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> [MACHINIST H110 LGA 1151 Motherboard User Manual](#)

## MACHINIST H110

# MACHINIST H110 LGA 1151 Motherboard User Manual

Model: H110

## INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your MACHINIST H110 LGA 1151 Motherboard. Please read this guide thoroughly before proceeding with installation to ensure proper setup and functionality. This motherboard is designed to support Intel 6th/7th generation Core i3/i5/i7, Pentium, and Celeron Series CPUs.

## PACKAGE CONTENTS

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The package includes the following items:

- 1 x MACHINIST H110 Motherboard
- 1 x SATA Cable
- 1 x I/O Baffle

**Note:** The motherboard does not include a CMOS battery. A user manual is not physically included in the package; this digital document serves as the user manual.



Figure 1: Package Contents. This image displays the MACHINIST H110 motherboard, a SATA data cable, and an I/O baffle, which are typically included in the product box.

## KEY FEATURES

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- **LGA 1151 Socket:** Compatible with Intel 6th/7th generation Core i3/i5/i7, Pentium, and Celeron Series processors.
- **Dual Channel DDR4 Memory:** Two DDR4 Non-ECC memory slots supporting up to 32GB (16GB per slot) with a maximum frequency of 2400MHz.
- **NVME/SATA M.2 Interface:** Supports both NVME (PCIe channel) and SATA (SATA channel) M.2 SSDs, with manual conversion capability.
- **Connectivity:** Features PCIe 2.0 X16 slot, SATA 3.0 ports, USB 3.0, USB 2.0, VGA, and HDMI for high-

definition video output (requires CPU with integrated graphics).

- **Power Design:** 4+1 Phase Power Supply with PWM Controller RT3607BC.
- **Network:** Realtek 8111H Gigabit network card.

## MOTHERBOARD LAYOUT AND COMPONENTS

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Familiarize yourself with the various components and connectors on the motherboard before installation.



Figure 2: H110 Motherboard Interface Details. This image illustrates the location of key components and ports on the motherboard, including USB 2.0, USB 3.0, HDMI, VGA, LAN, Audio jacks, PCIe X16 slot, SATA 3.0 ports, NVME/NGFF M.2 slot, 8-pin DC power, 24-pin DC power, and fan headers.

## SETUP AND INSTALLATION

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### 1. CPU Installation

Carefully align your LGA 1151 CPU with the socket. Ensure the triangular mark on the CPU matches the mark on the socket. Gently lower the CPU into the socket without forcing it. Close the load plate and secure the lever.



Figure 3: Intel LGA 1151 Socket. This image shows the LGA 1151 CPU socket, indicating where the processor should be placed.

### 2. Memory (RAM) Installation

Locate the two DDR4 memory slots. Open the clips on both ends of the slot. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot. Press down firmly on both ends of the memory module until the clips snap into place.



Figure 4: Dual Channel DDR4 Memory Slots. This image displays the two DDR4 memory slots, capable of supporting up to 32GB of RAM at 2400MHz.

### 3. Storage Device Installation (M.2 / SATA)

**M.2 SSD:** The motherboard features an M.2 interface that supports both NVME and NGFF (SATA) protocols. The default mode is NVME. To switch between NVME and NGFF modes, refer to the manual conversion instructions or the diagram on the motherboard. Insert the M.2 SSD into the slot at an angle and secure it with the provided screw.



Figure 5: NVME/SATA M.2 Hard Disk Interface. This image explains the M.2 interface's dual compatibility with NVME and SATA protocols, and the manual conversion process.

**SATA Drives:** Connect your SATA hard drives or SSDs to the SATA 3.0 ports using SATA data cables. Ensure the power cable from your power supply is also connected to the SATA drive.

### 4. Power Connections

Connect the 24-pin ATX power connector from your power supply to the main power socket on the motherboard. Also, connect the 8-pin CPU power connector to the corresponding socket near the CPU.

### 5. Front Panel Connections

Connect the front panel headers (Power LED, HDD LED, Power Switch, Reset Switch) from your computer case to the corresponding pins on the motherboard. Refer to the motherboard layout diagram (Figure 2) for pin locations.

## OPERATING INSTRUCTIONS

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After completing all hardware installations, connect your monitor, keyboard, and mouse. Power on your system. The system should boot to the BIOS/UEFI interface or your operating system if already installed. To enter the BIOS/UEFI setup, typically press the **DEL** or **F2** key during startup.

For optimal performance, it is recommended to install the latest drivers for your motherboard components. Drivers can often be found on the manufacturer's website or by using driver management software like Driver Talent, especially for Windows 10 systems.

## MAINTENANCE

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### CMOS Reset Procedure

If you encounter system instability or issues related to BIOS settings, performing a CMOS reset can resolve them. Follow these steps:

1. **Disconnect Power:** Turn off your computer and unplug the power cord from the wall outlet.
2. **Remove CMOS Battery:** Locate the small coin-cell battery (CR2032) on the motherboard and carefully remove it.
3. **Short CMOS Jumper:** Find the "Clear CMOS" jumper (usually labeled CLR\_CMOS or similar). Use a metal object (like a screwdriver or tweezers) to short the two pins for approximately 5 seconds.
4. **Reinstall Battery and Power:** Reinstall the CMOS battery, plug in the power cord, and restart your computer.



Figure 6: CMOS Reset Method. This image illustrates the process of resetting the CMOS by removing the battery and shorting the designated pins.

Regularly clean dust from your computer's interior to prevent overheating and ensure optimal performance.

## TROUBLESHOOTING

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- **System Will Not Power On (Fans Don't Spin):**

Verify motherboard and CPU power connections are secure. Confirm CPU and memory model compatibility and condition. Ensure memory modules are properly seated. If the issue persists, clear the CMOS (refer to Maintenance section).

- **No Display (Fans Spin, Keyboard Lights Unresponsive to Caps Lock):**

Verify motherboard and CPU power connections. Ensure memory modules are properly seated. Confirm CPU and memory model compatibility and condition. If issues persist, clear the CMOS.

- **No Display (Fans Spin, Keyboard Caps Lock Indicator Lights Up):**

Verify the monitor is powered on and the display data cable is securely connected. If no external graphics card (GPU) is installed, confirm your CPU supports integrated graphics. If an external GPU is installed, ensure the display cable is connected to its output port. Check the condition of the display cable, GPU, and monitor. If the issue persists, clear the CMOS.

## SPECIFICATIONS

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Feature	Detail
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Brand	MACHINIST
Model Name	H110
CPU Socket	LGA 1151
Compatible Processors	Intel Core 6th/7th Gen i3/i5/i7, Pentium, Celeron Series CPUs
Chipset Type	Intel H110
RAM Memory Technology	DDR4
Memory Slots	2 x DDR4 Non-ECC (Dual Channel)
Max Memory Capacity	32GB (16GB per slot)
Memory Clock Speed	Up to 2400 MHz
M.2 Interface	NVME/SATA M.2 (PCIe/SATA channels, manual conversion)
PCIe Slot	1 x PCIe 2.0 X16
SATA Ports	3 x SATA 3.0
USB Ports	USB 3.0, USB 2.0 (Rear and Front Headers)
Video Output	VGA, HDMI (requires CPU with integrated graphics)
Network	Realtek 8111H Gigabit LAN
Audio	Realtek LAC887 chip (Front audio, Rear audio)
Power Interface	24-pin DC*1, 8-pin DC*1
Power Supply	5-phase power supply
Item Weight	1.2 pounds
Package Dimensions	8.8 x 8 x 2.2 inches

## WARRANTY INFORMATION

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For detailed warranty terms and conditions, please refer to the official MACHINIST website or contact your point of purchase. Standard manufacturer warranty policies apply to this product.

## SUPPORT AND CONTACT

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If you require further assistance or have questions not covered in this manual, please visit the official MACHINIST support page or contact their customer service. You can find contact information on the MACHINIST brand store page or their official website.

### Online Resources:

- [MACHINIST Brand Store on Amazon](#)
- For driver downloads, consider using [Driver Talent](#) or utilize Windows 10's built-in driver management.

