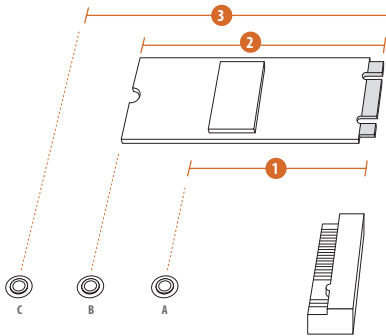
The M.2, also known as the Next Generation Form Factor (NGFF), is a small size and versatile card edge connector that aims to replace mPCIe and mSATA. The Ultra M.2 Socket (M2_1) supports SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen3 x4 (32 Gb/s) (with Ryzen CPU) or Gen3 x2 (16 Gb/s) (with A-Series APU)

Installing the M.2_SSD (NGFF) Module



Step 1

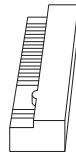
Prepare a M.2_SSD (NGFF) module and the screw.



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
Nut Location	A	B	C
PCB Length	4.2cm	6cm	8cm
Module Type	Type 2242	Type2260	Type 2280



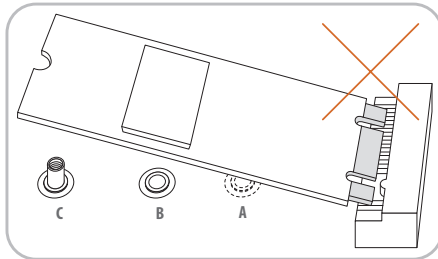
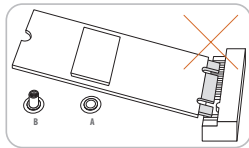
Step 3

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.



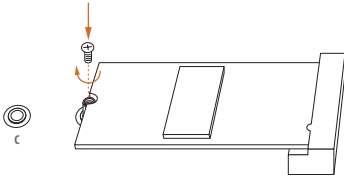
Step 4

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

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

**Step 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.

M.2_SSD (NGFF) Module Support List

Vendor	Interface	P/N
SanDisk	PCIe	SanDisk-SD6PP4M-128G(Gen2 x2)
Intel	PCIe	INTEL 6000P-SSDPEKKF256G7 (nvme)
Intel	PCIe	INTEL 6000P-SSDPEKKF512G7 (nvme)
Kingston	PCIe	Kingston SHPM2280P2 / 240G (Gen2 x4)
Samsung	PCIe	Samsung XP941-MZHPU512HCGL(Gen2x4)
ADATA	SATA	ADATA - AXNS381E-128GM-B
Crucial	SATA	Crucial-CT240M500SSD4-240GB
ezlink	SATA	ezlink P51B-80-120GB
Intel	SATA	INTEL 540S-SSDSCKKW240H6-240GB
Kingston	SATA	Kingston SM2280S3G2/120G - Win8.1
Kingston	SATA	Kingston-RBU-SNS8400S3 / 180GD
LITEON	SATA	LITEON LJH-256V2G-256GB (2260)
PLEXTOR	SATA	PLEXTOR PX-128M6G-2260-128GB
PLEXTOR	SATA	PLEXTOR PX-128M7VG-128GB
SanDisk	SATA	SanDisk X400-SD8SN8U-128G
SanDisk	SATA	Sandisk Z400s-SD8SNAT-128G-1122
SanDisk	SATA	SanDisk-SD6SN1M-128G
Transcend	SATA	Transcend TS256GMTS800-256GB
V-Color	SATA	V-Color 120G
V-Color	SATA	V-Color 240G
WD	SATA	WD GREEN WDS240G1G0B-00RC30

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

Technische Daten

- Plattform**
- Micro-ATX-Formfaktor
 - Feststoffkondensator-Design

- Prozessor**
- Unterstützt AMD-Sockel-AM4-APUs der A-Serie (Bristol Ridge) und Prozessoren der Ryzen-Serie (Summit Ridge)
 - Digi Power design
 - 7-Leistungsphasendesign
 - Unterstützt CPU bis 65 W

- Chipsatz**
- AMD Promontory B350 (AB350M-HDV)
 - AMD Promontory A320 (A320M-HDV/A320M-DGS)

- Speicher**
- Dualkanal-DDR4-Speichertechnologie
 - 2 x DDR4-DIMM-Steckplätze
 - CPUs von AMDs Ryzen-Serie unterstützen ungepufferten DDR4-3200+(OC)/2933(OC)/2667/2400/2133-ECC- und -Non-ECC-Speicher*
 - APUs von AMDs A-Serie der 7. Generation unterstützen ungepufferten DDR4-2400/2133-ECC- und -Non-ECC-Speicher*
- * Weitere Informationen finden Sie in der Speicherkompatibilitätsliste auf der ASRock-Webseite. (<http://www.asrock.com/>)
- * Bitte beachten Sie Seite 23 für die maximal unterstützte Frequenz von DDR4-UDIMM.
- Systemspeicher, max. Kapazität: 32 GB
 - 15-µ-Goldkontakt in DIMM-Steckplätze

- Erweiterungssteckplatz**
- 1 x PCI-Express-3.0-x16-Steckplatz (PCIE2 im x16-Modus)*
- * Unterstützt NVMe-SSD als Bootplatte
- * CPUs von AMDs Ryzen-Serie unterstützen PCIE2: x16-Modus
- * APUs von AMDs A-Serie der 7. Generation unterstützen PCIE2: x8-Modus
- 1 x PCI-Express 2.0-x1-Steckplatz

- Grafikkarte**
- Integrierte Grafikkarte der AMD-Radeon™-R7-Serie in APU der A-Serie / E-Serie
 - DirectX 12, Pixel Shader 5.0
 - Max. geteilter Speicher: 2GB
- AB350M-HDV/A320M-HDV:**
- Drei Grafikkarten-Ausgangsoptionen: D-Sub, DVI-D und HDMI

- Unterstützt drei Monitore
- Unterstützt HDMI mit maximaler Auflösung von 4K x 2K (4096 x 2160) bei 24 Hz / (3840 x 2160) bei 30 Hz
- Unterstützt DVI-D mit maximaler Auflösung von 1920 x 1200 bei 60 Hz
- Unterstützt D-Sub mit maximaler Auflösung von 2048 x 1536 bei 60 Hz
- Unterstützt Auto-Lippensynchronizität, hohe Farbtiefe (12 bpc), xvYCC und HBR (Audio mit hoher Bitrate) mit HDMI-Port (konformer HDMI-Monitor erforderlich)
- Unterstützt HDCP mit DVI-D- und HDMI-Ports
- Unterstützt Blu-ray- (BD) Wiedergabe (Full HD/1080p) mit DVI-D- und HDMI-Ports

A320M-DGS:

- Unterstützt DVI-D mit maximaler Auflösung von 1920 x 1200 bei 60 Hz
- Unterstützt HDCP mit DVI-D-Port
- Unterstützt Blu-ray- (BD) Wiedergabe (Full HD/1080p) mit DVI-D-Port

Audio

- 7.1-Kanal-HD-Audio (Realtek ALC887-Audiocodec)
- * Zur Konfiguration von 7.1-Kanal-HD-Audio müssen Sie ein HD-Frontblenden-Audiomodul nutzen und den Mehrkanalton über den Audiotreiber aktivieren.
- Unterstützt Überspannungsschutz
- ELNA-Audiokondensatoren

LAN

- PCIE-x1-Gigabit-LAN 10/100/1000 Mb/s
- Realtek RTL8111GR
- Unterstützt Wake-On-LAN
- Unterstützt Schutz gegen Blitzschlag/elektrostatische Entladung
- Unterstützt LAN-Kabelerkennung
- Unterstützt energieeffizientes Ethernet 802.3az
- Unterstützt PXE

Rück- blende, E/A

- 1 x PS/2-Maus-/Tastaturanschluss
- 2 x USB-2.0-Ports (unterstützt Schutz gegen elektrostatische Entladung)
- 4 x USB-3.0-Ports (unterstützt Schutz gegen elektrostatische Entladung)
- 1 x RJ-45-LAN-Port mit LED (Aktivität/Verbindung-LED und Geschwindigkeit-LED)
- HD-Audioanschlüsse: Line-in / Vorderer Lautsprecher / Mikrofon

AB350M-HDV/A320M-HDV:

- 1 x D-Sub-Port
- 1 x DVI-D-Port

1 x HDMI-Port

A320M-DGS:

- 1 x DVI-D-Port

Speicher

- 4 x SATA-III-6,0-Gb/s-Anschlüsse, unterstützt RAID (RAID 0, RAID 1 und RAID 10), NCQ, AHCI und Hot-Plugging
- 1 x Ultra-M.2-Sockel, unterstützt M-Key-2242-/2260-/2280-M.2-SATA-III-6,0-Gb/s-Modul und M.2-PCI-Express-Modul bis Gen3 x 4 (32 Gb/s) (mit Prozessor der Ryzen-Serie) oder Gen3 x 2 (16 Gb/s) (mit APU der A-Serie)*

* Unterstützt NVMe-SSD als Bootplatte

* Unterstützt ASRock U.2-Kit

Anschluss

- 1 Druckerport-Anschlussleiste
 - 1 x COM-Anschluss-Stiftleiste
 - 1 x TPM-Stiftleiste
 - 1 x Gehäuseeingriff- und Lautsprecher-Stiftleiste
 - 1 x CPU-Lüfteranschluss (4-polig)
 - 2 x Gehäuselüfteranschlüsse (1 x 4-polig, 1 x 3-polig)
- * Der CPU-Lüfteranschluss unterstützt einen CPU-Lüfter mit einer maximalen Lüfterleistung von 1 A (12 W).
- 1 x 24-poliger ATX-Netzanschluss
 - 1 x 4-poliger 12-V-Netzanschluss
 - 1 x Audioanschluss an Frontblende
 - 2 x USB 2.0-Stiftleisten (unterstützt vier USB 2.0-Ports) (unterstützt Schutz gegen elektrostatische Entladung)
 - 1 x USB 3.0-Stiftleiste (unterstützt zwei USB 3.0-Ports) (unterstützt Schutz gegen elektrostatische Entladung)

BIOS-Funktion

- AMI-UEFI-Legal-BIOS mit Unterstützung grafischer Benutzerschnittstellen
- Unterstützt „Plug-and-Play“
- ACPI 5.1-konforme Aufweckereignisse
- Jumper-frei
- SMBIOS 2.3-Unterstützung
- DRAM-Spannungsmehrfachanpassung

Hardwareüberwachung

- CPU-/Gehäusetemperaturerkennung
- CPU-/Gehäuselüftertachometer
- Lautloser CPU-/Gehäuselüfter
- CPU-/Gehäuselüfter-Mehrfachgeschwindigkeitssteuerung
- Gehäuse-offen-Erkennung
- Spannungsüberwachung: +12 V, +5 V, +3,3 V, CPU Vcore

Betriebssystem

- Microsoft® Windows® 10, 64 Bit
- * Einzelheiten zum aktualisierten Windows® 10-Treiber entnehmen Sie bitte der ASRock-Webseite: <http://www.asrock.com>

Zertifizierungen

- FCC, CE, WHQL
- ErP/EuP ready (ErP/EuP ready-Netzteil erforderlich)

* Detaillierte Produktinformationen finden Sie auf unserer Webseite: <http://www.asrock.com>



Bitte beachten Sie, dass mit einer Übertaktung, zu der die Anpassung von BIOS-Einstellungen, die Anwendung der Untied Overclocking Technology oder die Nutzung von Übertaktungswerkzeugen von Drittanbietern zählen, bestimmte Risiken verbunden sind. Eine Übertaktung kann sich auf die Stabilität Ihres Systems auswirken und sogar Komponenten und Geräte Ihres Systems beschädigen. Sie sollte auf eigene Gefahr und eigene Kosten durchgeführt werden. Wir übernehmen keine Verantwortung für mögliche Schäden, die durch eine Übertaktung verursacht wurden.

Spécifications

- Plateforme**
- Facteur de forme Micro ATX
 - Conception à condensateurs solides

- Processeur**
- Prend en charge les APU série A (Bristol Ridge) et les CPU série Ryzen (Summit Ridge) AM4 à socket AMD
 - Digi Power design
 - Alimentation à 7 phases
 - Prend en charge les unités centrales jusqu'à 65W

- Chipset**
- AMD Promontory B350 (AB350M-HDV)
 - AMD Promontory A320 (A320M-HDV/A320M-DGS)

- Mémoire**
- Technologie mémoire double canal DDR4
 - 2 x fentes DIMM DDR4
 - Les CPU AMD série Ryzen prennent en charge la mémoire DDR4 3200+(OC)/2933(OC)/2667/2400/2133 ECC et non ECC, sans tampon*
 - Les APU AMD série A 7e Gén prennent en charge la mémoire DDR4 2400/2133 ECC et non ECC, sans tampon*
- * Veuillez consulter la liste de prise en charge des mémoires sur le site Web d'ASRock pour de plus amples informations. (<http://www.asrock.com/>)
- * Veuillez consulter la page 23 pour connaître la prise en charge de la fréquence maximale de l'UDIMM DDR4.
- Capacité max. de la mémoire système : 32Go
 - Contacts dorés 15µ sur fentes DIMM

- Fente d'expansion**
- 1 x Fente PCI Express 3.0 x16 (PCIE2 @ mode x16)*
- * Prend en charge les SSD NVMe comme disques de démarrage
- * Les CPU AMD série Ryzen prennent en charge PCIE2 : mode x16
- * Les APU AMD série A 7e Gén prennent en charge PCIE2 : mode x8
- 1 x fente PCI Express 2.0 x1

- Graphiques**
- Carte graphique AMD Radeon™ série R7 intégrée dans APU série A / série E
 - DirectX 12, Pixel Shader 5.0
 - Mémoire partagée max. 2 Go
- AB350M-HDV/A320M-HDV :**
- Trois options de sortie graphique : D-Sub, DVI-D et HDMI

- Prend en charge la configuration à triple moniteurs
- Prend en charge la technologie HDMI avec résolution maximale de 4K × 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz
- Prend en charge le mode DVI-D avec une résolution maximale de 1920x1200 @ 60Hz
- Prend en charge le mode D-Sub avec une résolution maximale de 2048x1536 @ 60 Hz
- Prend en charge les technologies Auto Lip Sync, Deep Color (12bpc), xvYCC et HBR (High Bit Rate Audio) avec port HDMI (un écran compatible HDMI est requis)
- Prend en charge HDCP via ports DVI-D et HDMI
- Prend en charge la lecture Blu-ray (BD) Full HD 1080p via ports DVI-D et HDMI

A320M-DGS :

- Prend en charge le mode DVI-D avec une résolution maximale de 1920x1200 @ 60Hz
- Prend en charge HDCP via port DVI-D
- Prend en charge la lecture Blu-ray (BD) Full HD 1080p via port DVI-D

Audio

- Audio 7.1 CH HD (Codec audio Realtek ALC887)
- *Pour configurer l'audio 7.1 CH HD, il est nécessaire d'utiliser un module audio HD pour panneau frontal et d'activer la fonction audio multicanal via le pilote audio.
- Prend en charge la protection contre les surtensions
 - Capuchons ELNA Audio

Réseau

- PCIE x1 Gigabit LAN 10/100/1000 Mo/s
- Realtek RTL8111GR
- Prend en charge la fonction Wake-On-LAN
- Prend en charge la protection contre la foudre/les décharges électrostatiques
- Prend en charge la détection de câble LAN
- Prend en charge la fonction d'économie d'énergie Ethernet 802.3az
- Prend en charge PXE

Connec- tique du panneau arrière

- 1 x port souris/clavier PS/2
- 2 x ports USB 2.0 (Protection contre les décharges électrostatiques)
- 4 x ports USB 3.0 (Protection contre les décharges électrostatiques)
- 1 x port RJ-45 LAN avec LED (LED ACT/LIEN et LED VI-ESSE)

- Connecteurs jack audio HD : Entrée ligne / haut-parleur avant / microphone

AB350M-HDV/A320M-HDV :

- 1 x port D-Sub
- 1 x port DVI-D

1 x port HDMI

A320M-DGS :

- 1 x port DVI-D

Stockage

- 4 x connecteurs SATA3 6,0 Go/s, prise en charge de RAID (RAID 0, RAID 1 et RAID 10), NCQ, AHCI et branchement à chaud
- 1 x socket Ultra M.2, prend en charge les modules M.2 SATA3 6,0 Go/s type 2242/2260/2280 touche M et M.2 PCI Express jusqu'à Gen3 x4 (32 Go/s) (avec CPU série Ryzen) ou Gen3 x2 (16 Go/s) (avec APU série A)*

* Prend en charge les SSD NVMe comme disques de démarrage

* Prend en charge le kit ASRock U.2

Connecteur

- 1 x embase pour port d'impression
- 1 x embase pour port COM
- 1 x embase TPM
- 1 x prise DEL d'alimentation et emplacement sur châssis
- 1 x connecteur pour ventilateur de CPU (4 broches)
- 2 x connecteurs pour ventilateur de châssis (1 x 4 broches, 1 x 3 broches)

* Le connecteur pour ventilateur de CPU prend en charge un ventilateur de CPU d'une puissance maximale de 1 A (12 W).

- 1 x connecteur d'alimentation ATX 24 broches
- 1 x connecteur d'alimentation 12 V 4 broches
- 1 x connecteur audio panneau frontal
- 2 x embases USB 2.0 (4 ports USB 2.0 pris en charge) (Protection contre les décharges électrostatiques)
- 1 x embase USB 3.0 (2 ports USB 3.0 pris en charge) (Protection contre les décharges électrostatiques)

Caractéristiques du BIOS

- BIOS UEFI AMI avec prise en charge d'interface graphique
- Prend en charge la fonction « Plug and Play »
- Compatible ACPI 5.1 Wake Up Events
- Prend en charge la configuration Jumpfree
- Compatible SMBIOS 2.3
- Réglage de la tension DRAM

Surveillance du matériel

- Détection de la température du processeur/châssis
- Tachéomètre ventilateur processeur/châssis
- Ventilateur silencieux processeur/châssis
- Contrôle simultané des vitesses des ventilateurs processeur/châssis
- Détection CHASSIS OUVERT
- Surveillance de la tension d'alimentation : +12V, +5V, +3,3V, CPU Vcore

Système d'exploita- tion

- Microsoft® Windows® 10 64 bits
- * Pour le pilote mis à jour pour Windows® 10, veuillez visiter le site Web d'ASRock pour plus de détails : <http://www.asrock.com>

Certifica- tions

- FCC, CE, WHQL
- ErP/EuP Ready (alimentation ErP/EuP ready require)

* pour des informations détaillées de nos produits, veuillez visiter notre site : <http://www.asrock.com>



Il est important de signaler que l'overclocking présente certains risques, incluant des modifications du BIOS, l'application d'une technologie d'overclocking déliée et l'utilisation d'outils d'overclocking développés par des tiers. La stabilité de votre système peut être affectée par ces pratiques, voire provoquer des dommages aux composants et aux périphériques du système. L'overclocking se fait à vos risques et périls. Nous ne pourrions en aucun cas être tenus pour responsables des dommages éventuels provoqués par l'overclocking.

Specifiche

Piatta- forma

- Fattore di forma Micro ATX
- Design condensatore solido

CPU

- Supporta APU serie A (Bristol Ridge) e CPU serie Ryzen (Summit Ridge) AMD Socket AM4
- Digi Power design
- Potenza a 7 fasi
- Supporto di CPU fino a 65W

Chipset

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

Memoria

- Tecnologia memoria DDR4 Dual Channel
 - 2 x alloggi DIMM DDR4
 - Le CPU serie AMD Ryzen supportano DDR4 3200+(OC)/2933 (OC)/2400/2133 CEE e non ECC, senza buffer*
 - Le APU serie AMD 7a Gen A supportano DDR4 2400/2133 CEE e non ECC, senza buffer*
- * Per maggiori informazioni fare riferimento all'elenco dei supporti di memoria sul sito di ASRock. (<http://www.asrock.com/>)
- * Fare riferimento a pagina 23 per il supporto della frequenza massima DDR4 UDIMM.
- Capacità max. della memoria di sistema: 32 GB
 - Contatti d'oro 15µ negli alloggi DIMM

Alloggio d'espansione

- 1 x PCI Express 3.0 x16 slot (PCIE2 @ modalità x16)*
- * Supporto di SSD NVMe come disco d'avvio
- * Le CPU serie AMD Ryzen supportano PCIE2: modalità x16
- * Le APU serie AMD 7a A supportano PCIE2: modalità x8
- 1 alloggiamento PCI Express 2.0 x1

Grafica

- Grafica AMD Radeon™ serie R7 in APU serie A/E
- DirectX 12, Pixel Shader 5.0
- Memoria condivisa max. 2GB

AB350M-HDV/A320M-HDV:

- Tre opzioni di output grafico: D-Sub, DVI-D e HDMI
- Supporto di tre monitor

- Supporta HDMI con risoluzione massima fino a 4K x 2K (4096x2160) a 24Hz / (3840x2160) a 30Hz
- Supporta DVI-D con una risoluzione max. fino a 1920 x 1200 a 60 Hz
- Supporta D-Sub con una risoluzione max. fino a 2048x1536 a 60 Hz
- Supporto delle funzioni Auto Lip Sync, Deep Color (12bpc), xvYCC e HBR (High Bit Rate Audio) con porta HDMI (è necessario un monitor compatibile HDMI)
- Supporto di HDCP con le porte DVI-D e HDMI
- Supporto di riproduzione Full HD 1080p Blu-ray (BD) con le porte DVI-D e HDMI

A320M-DGS:

- Supporta DVI-D con una risoluzione max. fino a 1920 x 1200 a 60 Hz
- Supporto di HDCP con le porte DVI-D
- Supporta Blu-ray (BD) Full HD 1080p, riproduzione con porte DVI-D

Audio

- Audio HD 7.1 CH (codec audio Realtek ALC887)
- * Per configurare l'audio HD 7.1 canali, è necessario utilizzare un modulo pannello frontale audio HD ed attivare la funzione audio multicanale tramite il driver audio.
- Supporta protezione da sovratensione
- Cappucci audio ELNA

LAN

- 1 x PCIE LAN Gigabit 10/100/1000 Mb/s
- Realtek RTL8111GR
- Supporto WOL (Wake-On-LAN)
- Supporta protezione da fulmini/scariche elettrostatiche
- Supporto del rilevamento cavo LAN
- Supporto Energy Efficient Ethernet 802.3az
- Supporto PXE

I/O pannello posteriore

- 1 x porta mouse/tastiera PS/2
- 2 x porte USB 2.0 (supporta protezione da scariche elettrostatiche)
- 4 x porte USB 3.0 (supporta protezione da scariche elettrostatiche)
- 1 x porta LAN RJ-45 con LED (ACT/LINK LED e SPEED LED)

- Connettori audio HD: Ingresso linea / altoparlante frontale / microfono

AB350M-HDV/A320M-HDV:

- 1 x porta D-Sub
- 1 x porta DVI-D
- 1 x porta HDMI

A320M-DGS:

- 1 x porta DVI-D

**Archiviazi-
one**

- 4 x connettori SATA3 6,0 Gb/s, supporto RAID (RAID 0, RAID 1, e RAID 10), NCQ, AHCI e Hot Plug
- 1 x Ultra M.2 Socket, supporta i moduli M.2 SATA3 6,0 Gb/s di tipo 2242/2260/2280 chiave M e moduli M.2 PCI Express fino a Gen3 x4 (32 Gb/s) (con CPU serie Ryzen) o Gen3 x2 (16 Gb/s) (con APU serie A)*

* Supporto di SSD NVMe come disco d'avvio

* Supporta kit ASRock U.2

**Connet-
tore**

- 1 x connettore porta stampa
- 1 x connettore porta COM
- 1 x connettore TPM
- 1 x collegamento altoparlante e intrusione telaio
- 1 x connettore ventola CPU (4-pin)
- 2 connettori ventola telaio (1 x 4 pin, 1 x 3 pin)

* Il connettore ventola CPU supporta ventole CPU con potenza massima di 1 A (12 W).

- 1 x connettore alimentazione ATX 24 pin
- 1 x connettore alimentazione 12 V 4-pin
- 1 x connettore audio pannello frontale
- 2 x connettori USB 2.0 (supporto di 4 porte USB 2.0) (supporta protezione da scariche elettrostatiche)
- 1 x connettore USB 3.0 (supporto di 2 porte USB 3.0) (supporta protezione da scariche elettrostatiche)

**Funzional-
ità BIOS**

- AMI UEFI Legal BIOS con interfaccia di supporto
- Supporta "Plug and Play"
- Eventi di riattivazione conformi a ACPI 5.1
- Supporta jumperfree
- Supporto di SMBIOS 2.3
- Regolazione variabile tensione DRAM

**Hardware
Monitor**

- Rilevamento temperatura CPU/telaio
- Tachimetro ventola CPU/telaio
- Ventola silenziosa CPU/telaio
- Ventola CPU/telaio con controllo di varie velocità
- Rilevamento CASE OPEN
- Monitoraggio tensione: +12 V, +5 V, +3,3 V, Vcore

SO

- Microsoft® Windows® 10 64 bit
- * Per il driver aggiornato di Windows® 10, visitare il sito ASRock all'indirizzo: <http://www.asrock.com>

Certificazioni

- FCC, CE, WHQL
- ErP/EuP Ready (è necessaria alimentazione ErP/EuP ready)

* Per informazioni dettagliate sul prodotto, visitare il nostro sito Web: <http://www.asrock.com>



Prestare attenzione al potenziale rischio previsto nella pratica di overclocking, inclusa la regolazione delle impostazioni nel BIOS, l'applicazione di tecnologia di Untied Overclocking o l'utilizzo di strumenti di overclocking di terze parti. L'overclocking può influenzare la stabilità del sistema o perfino provocare danni ai componenti e ai dispositivi del sistema. Occorre eseguirlo a proprio rischio e spese. Non ci riterremo responsabili per possibili danni provocati da overclocking.

Especificaciones

- Plataforma**
- Factor de forma Micro ATX
 - Diseño de condensador sólido

- CPU**
- Admite APU de la serie A AM4 con zócalo AMD (Bristol Ridge) y CPU de la serie Ryzen (Summit Ridge)
 - Digi Power design
 - Diseño de fase de alimentación 7
 - Admite CPU de hasta 65 W.

- Conjunto de chips**
- AMD Promontory B350 (AB350M-HDV)
 - AMD Promontory A320 (A320M-HDV/A320M-DGS)

- Memoria**
- Tecnología de memoria DDR4 de doble canal
 - 2 x ranuras DIMM DDR4
 - Las CPU de la serie AMD Ryzen admiten memoria sin búfer ECC y no ECC DDR4 3200+(OC)/2933(OC)/2667/2400/2133*
 - Las APU de la serie A de la 7ª generación AMD admiten memoria sin búfer ECC y no ECC DDR4 2400/2133*
- * Consulte la lista de compatibilidades de memoria en el sitio web de ASRock para obtener más información. (<http://www.asrock.com/>)
- * Consulte la página 23 para conocer las frecuencias máximas compatibles de DDR4 UDIMM.
- Capacidad máxima de memoria del sistema: 32 GB
 - Contacto 15µ Gold en ranuras DIMM

- Ranura de expansión**
- 1 x Ranura PCI Express 3.0 x16 (modo PCIe2 x16)*
- * Admite unidad de estado sólido de NVMe como disco de arranque
- * Las CPU de la serie AMD Ryzen admiten PCIe2: modo x16
- * Las APU de la serie A de la 7ª generación AMD admiten PCIe2: modo x8
- 1 ranura PCI Express 2.0 x1

- Gráficos**
- Gráficos de la serie R7 de AMD Radeon™ integrados en APU de las series A/E
 - DirectX 12, Pixel Shader 5.0
 - Memoria máxima compartida de 2GB

AB350M-HDV/A320M-HDV:

- Tres opciones de salida de gráficos: D-Sub, DVI-D y HDMI
- Compatible con tres monitores
- Admite la tecnología HDMI con una resolución máxima de 4K x 2K (4096x2160) a 24Hz / (3840x2160) a 30Hz
- Compatible con DVI-D con máxima resolución hasta 1920x1200 @ 60Hz
- Admite D-Sub con una resolución máxima de 2048x1536 @ 60 Hz
- Admite Sincronización automática entre audio y vídeo, color profundo (12 bpc), xvYCC y HBR (audio de alta tasa de bits) con puerto HDMI (se necesita un monitor compatible con HDMI)
- Compatible con función HDCP con puertos DVI-D y HDMI
- Compatible con reproducción Blu-ray (BD) Full HD de 1080p con puertos DVI-D y HDMI

A320M-DGS:

- Compatible con DVI-D con máxima resolución hasta 1920x1200 @ 60Hz
- Compatible con HDCP con puerto DVI-D
- Compatible con reproducción Blu-ray (BD) Full HD de 1080p con puerto DVI-D

Audio

- 7.1 Audio CH HD (Códec de audio Realtek ALC887)
- *Para configurar 7.1 Audio CH HD, deberá utilizar un módulo del panel frontal de audio HD y habilitar la característica de audio multicanal a través del controlador de audio.
- Admite protección contra sobretensiones
 - Tapas de audio ELNA

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111GR
- Admite la función Reactivación de LAN
- Admite protección contra rayos y descargas electrostáticas (ESD)
- Admite detección de cable LAN
- Admite Ethernet 802.3az de eficiencia energética
- Admite PXE

E/S en panel posterior

- 1 x puerto de ratón/teclado PS/2
- 2 x puertos USB 2.0 (admite protección contra descargas electrostáticas)
- 4 x puertos USB 3.0 (admite protección contra descargas electrostáticas)

- 1 x puerto LAN RJ-45 con LED (LED DE ACTIVIDAD/ENLACE y LED DE VELOCIDAD)
- Conector de audio HD: Entrada de línea / Altavoz frontal / Micrófono

AB350M-HDV/A320M-HDV:

- 1 x puerto D-Sub
- 1 x puerto DVI-D

1 x puerto HDMI

A320M-DGS:

- 1 x puerto DVI-D

Almacenamiento

- 4 x conectores SATA3 de 6,0 Gb/s, compatible con RAID (RAID 0, RAID 1 y RAID 10), NCQ, AHCI y conexión en caliente
- 1 x Zócalo Ultra M.2 que admite el módulo SATA3 6,0 Gb/s M.2 de tipo 2242/2260/2280 con clave M y el módulo PCI Express M.2 hasta Gen3 x4 (32 Gb/s) (con CPU de la serie Ryzen) o Gen3 x2 (16 Gb/s) (con APU de la serie A)*

* Admite unidad de estado sólido de NVMe como disco de arranque

* Admiteel Kit U.2 de ASRock

Conector

- 1 x Base de conexiones de puerto de impresión
- 1 x Base de conexiones de puerto COM
- 1 x Conector TPM
- 1 x cabezal de intrusión de chasis y de altavoces
- 1 x Conector para ventilador de la CPU (4 contactos)
- 2 Conectores de ventilador del chasis (1 de 4 pines y 1 de 3 pines)

* El conector para ventilador de la CPU admite ventilador de la CPU con una potencia de ventilador de 1 A (12 W) máxima.

- 1 x conector de alimentación ATX de 24 contactos
- 1 x conector de alimentación de 12V de 4 pines
- 1 x Conector de audio en el panel frontal
- 2 x Bases de conexiones USB 2.0 (admite 4 puertos USB 2.0). Admite protección contra descargas electrostáticas.
- 1 x base de conexiones USB 3.0 (admite 2 puertos USB 3.0). Admite protección contra descargas electrostáticas.

Función del BIOS

- BIOS legal UEFI AMI compatible con interfaz gráfica de usuario
- Compatible con “Plug and Play”
- Eventos de reactivación conformes con ACPI 5.1
- Compatible con Jumper FREE
- Admite SMBIOS 2.3
- Miniajuste de voltaje DRAM

Monitor de hardware

- Método de sensor de temperatura de la CPU/Chasis
- Tacómetro del ventilador de la CPU/Chasis
- Ventilador silencioso para CPU/chasis
- Control multivelocidad del ventilador de la CPU/Chasis
- Detección de CARCASA ABIERTA
- Supervisión del voltaje: +12 V, +5 V, +3,3 V, Vcore

SO

- Microsoft® Windows® 10 64 bits
- * Para obtener el controlador actualizado para Windows® 10, visite el sitio Web desde ASRock para obtener detalles: <http://www.asrock.com>

Certificaciones

- FCC, CE y WHQL
- Preparado para ErP/EuP (se necesita una fuente de alimentación preparada para ErP/EuP)

* Para obtener información detallada del producto, visite nuestro sitio Web: <http://www.asrock.com>



Tenga en cuenta que hay un cierto riesgo implícito en las operaciones de aumento de la velocidad del reloj, incluido el ajuste del BIOS, aplicando la tecnología de aumento de velocidad liberada o utilizando las herramientas de aumento de velocidad de otros fabricantes. El aumento de la velocidad puede afectar a la estabilidad del sistema e, incluso, dañar los componentes y dispositivos del sistema. Esta operación se debe realizar bajo su propia responsabilidad y usted debe asumir los costos. No asumimos ninguna responsabilidad por los posibles daños causados por el aumento de la velocidad del reloj.

Спецификация

Платформа

- Форм-фактор Micro ATX
- Схема на основе твердотельных конденсаторов

ЦП

- Поддерживаются процессоры AMD APU серии A (Bristol Ridge) и ЦП серии Ryzen (Summit Ridge) под сокет AM4
- Digi Power design
- Система питания 7
- Поддерживаются ЦП мощностью до 65 Вт.

Чипсет

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

Память

- Двухканальная память DDR4
 - 2 x гнезда DDR4 DIMM
 - ЦП AMD серии Ryzen поддерживают модули небуферизованной памяти DDR4 3200+(OC)/2933 (OC)/2667/2400/2133 с ECC и без ECC*
 - Процессоры APU AMD серии A 7-го поколения поддерживают модули небуферизованной памяти DDR4 2400/2133 с ECC и без ECC*
- * Дополнительная информация представлена в Списке совместимой памяти (Memory Support List) на веб-сайте ASRock. (<http://www.asrock.com/>)
- * Максимальные поддерживаемые частоты DDR4 UDIMM см на стр. 23.
- Максимальный объем ОЗУ: 32 ГБ
 - Гнезда DIMM с золочеными контактами 15мк

Слот расширения

- 1 слот PCI Express 3.0 x16 (PCIЕ2 в режиме x16)*
- * Поддерживаются в качестве загрузочных SSD-диски типа NVMe.
- * Для ЦП AMD серии Ryzen PCIЕ2 работает в режиме x16
- * Для процессоров APU AMD серии A 7-го поколения слот PCIЕ2 работает в режиме x8
- 1 слот PCI Express 2.0 x1

Графическая подсистема

- Встроенный видеоадаптер AMD Radeon™ R7 в процессорах APU серий A и E
- DirectX 12, пиксельные шейдеры 5.0
- Максимальный объем общей памяти: 2 ГБ

AV350M-HDV/A320M-HDV:

- Три видеовыхода: D-Sub, DVI-D и HDMI
- Поддержка работы с тремя мониторами
- Поддерживается HDMI с максимальным разрешением до 4K x 2K (4096x2160) при частоте обновления 24 Гц (3840x2160 при 30 Гц)
- На выходе DVI-D поддерживается максимальное разрешение до 1920x1200 при частоте обновления 60 Гц
- На выходе D-Sub поддерживается максимальное разрешение до 2048x1536 при частоте обновления 60 Гц
- Поддерживаются Auto Lip Sync, Deep Color (12 бит/цвет), xvYCC и HBR (High Bit Rate Audio) через порт HDMI (требуется соответствующий HDMI-монитор)
- Поддержка функции защиты HDCP через порты DVI-D и HDMI
- Поддержка воспроизведения в режиме Full HD 1080p Blu-ray (BD) через порты DVI-D и HDMI

A320M-DGS:

- На выходе DVI-D поддерживается максимальное разрешение до 1920x1200 при частоте обновления 60 Гц
- Поддержка функции защиты HDCP через порты DVI-D
- Поддержка воспроизведения Full HD 1080p Blu-ray (BD) через порты DVI-D

Звук

- 7.1-канальный звук высокой четкости (аудиокодек Realtek ALC887)

*Для настройки 7.1-канального звук высокой четкости HD Audio используйте переднюю аудиопанель HD и активируйте функцию многоканального звука в аудиодрайвере.

- Защита от перепадов напряжения в электрической сети
- Конденсаторы для аудиосистем ELNA

LAN

- PCIe x1 Gigabit LAN 10/100/1000 Мбит/с
- Realtek RTL8111GR
- Поддерживается пробуждение по ЛВС
- Молниезащита и защита от электростатических разрядов
- Поддерживается определение сетевого кабеля
- Поддерживается Energy Efficient Ethernet 802.3az
- Поддерживается PXE

Порты ввода-вывода на задней панели

- 1 порт PS/2 для мыши/клавиатуры
- 2 порта USB 2.0 (с защитой от электростатических разрядов)
- 4 порта USB 3.0 (с защитой от электростатических разрядов)

- 1 порт ЛВС RJ-45 с индикаторами («Активность/Соединение» и «Скорость»)
- Разъемы HD Audio: Линейный вход / передние динамики / микрофон

AB350M-HDV/A320M-HDV:

- 1 порт D-Sub
- 1 порт DVI-D
- 1 порт HDMI

A320M-DGS:

- 1 порт DVI-D

Запоминающие устройства

- 4 порта SATA3 со скоростью передачи данных 6,0 Гбит/с, поддержка RAID (RAID 0, RAID 1 и RAID 10), NCQ, AHCI и «горячего подключения».
- 1 слот Ultra M.2, поддерживает модуль M.2 SATA3 с ключом M типа 2242/2260/2280 со скоростью обмена данными 6,0 Гбит/с и модуль M.2 PCI Express до версии Gen3 x4 (32 Гбит/с с ЦП серии Ryzen) или Gen3 x2 (16 Гбит/с с APU серии A)*

* Поддерживаются в качестве загрузочных SSD-диски типа NVMe.

* Поддержка комплекта ASRock U.2

Разъемы

- 1 колодка порта принтера
- 1 колодка COM-порта
- 1 колодка TPM
- 1 колодка с разъемами датчика вскрытия корпуса и динамика
- 1 разъем для вентилятора охлаждения ЦП, 4-контактный
- 2 разъема для вентилятора корпуса (1 x 4-контактный, 1 x 3-контактный)

* Разъем процессорного вентилятора поддерживает вентилятор с потребляемым током не более 1 А (12 Вт).

- 1 разъем питания ATX, 24-контактный
- 1 разъем питания 12 В, 4-контактный
- 1 аудиоразъем на передней панели
- 2 колодки USB 2.0 (4 порта USB 2.0 с защитой от электростатических разрядов)
- 1 колодка USB 3.0 (2 порта USB 3.0 с защитой от электростатических разрядов)

Параметры BIOS

- AMI UEFI Legal BIOS с поддержкой графического интерфейса

- Поддержка технологии «Plug and Play»
- Совместимость с управлением энергопотреблением по ACPI 5.1
- Поддержка функции JumperFree
- Поддерживается SMBIOS 2.3.
- Регулировка напряжений DRAM

Контроль оборудования

- Датчик температуры процессора/корпуса
- Тахометр вентилятора охлаждения процессора / корпуса
- Тихая работа вентилятора охлаждения процессора/корпуса
- Управление скоростью вращения вентилятора охлаждения процессора/корпуса
- Датчик вскрытия корпуса
- Контроль напряжений: +12 В, +5 В, +3,3 В, Vcore

Операционные системы

- Microsoft® Windows® 10 (64-разрядная)
- * Подробные сведения об обновлении драйвера для Windows® 10 представлены на веб-сайте ASRock: <http://www.asrock.com>

Сертификация

- FCC, CE, WHQL
- Совместимость с ErP/EuP (необходим блок питания, соответствующий стандарту ErP/EuP)

* С дополнительной информацией об изделии можно ознакомиться на веб-сайте:
<http://www.asrock.com>



Следует учитывать, что разгон процессора, включая изменение настроек BIOS, применение технологии Untied Overclocking и использование инструментов разгона независимых производителей, сопряжен с определенным риском. Разгон процессора может снизить стабильность системы или даже привести к повреждению ее компонентов и устройств. Разгон процессора осуществляется пользователем на собственный риск и за собственный счет. Мы не несем ответственности за возможный ущерб, вызванный разгоном процессора.

Especificações

Plataforma

- Micro ATX Form Factor
- Design de condensador sólido

CPU

- Suporta soquete AMD série-A AM4 APUs (Bristol Ridge) e CPUs série Ryzen (Ridge Summit)
- Digi Power design
- Design com 7 fases de alimentação
- Suporta CPU até 65W

Chipset

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

Memória

- Tecnologia de memória DDR4 de dois canais
 - 2 x Slots DIMM DDR4
 - CPUs da Série Ryzen AMD suportam memória sem buffer DDR4 3200+(OC)/2933(OC)/2400/2133 ECC e não-ECC*
 - APUs AMD 7ª Ger Série A suportam memória sem buffer DDR4 2400/2133 ECC e não-ECC*
- * Por favor, consulte a Lista de Suporte de Memória no site da ASRock para obter mais informação. (<http://www.asrock.com/>)
- * Por favor consulte a página 23 para suporte de frequência máxima DDR4 UDIMM.
- Capacidade máxima da memória do sistema: 32GB
 - Contato em Ouro 15µ nos slots DIMM

Slot de expansão

- 1 x PCI Express 3.0 x16 Slot (PCIE2 @ x16 modo)*
- * Suporta NVMe SSD nos discos de inicialização
- * CPUs série Ryzen AMD suportam PCIE2: modo x16
- * APUs AMD 7ª série A suportam PCIE2: modo x8
- 1 x slots PCI Express 2.0 x1

Gráficos

- AMD Radeon™ Integrado R7 Série Gráfica em Séries A / Séries E APU
 - DirectX 12, Pixel Shader 5.0
 - Memória compartilhada máxima de 2GB
- AB350M-HDV/A320M-HDV:**
- Três opções de saída de gráficos: D-Sub, DVI-D e HDMI
 - Suporta configuração com três monitores
 - Suporta HDMI com resolução máx. até 4K x 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz
 - Suporta DVI-D com resolução máxima de até 1920x1200 @ 60Hz

- Suporta D-Sub com resolução máxima de até 2048x1536 @ 60Hz
- Suporta Auto sincronização labial, Deep Color (12bpc), xvYCC e HBR (High Bit Rate Audio) com porta HDMI (É necessário um monitor compatível com HDMI)
- Suporta HDCP com Portas DVI-D e HDMI
- Suporta reprodução Full HD 1080p Blu-ray (BD) com Portas DVI-D e HDMI

A320M-DGS:

- Suporta DVI-D com resolução máxima de até 1920x1200 @ 60Hz
- Suporta HDCP com Porta DVI-D
- Suporta reprodução Full HD 1080p Blu-ray (BD) com Porta DVI-D

Áudio

- Áudio 7.1 CH HD com proteção de conteúdo (Codec de áudio Realtek ALC887)

*Para configurar Áudio 7.1 CH HD, é necessário usar um módulo de áudio de painel frontal HD e habilitar o recurso de áudio multi-canal pelo driver de áudio.

- Suporta Proteção de Sobretenção
- Fones de Áudio ELNA

LAN

- LAN Gigabit 10/100/1000 Mb/s PCIE x1
- Realtek RTL8111GR
- Suporta Wake-On-LAN
- Oferece Suporte à Proteção de Relâmpago/ESD
- Suporta Detecção de Cabo LAN
- Suporta Energy Efficient Ethernet 802.3az
- Suporta PXE

E/S do painel posterior

- 1 x Porta PS/2 para mouse/teclado
- 2 x Portas USB 2.0 (Suporta Proteção ESD)
- 4 x Portas USB 3.0 (Suporta Proteção ESD)
- 1 x Porta LAN RJ-45 com LED (LED ACT/LINK e LED DE VELOCIDADE)
- Fichas de áudio HD: Entrada de Linha / Autofalante Frontal / Microfone

AB350M-HDV/A320M-HDV:

- 1 x Porta D-Sub
- 1 x Porta DVI-D
- 1 x Porta HDMI

A320M-DGS:

- 1 x Porta DVI-D

Armazenamento

- 4 x Conectores SATA3 6,0 Gb/s, suporta RAID (RAID 0, RAID 1, e RAID 10), NCQ, AHCI e Conexão a Quente
- 1 x Soquete Ultra M.2, suporta módulo Chave M tipo 2242/2260/2280 M.2 SATA3 6.0 Gb/s e M.2 PCI Express até Gen3 x4 (32 Gb/s) (com CPU Série Ridge) ou Gen3 x2 (16 Gb/s) (com APU Série-A)*

* Suporta NVMe SSD nos discos de inicialização

* Suporta Kit U.2 ASRock

Conector

- 1 x Suporte Porta Impressão
- 1 x Suporte porta COM
- 1 x Plataforma TPM
- 1 x Intrusão do Chassi e Cabeçote de Autofalante
- 1 x Conector da ventoinha da CPU (4 pinos)
- 2 conectores ventilador chassis (1 x 4 pinos, 1 x 3 pinos)
- * O Conector do Ventilador de CPU suporta o ventilador de CPU de alimentação máxima 1A do ventilador (12W).
- 1 x Conector alimentação ATX 24 pinos
- 1 x Conector de energia 4-pinos 12V
- 1 x Conector de áudio do painel frontal
- 2 x Plataformas USB 2.0 (Suporta 4 portas USB 2.0) (Suporta Proteção ESD)
- 1 x Plataforma USB 3.0 (Suporta 2 portas USB 3.0) (Suporta Proteção ESD)

Funções da BIOS

- AMI UEFI Legal BIOS com suporte GUI
- Suporta "Plug and Play"
- ACPI 5.1 compatível com eventos de despertar
- Suporta jumperfree
- Suporte SMBIOS 2.3
- Multi-ajuste de Voltagem da DRAM

Monitor de hardware

- Sensor de temperatura da CPU/Gabinete
- Tacômetro da Ventoinha da CPU/Gabinete
- Ventilador silencioso de CPU/Chassis
- Controle de multi velocidade da Ventoinha da CPU/Gabinete
- Detecção de ABERTURA da CAIXA
- Monitoramento da tensão: +12V, +5V, +3,3V, Vcore

SO

- Microsoft® Windows® 10 64-bit

* Para o driver atualizado do Windows® 10, por favor, visite o website da ASRock para mais detalhes: <http://www.asrock.com>

Certificações

- FCC, CE, WHQL
- Preparada para ErP/EuP (é necessária uma fonte de alimentação preparada para ErP/EuP)

* Para obter informações detalhadas sobre o produto, por favor, visite o nosso site:
<http://www.asrock.com>



Por favor, observe que existe um certo risco envolvendo overclocking, incluindo o ajuste das definições na BIOS, a aplicação de tecnologia Untied Overclocking ou a utilização de ferramentas de overclocking de terceiros. O overclocking poderá afetar a estabilidade do sistema ou mesmo causar danos nos componentes e dispositivos do seu sistema. Ele deve ser realizado por sua conta e risco. Não nos responsabilizamos por possíveis danos causados pelo overclocking.

Özellikler

Platform

- Micro ATX Form Faktörü
- Yekpare Kapasitör tasarımı

İşlemci

- AMD Soket AM4 A Serisi APU'ları (Bristol Ridge) ve Ryzen Serisi işlemcileri (Summit Ridge) destekler
- Diji Güç tasarımı
- 7 Güç Fazı tasarımı
- 65 W değerine kadar işlemci destekler

Yonga küm-esi

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

Bellek

- Çift Kanallı DDR4 Bellek Teknolojisi
- 2 tane DDR4 DIMM Yuvası
- AMD Ryzen serisi işlemciler DDR4 3200+(OC)/2933(OC)/2667/2400/2133 ECC ve ECC olmayan, ara belleğe alınmamış bellek destekler*
- AMD 7. Gen A Serisi APU'lar DDR4 2400/2133 ECC ve ECC olmayan, ara belleğe alınmamış bellek destekler*

* Daha fazla bilgi için lütfen ASRock'ın web sitesindeki Bellek Desteği Listesine başvurun. (<http://www.asrock.com/>)

* Lütfen en fazla DDR4 UDIMM frekans desteği için 23. sayfaya başvurun.

- En fazla sistem belleği kapasitesi: 32 GB
- DIMM Yuvalarında 15 µ Altın Temas

Genişletme Yuvası

- 1 tane PCI Express 3.0 x16 yuva (PCIe2 @ x16 modu)*
- * Önyükleme diskleri olarak NVMe SSD destekler
- * AMD Ryzen serisi işlemciler PCIe2: x16 modu
- * AMD 7. A Serisi APU'lar PCIe2: x8 modu
- 1 tane PCI Express 2.0 x1 yuva

Grafikler

- A-serisi / E-serisi APU'da tümleşik AMD Radeon™ R7 Serisi Grafikler

- DirectX 12, Pixel Shader 5.0
- En fazla paylaşılan bellek 2 GB

AB350M-HDV/A320M-HDV:

- Üç grafik çıkışı seçeneği: D-sub, DVI-D ve HDMI
- Üçlü Monitör Desteği

- 4K x 2K (4096x2160) @ 24 Hz / (3840x2160) @ 30 Hz değerlerine kadar en fazla çözünürlükle HDMI destekler
- En fazla 1920x1200 @ 60 Hz çözünürlükle DVI-D destekler
- En fazla 2048x1536 @ 60 Hz çözünürlükle D-Sub destekler
- HDMI Bağlantı Noktasıyla Otomatik Dudak Senkronizasyonu, Derin Renk (12bpc), xvYCC ve HBR (Yüksek Bit Oranlı Ses) özelliklerini destekler (Uyumlu bir HDMI monitörü kullanılmalıdır)
- DVI-D ve HDMI Bağlantı Noktalarıyla HDCP destekler
- DVI-D ve HDMI Bağlantı Noktalarıyla Tam HD 1080p Blu-ray (BD) kayıttan yürütme destekler

A320M-DGS:

- En fazla 1920x1200 @ 60 Hz çözünürlükle DVI-D destekler
- DVI-D Bağlantı Noktalarıyla HDCP destekler
- DVI-D Bağlantı noktasıyla Full HD 1080p Blu-ray (BD) kayıttan yürütmeyi destekler

Ses

- 7.1 CH HD Ses (Realtek ALC887 Ses Kodlayıcı)
- * 7.1 CH HD Ses yapılandırması için, bir HD ön panel ses modülünün kullanılması ve çok kanallı ses özelliğinin ses sürücüsü aracılığıyla etkinleştirilmesi gereklidir.
- Aşırı Gerilim Korumasını destekler
- ELNA Ses Kapakları

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/sn.
- Realtek RTL8111GR
- Yerel Ağ Üzerinden Açmayı destekler
- Yıldırım/ESD Korumasını destekler
- LAN Kablosu Algılama destekler
- Enerji Verimliliğine Sahip Ethernet 802.3az işlevini destekler
- PXE özelliğini destekler

Arka Panel G/Ç

- 1 tane PS/2 Fare/Klavye Bağlantı Noktası
- 2 tane USB 2.0 Bağlantısı Noktası (ESD Korumasını destekler)
- 4 tane USB 3.0 Bağlantısı Noktası (ESD Korumasını destekler)
- LED'e sahip 1 tane RJ-45 LAN Bağlantı Noktası (ACT/LINK LED ve SPEED LED)
- HD Ses Girişleri/Çıkışları: Hat Girişi / Ön Hoparlör / Mikrofon

AB350M-HDV/A320M-HDV:

- 1 tane D-Sub Bağlantı Noktası
- 1 tane DVI-D Bağlantı Noktası
- 1 tane HDMI Bağlantı Noktası

A320M-DGS:

- 1 tane DVI-D Bağlantı Noktası

Depolama

- 4 tane SATA3 6,0 Gb/sn. Bağlayıcı, RAID (RAID 0, RAID 1, ve RAID 10), NCQ, AHCI ve Tak Çıkar desteği
- 1 tane Ultra M.2 Yuvası, M Tuşu tip 2242/2260/2280 M.2 SATA3 6,0 Gb/ sn. modülünü ve Gen3 x4 (32 Gb/sn.) (Ryzen Serisi işlemciyle) veya Gen3 x2 (16 Gb/sn.) (A Serisi APU ile) değerine kadar M.2 PCI Express modülünü destekler*
- * Önyükleme diskleri olarak NVMe SSD destekler
- * ASRock U.2 Takımını destekler

Bağlayıcı

- 1 tane Yazdırma Bağlantı Noktası Bağlantısı
- 1 tane COM Bağlantı Noktası Bağlantısı
- 1 tane TPM Bağlantısı
- 1 tane Kasa Yetkisiz Erişim ve Hoparlör Bağlantısı
- 1 tane İşlemci Fanı Bağlayıcı (4 pimli)
- 2 tane Kasa Fanı Bağlayıcı (1 tane 4 pimli, 1 tane 3 pimli)
- * İşlemci Fanı Bağlayıcı, en fazla 1 A (12 W) fan gücünde işlemci fanı destekler.
- 1 tane 24 pim ATX Güç Bağlayıcısı
- 1 tane 4 pim 12 V Güç Bağlayıcısı
- 1 tane Ön Panel Ses Bağlayıcısı
- 2 tane USB 2.0 Bağlantısı (4 USB 2.0 bağlantı noktasını destekler) (ESD Korumasını destekler)
- 1 tane USB 3.0 Bağlantısı (2 USB 3.0 bağlantı noktasını destekler) (ESD Korumasını destekler)

**BIOS
Özelliği**

- Grafik kullanıcı arayüzü desteğiyle AMI UEFI Legal BIOS
- "Tak ve Çalıştır" özelliğini destekler
- ACPI 5.1 uyumluluğu uyandırma olayları
- Bağlantı teli olmadan çalıştırma özelliğini destekler
- SMBIOS 2.3 desteği
- DRAM Gerilimi Çoklu Ayarlama

**Donanım
Monitörü**

- İşlemci/Kasa sıcaklığı algılama
- İşlemci/Kasa Fanı Devirölçer
- İşlemci/Kasa Sessiz Fan
- İşlemci/Kasa Fanı çoklu hız kontrolü
- KASA AÇIK algılaması
- Gerilim izleme: +12 V, +5 V, +3,3 V, Vcore

İşletim Sistemi

- Microsoft® Windows® 10 64 bit
- * Güncellenmiş Windows® 10 sürücüsü konusunda ayrıntılar için lütfen ASRock web sitesini ziyaret edin: <http://www.asrock.com>

Onaylar

- FCC, CE, WHQL
- ErP/EuP için hazır (ErP/EuP için hazır güç beslemesi gereklidir)

* Detaylı ürün bilgisi için lütfen web sitemizi ziyaret edin: <http://www.asrock.com>



Lütfen, BIOS ayarlarını düzenleme, Bağımsız Hız Aşırtma Teknolojisinin uygulanması veya üçüncü taraf hız aşırtma araçlarının kullanılması da dâhil olmak üzere tüm hız aşırtma işlemlerinin belirli bir risk taşıdığını unutmayın. Hız aşırtma, sisteminizin dayanıklılığını etkileyebilir, hatta sisteminizde yer alan bileşenlere ve ayalara zarar verebilir. Bu, riski ve masrafları size ait olmak üzere gerçekleştirilmelidir. Hız aşırtmadan doğabilecek zararlar konusunda sorumlu olmayacağız.

규격

플랫폼

- Micro ATX 폼 팩터
- 솔리드 콘텐서 구조

CPU

- AMD Socket AM4 A 시리즈 APU(Bristol Ridge) 및 Ryzen 시리즈 CPU(Summit Ridge) 지원
- Digi Power design
- 7개 전원 위상 구조
- 최대 65W의 CPU 지원

칩세트

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

메모리

- 듀얼 채널 DDR4 메모리 기술
- DDR4 DIMM 슬롯 2개
- AMD Ryzen 시리즈 CPU는 DDR4 3200+(OC)/2933(OC)/2667/2400/2133 ECC 및 비 ECC, 비버퍼링 메모리를 지원합니다.*
- AMD 7세대 A 시리즈 APU는 DDR4 2400/2133 ECC 및 비 ECC, 비버퍼링 메모리를 지원합니다.*
- * 자세한 내용은 다음 ASRock 웹사이트에 있는 메모리 지원 목록을 참조하십시오. (<http://www.asrock.com/>)
- * DDR4 UDIMM 최대 주파수 지원은 23 페이지를 참조하십시오.
- 시스템 메모리 최대 용량: 32GB
- DIMM 슬롯에 15 μ Gold Contact 장착

확장 슬롯

- PCI Express 3.0 x16 슬롯 1개 (PCIe2 @x16 모드)
- * NVMe SSD를 부팅 디스크로 사용 가능하도록 지원
- * AMD Ryzen 시리즈 CPU는 PCIe2의 경우 x16 모드
- * AMD 7세대 A 시리즈 APU는 PCIe2의 경우 x8 모드
- PCI Express 2.0 x1 슬롯 4개
- PCI Express 2.0 x1 슬롯 1개

그래픽

- A-시리즈 /E-시리즈 APU의 경우 통합된 AMD Radeon™ R7 시리즈 그래픽
- DirectX 12, Pixel Shader 5.0

- 최대 공유 메모리 2GB

AB350M-HDV/A320M-HDV:

- 그래픽 출력 옵션 세 개 : D-Sub, DVI-D 및 HDMI
- 삼중 모니터 지원
- HDMI 지원 (최대 해상도 4K x 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz)
- DVI-D 지원 (최대 해상도 1920x1200 @ 60Hz)
- D-Sub 지원 (최대 해상도 2048x1536 @ 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
- DVI-D 및 HDMI 포트를 이용한 Full HD 1080p Blu-ray (BD) 재생 지원

A320M-DGS:

- DVI-D 지원 (최대 해상도 1920x1200 @ 60Hz)
- DVI-D 포트를 이용한 HDCP 지원
- DVI-D 포트를 이용한 Full HD 1080p Blu-ray (BD) 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 RTL8111GR
- Wake-On-LAN 지원
- 번개 /ESD 보호 지원
- LAN 케이블 감지 지원
- 절전형 이더넷 802.3az 지원
- PXE 지원

후면 패널 I/O

- PS/2 마우스 / 키보드 포트 1 개
- USB 2.0 포트 2 개 (ESD 보호 지원)
- USB 3.0 포트 4 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

AB350M-HDV/A320M-HDV:

- D-Sub 포트 1 개
- DVI-D 포트 1 개

HDMI 포트 1 개

A320M-DGS:

- DVI-D 포트 1 개

저장 장치

- SATA3 6.0 Gb/s 커넥터 4 개가 RAID(RAID 0, RAID 1 및 RAID 10), NCQ, AHCI 및 핫 플러그를 지원합니다 .
- 울트라 M.2 소켓 1 개 , M 키 타입 2242/2260/2280 M.2 SATA3 6.0 Gb/s 모듈 및 Gen3 M.2 PCI Express 모듈 (Ryzen 시리즈 CPU 탑재) 을 4 개 (32 Gb/s) 까지 또는 Gen3(A 시리즈 APU 탑재) 의 경우 2 개 (16 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
- 새시 침입 및 스피커 헤더 1 개
- CPU 팬 커넥터 (4 핀) 1 개
- 새시 팬 커넥터 2 개 (1 x 4 핀 , 1 x 3 핀)
- * CPU 팬 커넥터는 팬 전력이 최대 1A(12W) 인 CPU 팬을 지원합니다 .
- 24 핀 ATX 전원 커넥터 1 개
- 4 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 3.0 헤더 1 개 (USB 3.0 포트 2 개 지원) (ESD 보호 지원)

BIOS 기능

- GUI 지원을 제공하는 AMI UEFI 적합형 BIOS
- “ 플러그 앤드 플레이 ” 지원
- ACPI 5.1 준수 웨이크 업 이벤트
- 점퍼 프리 지원
- SMBIOS 2.3 지원
- DRAM 전압 다중 조정

**하드웨어
모니터**

- CPU/ 새시 온도 감지
- CPU/ 새시 팬 타코미터
- CPU/ 새시 저소음 팬
- CPU/ 새시 팬 다중 속도 조절
- 케이스 열림 감지
- 전압 모니터링 : +12V, +5V, +3.3V, Vcore

OS

- Microsoft® Windows® 10 64- 비트
- * 업데이트된 Windows® 10 드라이브의 자세한 내용은 다음의 ASRock 웹사이트를 참조하십시오 . <http://www.asrock.com>

인증

- FCC, CE, WHQL
- ErP/EuP 사용 가능 (ErP/EuP 사용 가능 전원공급장치 필요)

* 자세한 제품 정보에 대해서는 당사 웹사이트를 참조하십시오 : <http://www.asrock.com>



BIOS 설정을 조정하거나 Untied Overclocking Technology 를 적용하거나 타업체의 오버클로킹 도구를 사용하는 것을 포함하는 오버클로킹에는 어느 정도의 위험이 따른다는 것을 유념하십시오 . 오버클로킹은 시스템 안정성에 영향을 주거나 심지어 시스템의 구성 요소와 장치에 손상을 입힐 수도 있습니다 . 오버클로킹은 사용자 스스로 위험과 비용을 감수하고 해야 합니다 . 당사는 오버클로킹에 의해 발생할 수 있는 손상에 대해서 책임이 없습니다 .

仕様

- プラットフォーム**
- マイクロ ATX フォームファクター
 - 固体コンデンサ設計

- CPU**
- AMD ソケット AM4 A シリーズ APU (Bristol Ridge) および Ryzen シリーズ CPU (Summit Ridge) に対応
 - デジタル電源設計
 - 7 電源フェーズ設計
 - 最大 65W までの CPU に対応

- チップセット**
- AMD Promontory B350 (AB350M-HDV)
 - AMD Promontory A320 (A320M-HDV/A320M-DGS)

- メモリ**
- デュアルチャンネル DDR4 メモリテクノロジー
 - 2 x DDR4 DIMM スロット
 - AMD Ryzen シリーズ CPU は DDR4 3200+(OC)/2933(OC) (OC)/2667/2400/2133 ECC、および、ノン ECC、アンバッファードメモリに対応します。*
 - AMD 第 7 世代 A シリーズ APU は DDR4 2400/2133 ECC、および、ノン ECC、アンバッファードメモリに対応します。*
- * 詳細情報については ASRock ウェブサイトのメモリーサポート一覧表を参照してください。(http://www.asrock.com/)
- * DDR4 UDIMM 最大周波数サポートについては 23 ページを参照してください。
- システムメモリの最大容量: 32GB
 - DIMM スロットに 15 μ ゴールドコンタクトを採用

- 拡張スロット**
- 1 x PCI Express 3.0 x16 スロット (PCIe2 は 16 倍モードで動作)*
- * 起動ディスクとして NVMe SSD に対応
- * AMD Ryzen シリーズ CPU は PCIe2: 16 倍モード
- * AMD 第 7 世代 A シリーズ APU は PCIe2: 8 倍モードに対応します
- 1 x PCI Express 2.0 x1 スロット

- グラフィックス**
- 統合された AMD Radeon™ R7 シリーズグラフィックス (A シリーズ / E シリーズ APU)
 - DirectX 12, Pixel Shader 5.0
 - 最大共有メモリ 2GB
- AB350M-HDV/A320M-HDV:**
- 3 つのグラフィックス出力オプション : D-Sub, DVI-D, HDMI

- 3台のモニターに対応
- HDMI に対応、最大解像度 4K x 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz
- DVI-D をサポート。最大解像度 1920x1200 @60Hz
- D-Sub をサポート。最大解像度 2048x1536 @60Hz
- HDMI ポートでオートリップシンク、ディープカラー(12bpc)、xvYCC、および、HBR(高ビットレートオーディオ)に対応 (HDMI 対応モニターが必要です)
- DVI-D ポートと HDMI ポートで HDCP に対応
- DVI-D ポートと HDMI ポートで Full HD 1080p Blu-ray (BD) 再生に対応

A320M-DGS:

- DVI-D をサポート。最大解像度 1920x1200 @60Hz
- DVI-D ポートで HDCP に対応
- DVI-D ポートで Full HD 1080p Blu-ray (BD) 再生に対応

オーディオ

- 7.1 CH HD オーディオ (Realtek ALC887 Audio Codec)
- *7.1 CH HD オーディオを設定するためには、HD フロントパネルのオーディオモジュールを使用し、オーディオドライバを通してマルチチャンネルオーディオ機能を有効にする必要があります。
- サージ保護に対応
 - ELNA 製オーディオコンデンサ

LAN

- PCIE x1 ギガビット LAN 10/100/1000 Mb/ 秒
- Realtek RTL8111GR
- Wake-On-LAN(ウェイク オン ラン)に対応
- 雷 / 静電気放電(ESD)保護に対応
- LAN ケーブル検出に対応
- エネルギー効率のよいイーサネット 802.3az をサポート
- PXE をサポート

リアパネル I/O

- 1 x PS/2 マウス / キーボードポート
- 2 x USB 2.0 ポート(静電気放電(ESD)保護に対応)
- 4 x USB 3.0 ポート(静電気放電(ESD)保護に対応)
- LED 付き 1 x RJ-45 LAN ポート(ACT/LINK LED と SPEED LED)
- HD オーディオジャック: ラインイン / フロントスピーカー / マイク

AB350M-HDV/A320M-HDV:

- 1 x D-Sub ポート
- 1 x DVI-D ポート
- 1 x HDMI ポート

A320M-DGS:

- 1 x DVI-D ポート

ストレージ

- 4 x SATA3 6.0 Gb/s コネクタ、RAID (RAID 0、RAID 1、RAID 10)、NCQ、AHCI およびホットプラグ機能に対応
- 1 x ウルトラ M.2 ソケット、M キータイプ 2242/2260/2280 M.2 SATA3 6.0 Gb/s モジュール、および、最大 Gen3 x4 (32 Gb/s) (Ryzen シリーズ CPU の場合)または最大 Gen3 x2 (16 Gb/s) (A シリーズ APU の場合)までの M.2 PCI Express モジュールに対応*

* 起動ディスクとして NVMe SSD に対応

* ASRock U.2 キットに対応

コネクタ

- 1 x プリントポートヘッダー
- 1 x COM ポートヘッダー
- 1 x TPM ヘッダー
- 1 x シャーシインテリジョンとスピーカーヘッダー
- 1 x CPU ファンコネクタ (4 ピン)
- 2 x シャーシファンコネクタ (1 x 4 ピン、1 x 3 ピン)

* CPU ファンコネクタは最大 1A (12W) の電力の CPU ファンに対応します。

- 1 x 24 ピン ATX 電源コネクタ
- 1 x 4 ピン 12V 電源コネクタ
- 1 x 前面パネルオーディオコネクタ
- 2 x USB 2.0 ヘッダー (4 つの USB 2.0 ポートに対応) (静電気放電 (ESD) 保護に対応)
- 1 x USB 3.0 ヘッダー (2 つの USB 3.0 ポートに対応) (静電気放電 (ESD) 保護に対応)

BIOS 機能

- AMI UEFI Legal BIOS、GUI サポート付き
- 「プラグアンドプレイ」をサポート
- ACPI 5.1 準拠のウェイクアップイベント
- ジャンパーフリーをサポート
- SMBIOS 2.3 サポート
- DRAM 電圧マルチ調整

**ハードウェア
アモニター**

- CPU / シャーシ温度センシング
- CPU / シャーシファンタコメータ
- CPU / シャーシ静音ファン
- CPU / シャーシファンマルチ速度制御
- ケース開閉検知
- 電圧監視 : +12V、+5V、+3.3V、Vcore

OS

- Microsoft® Windows® 10 64-bit
- * 更新された Windows® 10 ドライバについては、ASRock のウェブサイト
サイトで詳細をご確認ください : <http://www.asrock.com>

認証

- FCC、CE、WHQL
- ErP/EuP Ready (ErP/EuP 対応電源供給装置が必要です)

* 商品詳細については、当社ウェブサイトをご覧ください。 <http://www.asrock.com>



BIOS 設定の調整、アンタイドオーバークロックテクノロジーの適用、サードパーティのオーバークロックツールの使用などを含む、オーバークロックには、一定のリスクを伴いますのでご注意ください。オーバークロックするとシステムが不安定になったり、システムのコンポーネントやデバイスが破損することがあります。ご自分の責任で行ってください。弊社では、オーバークロックによる破損の責任は負いかねますのでご了承ください。

规格

平台

- Micro ATX 规格尺寸
- 稳固的电容器设计

CPU

- 支持 AMD Socket AM4 A 系列 APU（Bristol Ridge）和锐龙 AMD Ryzen 处理器（Summit Ridge）
- Digi Power design
- 7 电源相设计
- 支持最高 65W 的 CPU

芯片集

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

内存

- 双通道 DDR4 内存技术
 - 2 x DDR4 DIMM 槽
 - 锐龙 AMD Ryzen 处理器支持 DDR4 3200+(OC)/2933(OC)/2667/2400/2133 ECC 及非 ECC，非缓冲内存 *
 - AMD 7th Gen A 系列 APU 支持 DDR4 2400/2133 ECC 及非 ECC，非缓冲内存 *
- * 请参阅华擎网站上的 Memory Support List（内存支持列表）了解详情。（<http://www.asrock.com/>）
- * 请参考第 23 页了解 DDR4 UDIMM 最大支持频率。
- 支持系统内存最大容量：32GB
 - DIMM 插槽中 15 μ 金触点

扩充槽

- 1 x PCI Express 3.0 x16 槽 (PCIe2 @ x16 模式) *
- * 支持 NVMe SSD 用作启动盘
- * 锐龙 AMD Ryzen 处理器支持 PCIe2: x16 模式
- * AMD 第 7 代 A 系列 APU 支持 PCIe2: x8 模式
- 1 x PCI Express 2.0 x1 槽

图形

- A 系列 /E 系列 APU 中的集成 AMD Radeon™ R7 系列图形
- DirectX 12、Pixel Shader 5.0
- 最大共享内存 2GB

AB350M-HDV/A320M-HDV:

- 3 个图形输出选项：D-Sub、DVI-D 和 HDMI
- 支持三台显示器
- 支持 HDMI，24Hz 时最大分辨率可达 4K x 2K (4096x2160)/30Hz 时可达 (3840x2160)
- 支持 DVI-D，60Hz 时最大分辨率达 1920x1200

- 支持 D-Sub，60Hz 时最大分辨率达 2048x1536
- 通过 HDMI 端口（需要兼容的 HDMI 显示器）支持 Auto Lip Sync、Deep Color (12bpc)、xvYCC 和 HBR（高位速率音频）
- 通过 DVI-D 和 HDMI 端口支持 HDCP
- 通过 DVI-D 和 HDMI 端口支持全高清 1080p Blu-ray (BD) 播放

A320M-DGS:

- 支持 DVI-D，60Hz 时最大分辨率达 1920x1200
- 通过 DVI-D 端口支持 HDCP
- 通过 DVI-D 端口支持全高清 1080p Blu-ray (BD) 播放。

音频

- 7.1 CH 高清音频 (Realtek ALC887 音频编解码器)
- * 要配置 7.1 CH 高清音频，需要使用高清前面板模块和通过音频驱动程序启用多通道音频功能。
- 支持电涌保护
- ELNA 音频电容

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111GR
- 支持 Wake-On-LAN（网上唤醒）
- 支持雷电 / ESD 保护
- 支持 LAN 线缆检测
- 支持高性能以太网 802.3az
- 支持 PXE

后面板 I/O

- 1 x PS/2 鼠标 / 键盘端口
- 2 x USB 2.0 端口（支持 ESD 保护）
- 4 x USB 3.0 端口（支持 ESD 保护）
- 1 x RJ-45 LAN 端口，带 LED（ACT/LINK LED 和 SPEED LED）
- 高清音频插孔：线路输入 / 前扬声器 / 麦克风

AB350M-HDV/A320M-HDV:

- 1 x D-Sub 端口
- 1 x DVI-D 端口
- 1 x HDMI 端口

A320M-DGS:

- 1 x DVI-D 端口

存储

- 4 x SATA3 6.0 Gb/s 接口，支持 RAID (RAID 0、RAID 1 和 RAID 10)、NCQ、AHCI 和热插拔
- 1 x 超级 M.2 接口，支持 2242/2260/2280 M.2 SATA3 6.0 Gb/s M Key 类型模块和 M.2 PCI Express 模块（最高 Gen3 x4 (32 Gb/s) (锐龙 AMD Ryzen 处理器) 或 Gen3 x2 (16 Gb/s) (A 系列 APU)*

* 支持 NVMe SSD 用作启动盘

* 支持华擎 U.2 套件

接口

- 1 x 打印端口接脚
- 1 x COM 端口接头
- 1 x TPM 接脚
- 1 x 机箱侵入和扬声器接脚
- 1 x CPU 风扇接口 (4 针)
- 2 x 机箱风扇接口 (1 x 4 针, 1 x 3 针)
- * CPU 风扇接口支持最高 1A (12W) 功率的 CPU 风扇。
- 1 x 24 针 ATX 电源接口
- 1 x 4 针 12V 电源接口
- 1 x 前面板音频接口
- 2 x USB 2.0 接脚 (支持 4 个 USB 2.0 端口, 支持 ESD 保护)
- 1 x USB 3.0 接脚 (支持 2 个 USB 3.0 端口, 支持 ESD 保护)

BIOS 功能特点

- AMI UEFI Legal BIOS, 支持 GUI
- 支持“即插即用”
- ACPI 5.1 兼容唤醒事件
- 支持免跳线 (jumperfree)
- SMBIOS 2.3 支持
- DRAM 电压多次调整

硬件监控

- CPU/ 机箱温度感测
- CPU/ 机箱风扇转速计
- CPU/ 机箱静音风扇
- CPU/ 机箱风扇多种速度控制
- CASE OPEN (机箱打开) 检测
- 电压监控: +12V、+5V、+3.3V、Vcore

操作系统

- Microsoft® Windows® 10 64-bit
- * 有关已更新的 Windows® 10 驱动程序，请访问华擎网站了解详情：<http://www.asrock.com>

认证

- FCC、CE、WHQL
- ErP/EuP 支持（需要支持 ErP/EuP 的电源）

* 有关详细产品信息，请访问我们的网站：<http://www.asrock.com>



须认识到超频会有一定风险，包括调整 BIOS 设置，应用“自由超频技术”，或使用第三方超频工具。超频可能会影响到系统的稳定性，甚至对系统的组件和设备造成损坏。执行这项工作您应自担风险和自己承担费用。我们对由于超频而造成的损坏概不负责。

电子信息产品污染控制标示

依据中国发布的「电子信息产品污染控制管理办法」及 SJ/T 11364-2006「电子信息产品污染控制标示要求」，电子信息产品应进行标示，藉以向消费者揭露产品中含有的有毒有害物质或元素不致发生外泄或突变从而对环境造成污染或对人体、财产造成严重损害的期限。依上述规定，您可于本产品之印刷电路板上看见图一之标示。图一中之数字为产品之环保使用期限。由此可知此主板之环保使用期限为 10 年。



图一

有毒有害物质或元素的名称及含量说明

若您欲了解此产品的有毒有害物质或元素的名称及含量说明，请参照以下表格及说明。

部件名称	有害物质或元素					
	铅 (Pb)	镉 (Cd)	汞 (Hg)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及电子组件	X	O	O	O	O	O
外部信号连接头及线材	X	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求，然该部件仍符合欧盟指令 2002/95/EC 的规范。

备注: 此产品所标示之环保使用年限，系指在一般正常使用状况下。

規格

平台

- Micro ATX 尺寸
- 固態電容設計

CPU

- 支援 AMD Socket AM4 A 系列 APU (Bristol Ridge) 與 Ryzen 系列 CPU (Summit Ridge)
- Digi Power design
- 7 電源相位設計
- 支援最高 65W CPU

晶片組

- AMD Promontory B350 (AB350M-HDV)
- AMD Promontory A320 (A320M-HDV/A320M-DGS)

記憶體

- 雙通道 DDR4 記憶體技術
 - 2 x DDR4 DIMM 插槽
 - AMD Ryzen 系列 CPU 支援 DDR4 3200+(OC)/2933 (OC)/2667/ 2400/2133 ECC 與非 ECC 無緩衝記憶體 *
 - AMD 第 7 代 A 系列 APU 支援 DDR4 2400/2133 ECC 與非 ECC 無緩衝記憶體 *
- * 如需更多資訊，請參閱華擎網站上的記憶體支援表。(http://www.asrock.com/)
- * 關於 DDR4 UDIMM 最高頻率支援，請參閱第 23 頁。
- 最大系統記憶體容量：32GB
 - 15 μ 特厚鍍金插槽

擴充插槽

- 1 x PCI Express 3.0 x16 插槽 (PCIe2 @ x16 模式)*
- * 支援 NVMe SSD 作為開機磁碟
- * AMD Ryzen 系列 CPU 支援 PCIe2：x16 模式
- * AMD 第 7 代 A 系列 APU 支援 PCIe2：x8 模式
- 1 x PCI Express 2.0 x1 插槽

顯示卡

- 整合 A 系列 / E 系列 APU 的 AMD Radeon™ R7 系列顯示卡
- DirectX 12、Pixel Shader 5.0
- 最大共用記憶體 2GB

AB350M-HDV/A320M-HDV：

- 三個圖形輸出選項：D-Sub、DVI-D 及 HDMI
- 支援三台顯示器

- 支援最高可達 4K x 2K (4096x2160) @ 24Hz / (3840x2160) @ 30Hz 解析度的 HDMI
- 支援最高達 1920x1200 @ 60Hz 解析度的 DVI-D
- 最高支援 2048x1536 @ 60Hz 解析度的 D-Sub
- 支援使用 HDMI 連接埠（需相容於 HDMI 監視器）的 Auto Lip Sync、Deep Color (12bpc)、xvYCC 及 HBR（高位元率音訊）
- 支援含 DVI-D 及 HDMI 連接埠的 HDCP
- 支援透過 DVI-D 及 HDMI 連接埠的 Full HD 1080p 藍光 (BD) 播放

A320M-DGS :

- 支援最高達 1920x1200 @ 60Hz 解析度的 DVI-D
- 支援含 DVI-D 連接埠的 HDCP
- 支援透過 DVI-D 連接埠的 Full HD 1080p 藍光 (BD) 播放

音訊

- 7.1 CH HD 音訊 (Realtek ALC887 音訊轉碼器)
- * 若要設定 7.1 CH HD 音訊，必須使用 HD 前面板音訊模組，並透過音訊驅動程式啟用多聲道音訊功能。
- 支援突波保護
- ELNA 音響級電容

LAN

- PCIe x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111GR
- 支援網路喚醒
- 支援雷擊／靜電保護
- 支援 LAN 纜線偵測
- 支援 Energy Efficient Ethernet 802.3az
- 支援 PXE

後面板 I/O

- 1 x PS/2 滑鼠／鍵盤連接埠
- 2 x USB 2.0 連接埠（支援靜電保護）
- 4 x USB 3.0 連接埠（支援靜電保護）
- 1 x RJ-45 LAN 連接埠，含 LED（ACT/LINK LED 及 SPEED LED）
- HD 音訊插孔：線路輸入／前置喇叭／麥克風

AB350M-HDV/A320M-HDV :

- 1 x D-Sub 連接埠
- 1 x DVI-D 連接埠
- 1 x HDMI 連接埠

A320M-DGS :

- 1 x DVI-D 連接埠

儲存裝置

- 提供 4 x SATA3 6.0 Gb/s 接頭，支援 RAID (RAID 0、RAID 1、與 RAID 10)、NCQ、AHCI 及熱插拔
- 1 x Ultra M.2 插座，支援 M Key 型 2242/2260/2280 M.2 SATA3 6.0 Gb/s 模組與 M.2 PCI Express 模組 (使用 Ryzen 系列 CPU 時，最高可達 Gen3 x4 (32 Gb/s)，或使用 A 系列 APU 時，最高可達 Gen3 x2 (16 Gb/s))
- * 支援 NVMe SSD 作為開機磁碟
- * 支持華擎 U.2 套件

接頭

- 1 x 列印連接埠排針
- 1 x COM 連接埠排針
- 1 x TPM 排針
- 1 x 機殼防護排針
- 1 x CPU 風扇接頭 (4-pin)
- 2 x 機殼風扇接頭 (1 x 4-pin、1 x 3-pin)
- * CPU 風扇接頭支援最高 1A (12W) 風扇功率的 CPU 風扇。
- 1 x 24 pin ATX 電源接頭
- 1 x 4 pin 12V 電源接頭
- 1 x 前面板音訊接頭
- 2 x USB 2.0 排針 (支援 4 個 USB 2.0 連接埠) (支援靜電保護)
- 1 x USB 3.0 排針 (支援 2 個 USB 3.0 連接埠) (支援靜電保護)

BIOS 功能

- AMI UEFI Legal BIOS 含 GUI 支援
- 支援「隨插即用」
- ACPI 5.1 符合喚醒自動開機
- 支援免跳線模式
- 支援 SMBIOS 2.3
- DRAM 電壓多重調整

硬體監視器

- CPU / 機殼溫度感應
- CPU / 機殼風扇轉速計
- CPU / 機殼靜音風扇
- CPU / 機殼風扇多重速度控制
- 機殼開啟偵測
- 電壓監控：+12V、+5V、+3.3V、Vcore

作業系統

- Microsoft® Windows® 10 64-bit
- * 關於最新 Windows® 10 驅動程式的詳細資訊，請瀏覽華擎網站：<http://www.asrock.com>

認證

- FCC、CE、WHQL
- ErP/EuP ready (須具備 ErP/EuP ready 電源供應器)

* 如需產品詳細資訊，請上我們的網站：<http://www.asrock.com>



請務必理解，超頻可能產生某種程度的風險，其中包括調整 BIOS 中的設定、採用自由超頻技術或使用協力廠商的超頻工具。超頻可能會影響您系統的穩定性，或者甚至會對您系統的元件及裝置造成傷害。您應自行負擔超頻風險及成本。我們對於因超頻所造成的可能損害概不負責。

Spesifikasi

Platform

- Bentuk dan Ukuran Micro ATX
- Desain Kapasitor Solid

CPU

- Mendukung Soket AMD APU Seri AM4 A (Bristol Ridge) dan CPU Seri Ryzen (Summit Ridge)
- Digi Power design
- Desain 7 Fase Daya
- Mendukung CPU hingga 65W

Chipset

- Promontory AMD B350 (AB350M-HDV)
- Promontory AMD A320 (A320M-HDV/A320M-DGS)

Memori

- Teknologi Memori DDR4 Dua Kanal
- 2 x Slot DIMM DDR4
- CPU Seri AMD Ryzen mendukung DDR4 3200+(OC)/2933 (OC)/2667/ 2400/2133 ECC & non-ECC, memori tanpa buffer*
- AMD APU Seri A Generasi ke-7 mendukung DDR4 2400/2133 ECC & non-ECC, memori tanpa buffer*

* Untuk informasi lebih lanjut, lihat Daftar Dukungan Memori di situs web ASRock. (<http://www.asrock.com/>)

* Lihat halaman 23 untuk dukungan frekuensi maksimum DDR4 UDIMM.

- Kapasitas maksimum memori sistem: 32GB
- 15µ Bidang Kontak berwarna Emas di Slot DIMM

Slot Ekspansi

- 1 x Slot PCI Express 3.0 x16 (mode PCIE2 @ x16)*
- * Mendukung SSD NVMe sebagai disk boot
- * CPU Seri AMD Ryzen mendukung PCIE2: x16 mode
- * AMD APU Seri A Generasi ke-7 mendukung PCIE2: x8 mode
- 1 x Slot PCI Express 2.0 x1

Grafis

- Grafis AMD Radeon™ Seri R7 terpadu dalam APU seri A/seri E
- DirectX 12, Pixel Shader 5.0
- Maksimum memori bersama 2GB

AB350M-HDV/A320M-HDV:

- Tiga pilihan output grafis: D-Sub, DVI-D, dan HDMI
- Mendukung Tiga Monitor

- Mendukung HDMI dengan resolusi maksimum hingga 4K x 2K (4096x2160) @ 24Hz/(3840x2160) @ 30Hz
- Mendukung DVI-D dengan resolusi maksimum hingga 1920x1200 @ 60Hz
- Mendukung D-Sub dengan resolusi maksimum hingga 2048x1536 @ 60Hz
- Mendukung Auto Lip Sync, Kedalaman Warna (12bpc), xvYCC, dan HBR (Audio High Bit Rate) dengan Port HDMI (memerlukan monitor yang kompatibel dengan HDMI)
- Mendukung HDCP dengan port DVI-D dan HDMI
- Mendukung pemutaran 1080p Blu-ray HD Penuh (BD) dengan Port DVI-D dan HDMI

A320M-DGS:

- Mendukung DVI-D dengan resolusi maksimum hingga 1920x1200 @ 60Hz
- Mendukung HDCP dengan Port DVI-D
- Mendukung pemutaran Blu-ray (BD) 1080p Full HD dengan Port DVI-D

Audio

- Audio HD 7.1 CH (Realtek ALC887 Audio Codec)
- * Untuk mengkonfigurasi Audio HD 7.1 CH, modul audio panel depan HD harus digunakan dan fitur audio multisaluran harus diaktifkan melalui driver audio.
- Mendukung Perlindungan dari Arus Pendek
 - ELNA Audio Caps

LAN

- x1 PCIE Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111GR
- Mendukung Wake-On-LAN
- Mendukung Perlindungan dari Petir/ESD
- Mendukung Deteksi Kabel LAN
- Mendukung Ethernet Hemat Energi 802.3az
- Mendukung PXE

I/O Panel Belakang

- 1 x Port Mouse/Keyboard PS/2
- 2 x Port USB 2.0 (Mendukung Perlindungan dari ESD)
- 4 x Port USB 3.0 (Mendukung Perlindungan dari ESD)
- 1 x Port LAN RJ-45 dengan LED (LED ACT/LINK dan LED SPEED)
- Soket Audio HD: Saluran Masuk/Speaker Depan/Mikrofon

AB350M-HDV/A320M-HDV:

- 1 x Port D-Sub
- 1 x Port DVI-D
- 1 x Port HDMI

A320M-DGS:

- 1 x Port DVI-D

Penyimpanan

- 4 Konektor SATA3 6,0 Gb/s, mendukung RAID (RAID 0, RAID 1, dan RAID 10), NCQ, AHCI dan Hot Plug
- 1 x Soket Ultra M.2, mendukung modul tipe 2242/2260/2280 M.2 SATA3 6,0 Gb/s Key M dan modul M.2 PCI Express hingga Generasi ke-3 x4 (32 Gb/d) (dengan CPU Seri Ryzen) atau Generasi ke-3 x2 (16 Gb/d) (dengan APU Seri A)*

* Mendukung SSD NVMe sebagai disk boot

* Mendukung Kit U.2 ASRock

Konektor

- 1 x Header Port Printer
 - 1 x Header Port COM
 - 1 x Header TPM
 - 1 x Intrusi Sasis dan Header Speaker
 - 1 x Konektor Kipas CPU (4-pin)
 - 2 x Konektor Kipas Chassis (1 x 4-pin, 1 x 3-pin)
- * Konektor Kipas CPU mendukung kipas CPU dengan daya kipas maksimum 1A (12W).
- 1 x Konektor Daya ATX 24 pin
 - 1 x Konektor Daya 4 pin 12V
 - 1 x Konektor Audio Panel Depan
 - 2 x Header USB 2.0 (Mendukung 4 port USB 2.0) (Mendukung Perlindungan dari ESD)
 - 1 x Header USB 3.0 (Mendukung 2 port USB 3.0) (Mendukung Perlindungan dari ESD)

Fitur BIOS

- AMI UEFI Legal BIOS dengan dukungan GUI
- Mendukung “Plug and Play”
- ACPI 5.1 kompatibel dengan aktivitas pengaktifan
- Mendukung jumperfree
- Dukungan SMBIOS 2.3
- Multipengatur Voltase DRAM

- Monitor Perangkat Keras**
- Sensor suhu CPU/Sasis
 - Takometer Kipas CPU/Sasis
 - Kipas Hening CPU/Sasis
 - Kontrol multikecepatan Kipas CPU/Sasis
 - Deteksi CASE OPEN
 - Pemantauan voltase: +12V, +5V, +3,3V, Vcore

- OS**
- Microsoft® Windows® 10 64-bit
- * Untuk info rinci tentang driver Windows® 10 terbaru, kunjungi situs web ASRock: <http://www.asrock.com>

- Sertifikasi**
- FCC, CE, WHQL
 - Siap untuk ErP/EuP (memerlukan catu daya untuk siap ErP/EuP)

* Untuk informasi rinci tentang produk, kunjungi situs web kami: <http://www.asrock.com>



Perlu diketahui, overclocking memiliki risiko tertentu, termasuk menyesuaikan pengaturan pada BIOS, menerapkan Teknologi Untied Overclocking, atau menggunakan alat bantu overclocking pihak ketiga. Overclocking dapat mempengaruhi stabilitas sistem, atau bahkan mengakibatkan kerusakan komponen dan perangkat sistem. Risiko dan biaya apapun menjadi tanggungan Anda. Kami tidak bertanggung jawab atas kemungkinan kerusakan karena overclocking.

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 <http://www.asrock.com/support/tsd.asp>

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EC-Declaration of Conformity

For the following equipment:

Motherboard

(Product Name)

AB350M-HDV/A320M-HDV/A320M-DGS/ ASRock

(Model Designation / Trade Name)

ASRock Incorporation

(Manufacturer Name)

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

(Manufacturer Address)

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC) and Safety Directive (2006/95/EC), the following standards are applied:

- EN 55022: 2006+A1:2007
- EN 61000-3-2: 2009
- EN 61000-3-3: 2008
- EN 55024: 1998 + A1:2001 + A2:2003
 - IEC 61000-4-2: 2008;
 - IEC 61000-4-3: 2010; IEC 61000-4-4: 2010;
 - IEC 61000-4-5: 2005; IEC 61000-4-6: 2008;
 - IEC 61000-4-8: 2009; IEC 61000-4-11: 2004;
- EN 60950-1: 2005 + A1:2009
 - IEC 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011

The following manufacturer / importer or authorized representative established within the EUT is responsible for this declaration:

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)

March 17, 2017

(Date)