ASRock H370 PERFORMANCE

ASRock H370 Performance Motherboard User Manual

Comprehensive guide for installation, operation, and maintenance.

1. PRODUCT OVERVIEW

The ASRock H370 Performance motherboard is designed for 8th Generation Intel Core Processors, offering robust performance and extensive connectivity. It features a Digi Power design with 10 power phases for stable power delivery, supports Intel Turbo Boost 2.0 Technology, and is built on the Intel H370 chipset.

Image: ASRock H370 Performance Motherboard alongside its retail packaging.

Key Features:

- Supports 8th Generation Intel Core Processors.

- Supports CPU up to 95W.
- Digi Power design for enhanced stability.
- 10 Power Phase design for efficient power delivery.
- Supports Intel Turbo Boost 2.0 Technology.
- 4x DDR4-2666/2400/2133 DIMM Slots, Dual Channel, Non-ECC, Unbuffered, Max Capacity of 64GB.
- 2x PCI-Express 3.0 x16 Slots, 4x PCI-Express 3.0 x1 Slots.
- Supports AMD Quad CrossFireX and CrossFireX Technology.
- 6x SATA3 Ports with RAID 0, 1, 5, 10 support.
- 2x Ultra M.2 Ports for high-speed storage.
- Realtek ALC1220 7.1-Channel High Definition Audio CODEC.
- Intel I219V Gigabit Ethernet Controller.
- Multiple USB 3.1 Gen2, USB 3.1 Gen1, and USB 2.0 ports.
- VGA, HDMI, DisplayPort outputs.

Product Overview Video:

Video: A general product overview highlighting features of an ASRock H370M-HDV motherboard. While not the exact model, it provides a visual reference for ASRock H370 series motherboards.

2. SETUP AND INSTALLATION

Before beginning installation, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

2.1. Motherboard Layout

Image: Top-down view of the ASRock H370 Performance motherboard, showing the CPU socket, RAM slots, PCIe slots, and M.2 slots.

Familiarize yourself with the motherboard's layout. Key areas include the LGA1151 CPU socket, DDR4 DIMM slots, PCI-Express slots, SATA ports, and M.2 slots.

2.2. CPU Installation

1. Locate the LGA1151 CPU socket.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the notches on your 8th Generation Intel Core Processor with the keys on the socket. Do not force the CPU into place.
4. Lower the load plate and secure it with the lever.
5. Apply thermal paste to the CPU and install the CPU cooler according to its manufacturer's instructions.

2.3. Memory (RAM) Installation

1. Locate the four DDR4 DIMM slots.
2. Open the clips at both ends of the DIMM slot.
3. Align the notch on the DDR4 memory module with the key in the DIMM slot.
4. Insert the memory module firmly into the slot until the clips snap into place. Ensure both clips are fully closed.
5. For dual-channel performance, install memory modules in matching colored slots (e.g., A2 and B2).

2.4. Storage Device Installation

SATA Drives:

- Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA3 ports on the motherboard.
- Connect power cables from your power supply to the SATA drives.

M.2 SSDs:

- Locate the Ultra M.2 slots.
- Insert the M.2 SSD into the slot at an angle.
- Gently push down the M.2 SSD and secure it with the provided screw.

2.5. Expansion Card Installation (PCIe)

- Identify the appropriate PCI-Express slot for your expansion card (e.g., graphics card).
- Align the card with the slot and press firmly until it is seated correctly.
- Secure the card to the chassis with a screw.

2.6. Connecting Peripherals and Power

Image: Close-up view of the rear I/O panel, showing various ports including USB, LAN, audio, and video outputs.

- Connect the 24-pin ATX power connector and the 8-pin 12V power connector from your power supply to the motherboard.
- Connect front panel headers (power button, reset button, USB, audio) to their respective pins on the motherboard. Refer to the motherboard manual for exact pin layouts.
- Connect external peripherals (monitor, keyboard, mouse, speakers) to the rear I/O ports.

3. OPERATING INSTRUCTIONS

3.1. First Boot and BIOS Setup

- After assembling all components, connect the power cord and turn on your system.
- Press the Del or F2 key during startup to enter the BIOS/UEFI setup utility.
- Configure boot order, date/time, and other system settings as needed.

- Save changes and exit the BIOS.

3.2. Operating System Installation

Insert your operating system installation media (USB drive or DVD) and follow the on-screen prompts to install your preferred OS. Ensure all necessary drivers are installed after OS installation for optimal performance.

3.3. Driver Installation

Install the latest drivers for your motherboard chipset, audio, LAN, and any other integrated components. These can typically be found on the ASRock support website for the H370 Performance model. Installing the correct drivers ensures proper functionality and performance of your system.

4. MAINTENANCE

4.1. BIOS Updates

Periodically check the ASRock website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, or fix bugs. Follow the instructions provided by ASRock carefully when performing a BIOS update to avoid system damage.

4.2. Cleaning

- Regularly clean dust from inside your computer case, especially around fans and heatsinks, to maintain optimal cooling.
- Use compressed air to remove dust. Avoid using liquid cleaners directly on components.
- Ensure the system is powered off and unplugged before cleaning.

4.3. Component Checks

Occasionally inspect cables and connections to ensure they are secure. Check for any signs of physical damage or loose components.

5. TROUBLESHOOTING

5.1. System Does Not Power On

- Verify that the power supply is connected correctly to the motherboard (24-pin ATX and 8-pin 12V connectors).
- Ensure the power supply switch is in the ON position.
- Check front panel power button connections to the motherboard.
- Test the power supply with another system or a power supply tester if available.

5.2. No Display Output

- Ensure the monitor is connected to the correct video output (either integrated graphics or a dedicated graphics card).
- Reseat the graphics card (if applicable) and memory modules.
- Try booting with only one memory module installed.
- Clear the CMOS (refer to the motherboard manual for instructions).

5.3. Operating System Fails to Load

- Check the boot order in the BIOS/UEFI settings to ensure the correct drive is selected.
- Verify that storage drives are properly connected and detected by the BIOS.
- Run a diagnostic check on your storage drive.

6. SPECIFICATIONS

Feature	Detail
Brand	ASRock
Series	H370 Performance
Model Name	H370 Performance
Item Model Number	H370 PERFORMANCE
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core
Chipset Type	Intel H370
RAM Memory Technology	DDR4
RAM	DDR4 (Max 64GB, Dual Channel, Non-ECC, Unbuffered)
Memory Speed	2400 MHz (Supports 2666/2400/2133)
PCI-Express Slots	2x PCI-Express 3.0 x16, 4x PCI-Express 3.0 x1
Multi-Graphics Support	AMD Quad CrossFireX, CrossFireX Technology
SATA Ports	6x SATA3 (Support RAID 0, 1, 5, 10, NCQ, AHCI, Hot Plug)
M.2 Ports	2x Ultra M.2 (one supports type 2230/2242/2260/2280/22110 M.2 SATA3 & PCIe Gen3 x4; one supports type 2230/2242/2260/2280 M.2 SATA3 & PCIe Gen3 x4)
Audio	Realtek ALC1220 7.1-Channel High Definition Audio CODEC
LAN	Giga PHY Intel I219V Gigabit Ethernet Controller
USB Ports	2x USB 3.1 Gen2 (1 Type-A rear, 1 Type-C rear), 6x USB 3.1 Gen1 (2 rear, 4 via headers), 6x USB 2.0 (2 rear, 4 via headers)
Video Outputs	1x VGA, 1x HDMI, 1x DisplayPort
Other Rear I/O	1x PS/2 Mouse/Keyboard, 1x Optical SPDIF Out, 2x Antenna Ports, 1x RJ45 LAN Port w/ LED, Audio I/O Jacks
Power Connector	1x 24pin ATX, 1x 8pin 12V

Feature	Detail
Form Factor	ATX, 12.0 x 9.6 inch / 30.5 x 24.4 cm
Item Weight	0.06 ounces
Product Dimensions	13.78 x 12.28 x 3.58 inches

7. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official ASRock website or contact ASRock customer service directly. Warranty terms and conditions may vary by region and retailer.

You can visit the ASRock Store for more information: ASRock America Store.