

## GOWENIC H110B4

# GOWENIC H110B4 H110 Computer Motherboard User Manual

Model: H110B4

## 1. INTRODUCTION

This manual provides comprehensive instructions for the GOWENIC H110B4 H110 Computer Motherboard. It is designed to assist users in the proper installation, configuration, and maintenance of the motherboard, ensuring reliable and efficient operation of your computer system. Please read this manual thoroughly before proceeding with any installation or setup procedures.

## 2. PRODUCT OVERVIEW

The GOWENIC H110B4 H110 Motherboard is designed for desktop and server applications, supporting LGA1151 pin CPUs such as Intel Core i5-6500 and i7-6700. It features DDR4 memory support and an M.2 interface for high-speed storage.

**Motherboard Size: Approx. 190 x 170mm / 7.5 x 6.7in**  
( Manual Measurement, Slight Error May Exist )

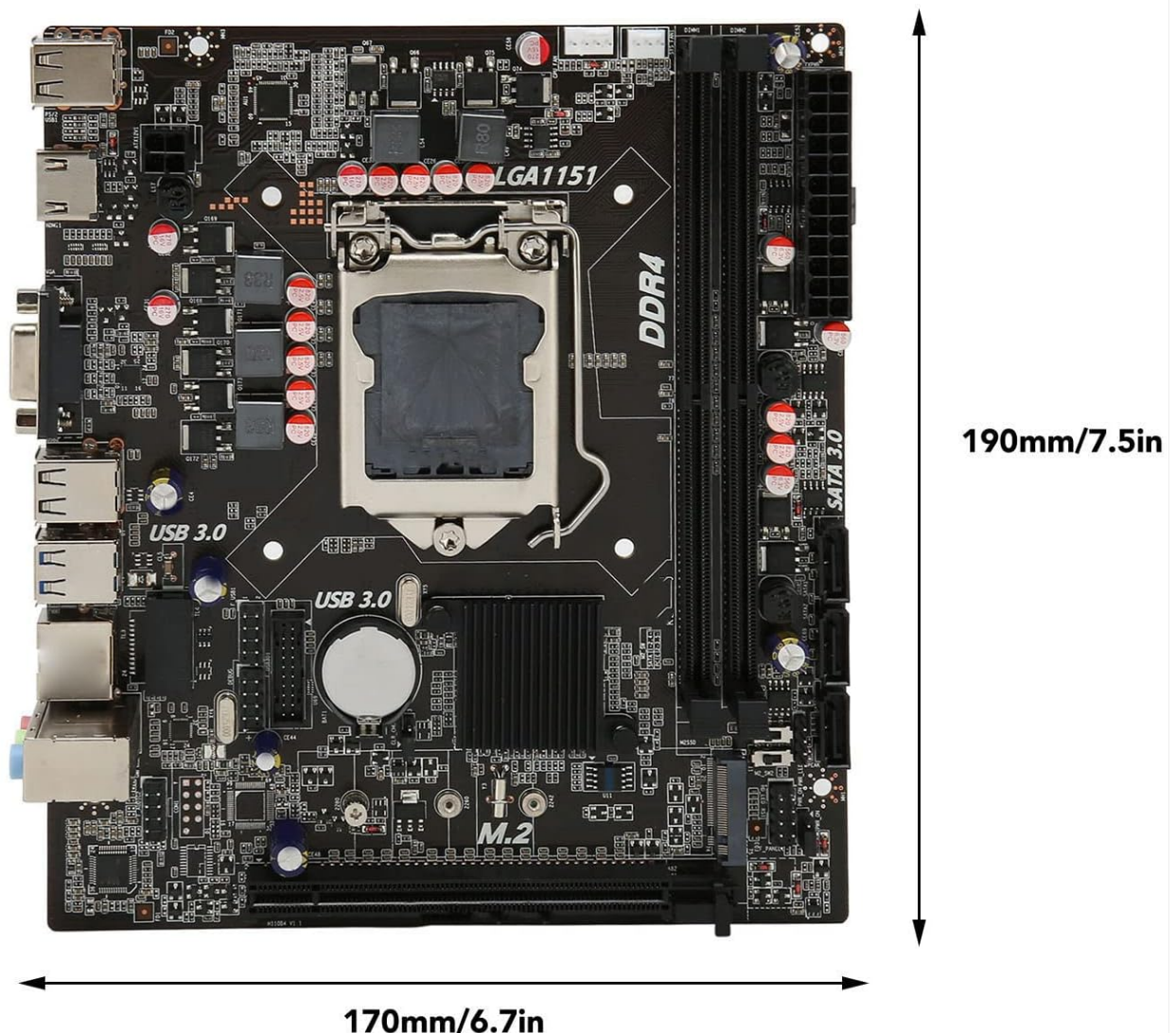


Figure 2.1: GOWENIC H110B4 H110 Motherboard with approximate dimensions (190 x 170mm / 7.5 x 6.7in).

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Video 2.1: Overview of the GOWENIC H110B4 H110 Computer Motherboard, showcasing its physical appearance and various angles.

### 3. KEY FEATURES

- **Easy Expansion:** Equipped with HD Multimedia Interface and VGA interface. The M.2 interface supports both NGFF and NVME protocols.
- **SATA3.0 Interface:** Features SATA3.0 ports for strong compatibility and fast data transfer speeds.
- **High-Speed M.2:** The M.2 hard disk interface supports speeds up to 32GB/s.
- **All Solid-State Capacitance:** Utilizes solid-state capacitors for stable performance and extended motherboard lifespan.
- **DDR4 SO DIMM:** Supports dual-channel DDR4 SO DIMM memory, with a maximum capacity of 64GB.

**Strong compatibility  
High performance and low  
power consumption**

**All Solidstate Capacitance:  
all solidstate capacitance features longer  
service life and higher stability**

Figure 3.1: Close-up view of the solid-state capacitors, highlighting their design for enhanced stability and durability.

## 4. MOTHERBOARD INTERFACE LAYOUT

Understanding the layout of the motherboard interfaces is crucial for proper component installation. Refer to the diagram below for a detailed view of all ports and connectors.

# Motherboard Interface

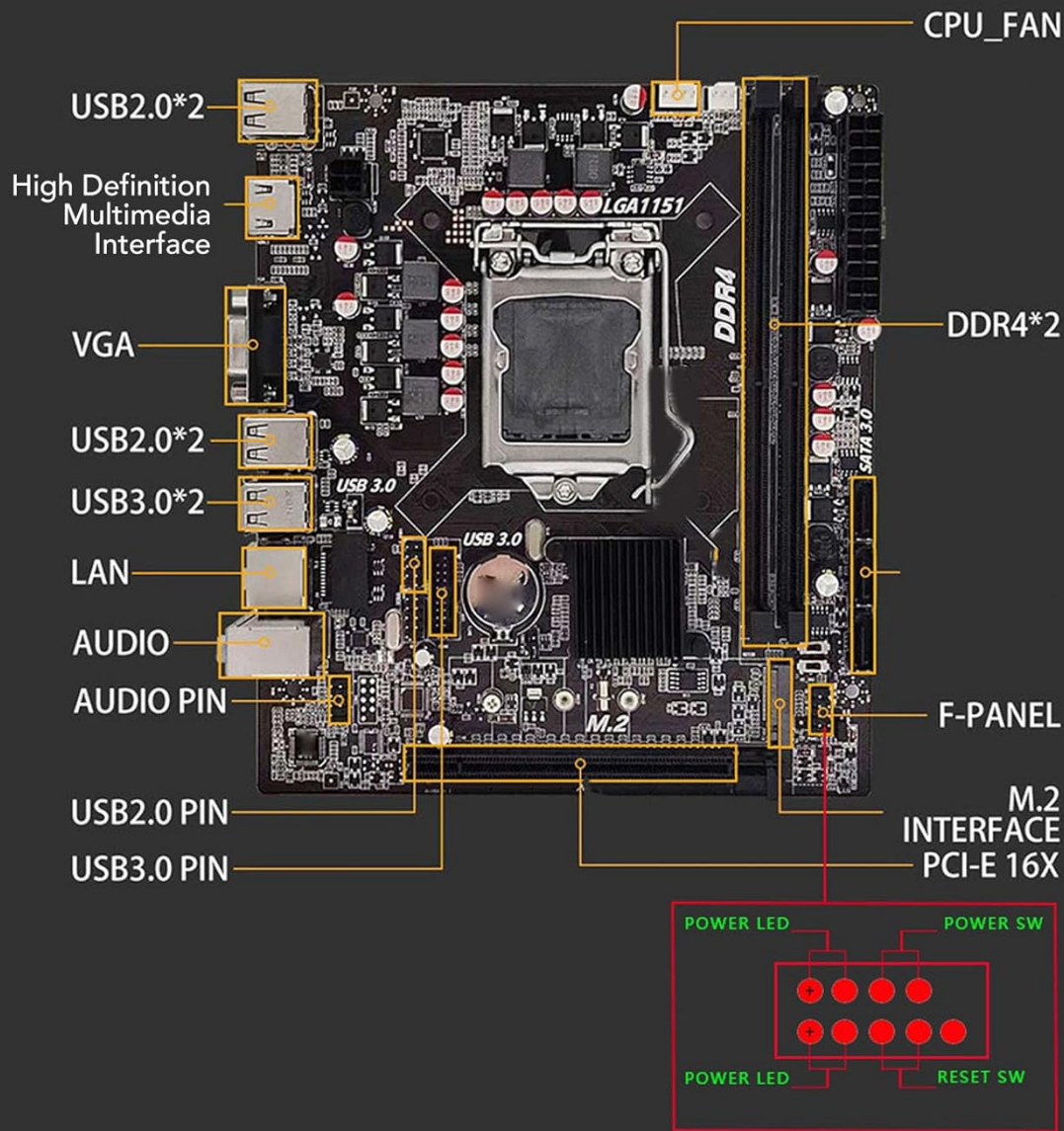


Figure 4.1: Detailed diagram illustrating the various interfaces on the GOWENIC H110B4 H110 Motherboard, including USB ports, video outputs, audio jacks, LAN, CPU fan header, DDR4 slots, SATA 3.0 ports, M.2 interface, and front panel connectors.

- **CPU\_FAN:** CPU Fan Header
- **DDR4\*2:** Two DDR4 SO DIMM memory slots
- **SATA 3.0:** SATA 3.0 ports for storage devices
- **M.2 Interface PCI-E 16X:** M.2 slot for NVMe/NGFF SSDs and PCI-E x16 slot
- **F-PANEL:** Front Panel Header (Power LED, Power SW, Reset SW)
- **USB3.0 PIN / USB2.0 PIN:** Internal USB headers
- **AUDIO / AUDIO PIN:** Audio jacks and internal audio header
- **LAN:** Ethernet port
- **USB3.0\*2 / USB2.0\*2:** External USB 3.0 and USB 2.0 ports
- **VGA / High Definition Multimedia Interface:** Video output ports

## 5. SETUP AND INSTALLATION



## 5.1 CPU Installation

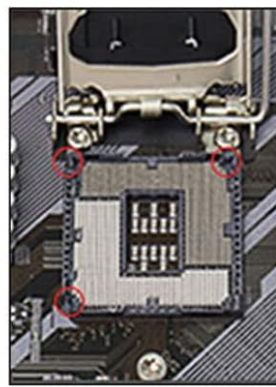
Follow these steps carefully to install your LGA1151 CPU onto the motherboard. Ensure proper alignment to prevent damage to the CPU or socket pins.

1. **Open CPU Socket:** Press down the wire buckle on the CPU socket and lift it upward. Do not remove the black protective cover before installing the CPU.
2. **Align CPU:** Observe the three bayonets (alignment notches) in the motherboard's CPU socket and the corresponding three bayonets on the CPU itself (often marked with a red circle in diagrams). Align the left side of the CPU with the socket and gently place it down.
3. **Verify Placement:** Ensure the CPU is seated correctly and evenly within the socket.
4. **Secure CPU:** Carefully put the wire buckle back down. At this point, the black protective cover will automatically eject. Remember not to manually remove the black cover before installing the CPU.

# CPU Installation



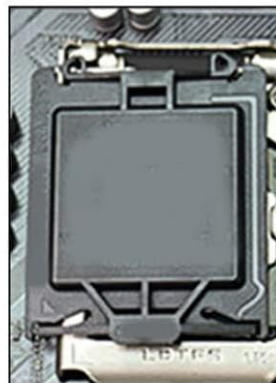
1. Press down the wire buckle and lift it upward. Do not remove the black cover before installing the CPU



2. There are three bayonets in the base of the motherboard and three bayonets in the CPU itself (red circle in the figure). Please align the left side of the CPU and then put it down.



3. as shown in the figure after installation



4. Put the wire buckle back down. At this time, the black cover will eject up automatically. Remember not to remove the black cover before installing the CPU



Figure 5.1: Visual guide for installing an LGA1151 CPU, showing the process of opening the socket, aligning the CPU, and securing it.

## 5.2 RAM (DDR4 SO DIMM) Installation

The motherboard supports DDR4 SO DIMM memory modules.

1. **Open Latches:** Gently push open the retention clips at both ends of the DDR4 memory slots.
2. **Align Module:** Align the notch on the DDR4 SO DIMM module with the key in the memory slot.
3. **Insert Module:** Press down firmly and evenly on both ends of the memory module until the retention clips snap into place, securing the module.
4. **Verify Installation:** Ensure the module is fully seated and the clips are locked.

### 5.3 Storage Device Installation (M.2 and SATA)

The motherboard supports both M.2 NVMe/NGFF SSDs and traditional SATA 3.0 hard drives/SSDs.

#### M.2 SSD Installation:

1. **Locate M.2 Slot:** Identify the M.2 slot on the motherboard.
2. **Insert SSD:** Gently insert the M.2 SSD into the slot at a 30-degree angle, ensuring the notch aligns.
3. **Secure SSD:** Push the SSD down and secure it with the provided screw.

#### SATA Device Installation:

1. **Connect SATA Cable:** Connect one end of a SATA data cable to a SATA 3.0 port on the motherboard and the other end to your SATA hard drive or SSD.
2. **Connect Power:** Connect a SATA power cable from your power supply unit (PSU) to the storage device.

### 5.4 Power Connections

Connect the main 24-pin ATX power connector and the 4-pin or 8-pin CPU power connector from your PSU to the corresponding ports on the motherboard.

### 5.5 Front Panel Connections

Connect the case's front panel cables (Power SW, Reset SW, Power LED, HDD LED, USB, Audio) to the corresponding headers on the motherboard as indicated in the Motherboard Interface Layout diagram (Figure 4.1). Pay close attention to polarity for LED connectors.

### 5.6 I/O Shield and SATA Cable

The motherboard package includes an I/O shield and a SATA data cable. The I/O shield is installed into your computer case before mounting the motherboard, providing protection and labeling for the rear ports. The SATA cable is used to connect storage devices.

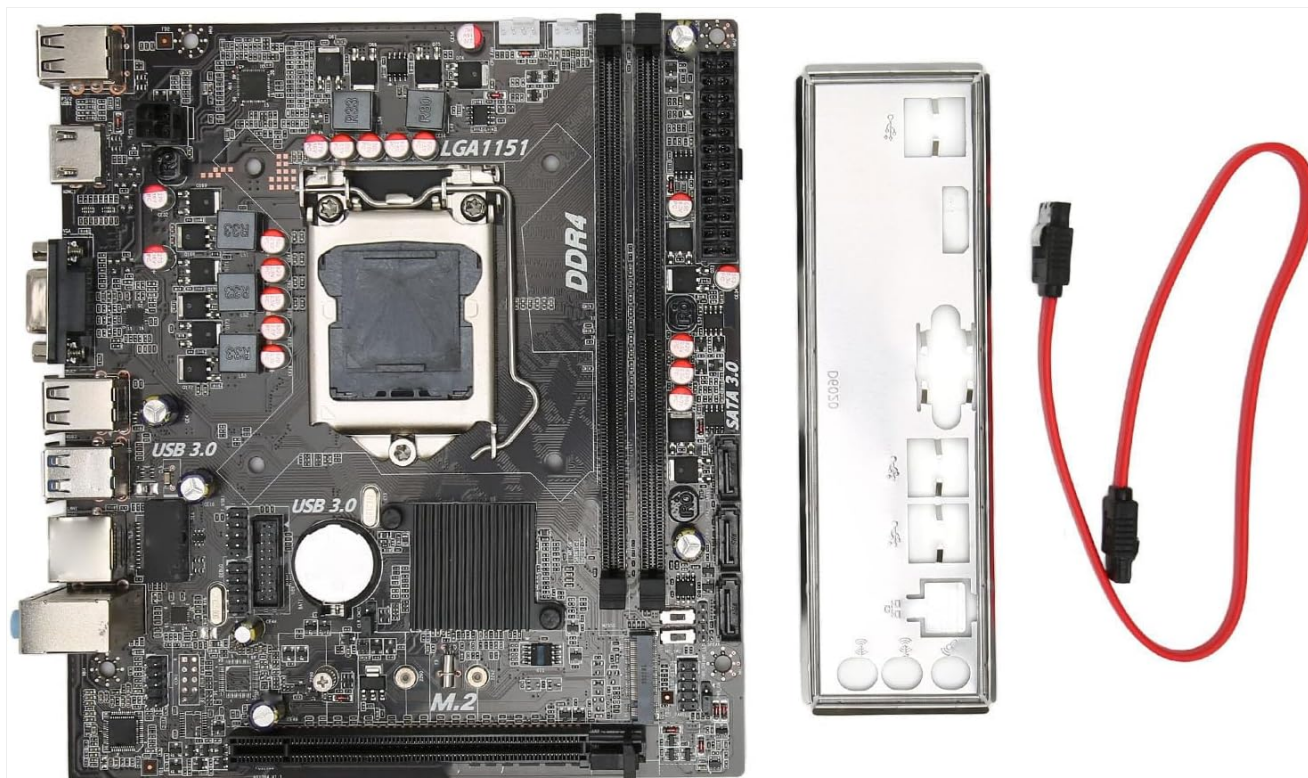


Figure 5.2: The GOWENIC H110B4 H110 Motherboard shown alongside its included I/O shield and a SATA data cable.

## 6. SPECIFICATIONS

Below are the detailed technical specifications for the GOWENIC H110B4 H110 Motherboard.

Feature	Specification
Brand	GOWENIC
Model Name	H110B4 (Item model number: GOWENIC6k9ep2zi7c)
CPU Socket	LGA 1151
Compatible Processors	Intel Core i5-6500, Intel Core i7-6700
Chipset Type	Intel H110
RAM Memory Technology	DDR4 SO DIMM
Memory Clock Speed	2133 MHz (Supports up to 64GB)
Storage Interface	SATA 3.0, M.2 (NGFF/NVME protocol, up to 32GB/s)
Video Output	HD Multimedia Interface, VGA
Compatible Devices	Personal Computer
Platform	Windows
Item Weight	1.23 pounds
Package Dimensions	10.94 x 10.12 x 2.28 inches

## 7. TROUBLESHOOTING

If you encounter issues with your motherboard, consider the following common troubleshooting steps:

- **No Power:** Ensure all power cables (24-pin ATX, CPU power) are securely connected from the PSU to the motherboard. Check the power supply unit itself.
- **No Display:** Verify that the monitor is connected to the correct video output (HD Multimedia Interface or VGA) on the motherboard or discrete graphics card. Reseat RAM modules and the graphics card (if applicable).
- **System Instability/Crashes:** Check RAM modules for proper seating. Test with one RAM module at a time. Ensure CPU cooler is properly installed and making good contact. Update BIOS (if possible and necessary, with caution).
- **Boot Device Not Found:** Check SATA and M.2 connections for storage devices. Verify boot order in BIOS/UEFI settings.
- **Peripheral Issues:** Ensure USB and other peripheral cables are correctly connected to the motherboard headers and external ports.

## 8. SAFETY INFORMATION

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Always observe the following safety precautions when handling computer components:

- **Static Electricity:** Always ground yourself before touching any components to prevent electrostatic discharge (ESD) damage. Use an anti-static wrist strap or touch a grounded metal object.
- **Power Off:** Ensure the computer is completely powered off and unplugged from the wall outlet before installing or removing any components.
- **Handle with Care:** Handle the motherboard and other components by their edges to avoid touching sensitive circuits.
- **Ventilation:** Ensure adequate ventilation within your computer case to prevent overheating.

## 9. WARRANTY AND SUPPORT

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For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official GOWENIC website. Keep your proof of purchase for warranty claims.