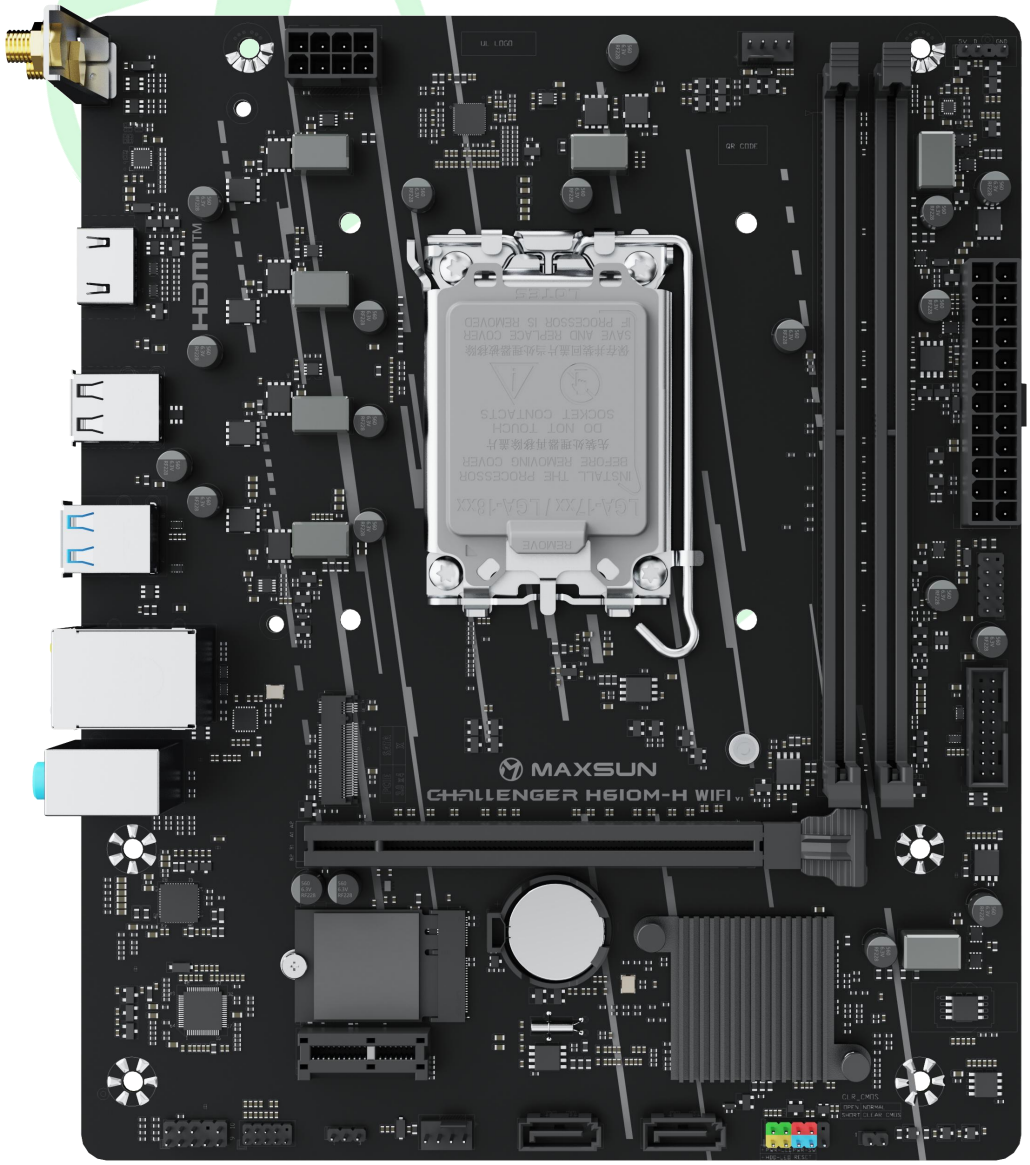
MS-Challenger H610M-H V1 WIFI

Manual

VER:A0

Edited on May 29, 2025

Chapter I Configuration Diagram of Mainboard



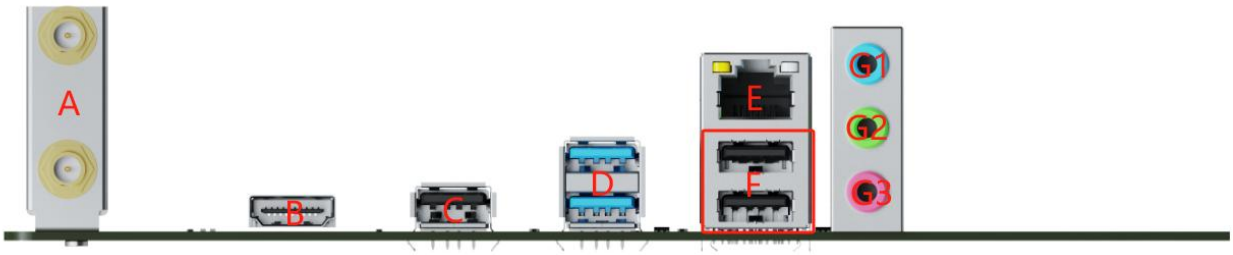
(This drawing is for reference only, and some details will be designed and adjusted according to the actual situation. Please refer to the material object, and our company reserves the right to interpret it.)

Chapter II Specifications

2.1 motherboard hardware specifications

Main board size	MicroATX(225*185mm)
CPU	Support LGA1700 slot 12th/13 th/14th generation processor Power Setting：PL1=55W PL2=65W 8s
chipset	Intel®H610 high-speed chipset
Memory	2 DIMM DDR4 memory slots The maximum support is 64GB. Support dual-channel memory technology Support 3200/2933/2666/2400/2133MHz memory frequency.
Display	Based on the display function with integrated graphics card processor, using shared display memory technology 1 HDMI 1.4 interface, up to support 4096x2160@30Hz Resolution (HDCP2.2 supported)
expansion interface	1 PCIE X16 4.0 slot 1 PCIE X1 3.0 slot Support AMD 、NVIDIA AND INTEL discrete graphics cards Support PCIE resizable bar technology (synchronization between CPU and graphics card is required)
audio	Integrated REALTEK ALC1220 sound card chip Support simultaneous output of front and rear channels (need to be set in HD audio controller) Rear audio interface: 1 rear onboard LINE IN interface, 1 rear onboard LINE OUT interface and 1 rear onboard MIC_IN microphone interface. F_AUDIO pin: 1 set of front microphone pin and 1 set of front audio output pin (these two pins are F_Aduio pin groups).
network	Integrated REALTEK 8111M network card chip (10/100/1000Mbit) 1x onboard RJ45 port, 1x RTL8821CE wireless network Support network wake-up Support PXE diskless and UEFI diskless boot.
storage	1 M.2 slot (only 2242/2280 PCIE X4/X2 3.0 channel SSD is supported) 2 SATA3.0 interfaces
USB	On-board rear interface: 2 USB3.2 GEN1 interfaces and 3 USB2.0 interfaces. On-board pins: 1 set (2) of USB2.0 pins and 1 set (2) of USB3.2 GEN1 pins.
In-board socket	1 24PIN motherboard ATX power supply interface 1 4PIN motherboard ATX 12V power supply interface with 12V input. 1 set of system fan pins, 1 set of CPU fan pins 1 set of chassis front control panel pins (F_PANEL)
Hardware	Voltage monitoring

monitoring	Temperature monitoring Fan monitoring Intelligent fan speed control (the motherboard has been supported, and the intelligent fan speed control also needs fan support)
operating system	Supports Windows10 64bit and Windows11 64bit. Support Ubuntu 64bit
ESD protection	Air discharge ± 8KV Level C ± 6KV Class B Contact discharge ± 6KV Level C ± 3KV Class B *Test with the complete machine grounded well
Packaging size	Net weight:400 g Size of the outer box: 510 *280 * 300mm FCL weight: 7.92KG



A: WiFi antenna interface

The WIFI interface is integrated with an RTL8821CE wireless network card, which supports Wi-Fi 5 and Bluetooth® 4.2

B: HDMI interface

HDMI1.4 interface, which supports up to 4096x2160@30Hz resolution (supports HDCP2.2), and is used to connect the HDMI display interface.

C: single-layer USB2.0 TYPE A interface

Up to support USB2.0 standard, but backwards compatibility USB1.1 standard. Used to connect USB TYPE A devices.

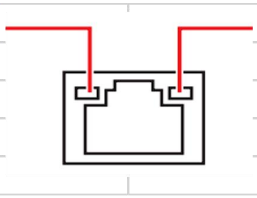
D: double-layer USB3.2 GEN1 interface

Maximum support for theoretical 5Gb speed transmission, which can meet the standards of backwards compatibility USB1.1 and USB2.0, and can be used to connect USB TYPE A devices.

E: RJ45 port

Network cable interface, used to connect the host system to the network with the network cable, maximum bandwidth 1000Mbps.

Activity Link LED	
Status	Description
Off	No link
Yellow	Linked
Blinking	Data activity



Speed LED	
Status	Description
Off	10Mbps connection
Green	100Mbps connection
Orange	1000Mbps connection

F: double-layer USB2.0 TYPE A interface

Up to support USB2.0 standard, but backwards compatibility USB1.1 standard. Used to connect USB TYPE A devices.

G1: Audio-in interface (blue)

Which is use for receiving audio input equipment, such as a mobile phone.

G2: audio-out interface (light green)

Used to access audio output devices, such as headphones, speakers and other external devices.

G3: audio-microphone connector (pink)

Used to access audio input devices, such as microphones and other radio equipment.

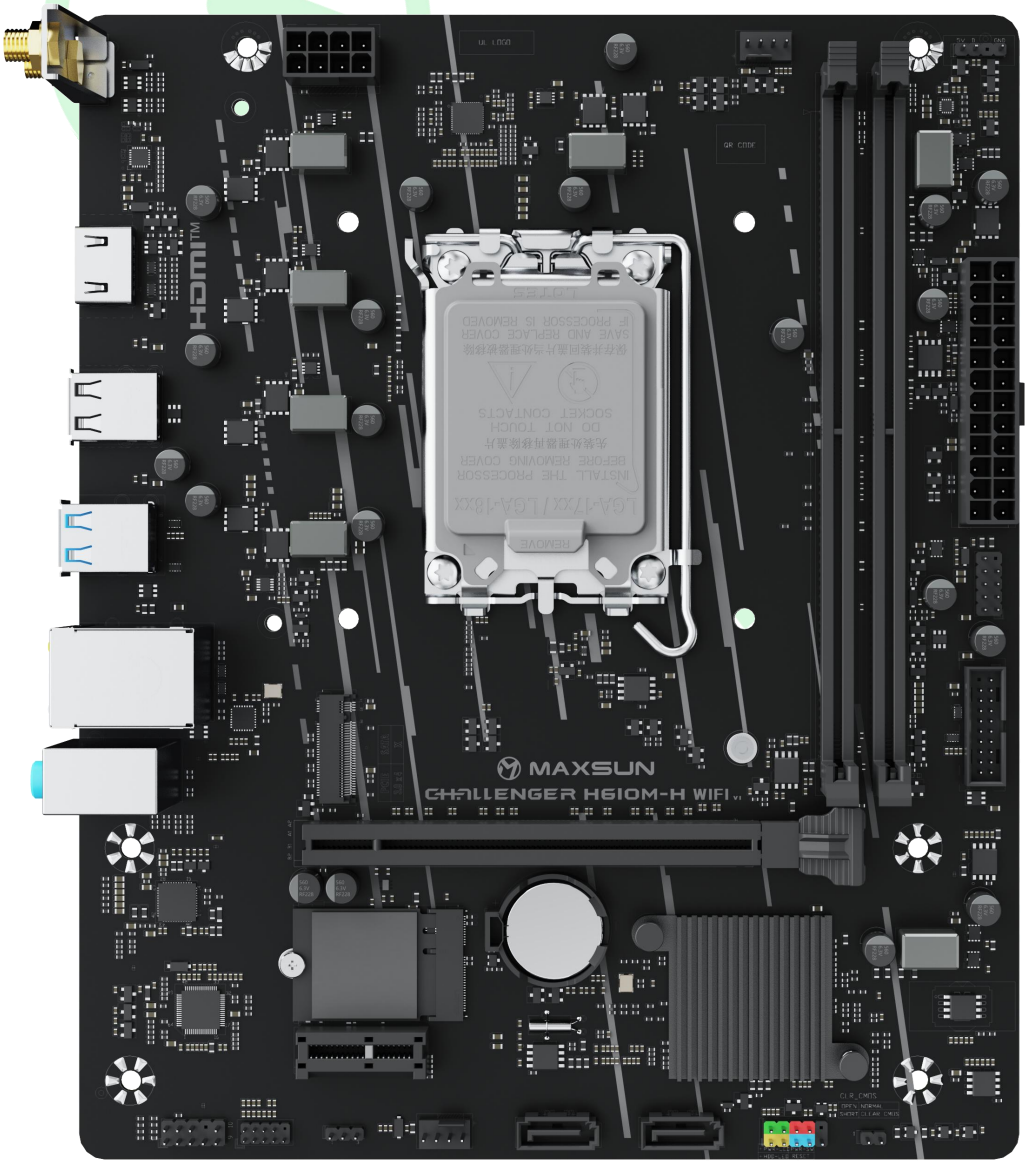
MS-Challenger H610M-H V1 WIFI

使用手册

VER:A0

编辑时间：2025 年 05 月 29 日

主板配置图



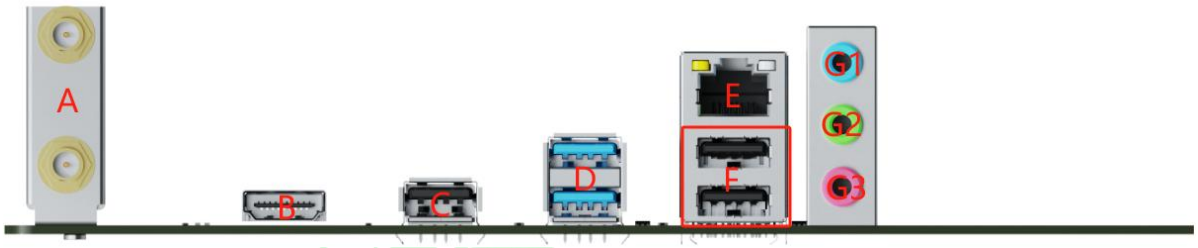
（此图仅供参考，部分细节会根据实际情况设计调整，请以实物为准，我司保留解释权）

第二章 规格

2.1、主板硬件规格

主板尺寸	MicroATX(225*185mm)
CPU	支持 LGA1700 插槽 第 12 代,13 代，14 代处理器 功耗设定：PL1=55W PL2=65W 8s
芯片组	Intel®H610 高速芯片组
内存	2 个 DIMM DDR4 内存槽 最高支持共 64GB 支持双通道内存技术 支持 3200/2933/2666/2400/2133MHz 内存频率
显示	基于具备集成显卡处理器的显示功能，采用共享显示内存技术 1 个 HDMI1.4 接口，最高支持 4096x2160@30Hz 分辨率（支持 HDCP2.2）
扩展接口	1 个 PCIEX16 4.0 插槽 1 个 PCIEX1 3.0 插槽 支持 AMD、Nvidia 和 INTEL 独立显卡 支持 PCIE resizable bar 技术（需 CPU 和显卡同步支持）
音频	集成 REALTEK ALC1220 声卡芯片 支持前后声道同时输出（需要高清音频控制器中设置） 后置音频接口：1 个后置板载 LINE IN 接口，1 个后置板载 LINE OUT 接口，一个后置板载 MIC_IN 麦克风接口。 F_AUDIO 插针： 1 组前置麦克风插针，1 组前置音频输出插针（此 2 个插针为 F_Aduio 插针组）
网络	集成 REALTEK8111M 网卡芯片(10/100/1000Mbit) 1 个板载 RJ45 接口，1 个 RTL8821CE 无线网卡 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	1 个 M.2 插槽（仅支持 2242/2280 PCIE X4/X2 3.0 通道 SSD） 2 个 SATA3.0 接口
USB	板载后置接口：2 个 USB3.2 GEN1 接口，3 个 USB2.0 接口 板内插针：1 组（2 个）USB2.0 插针， 1 组（2 个）USB3.2 GEN1 插针
板内插座	1 个 24PIN 主板 ATX 供电接口 1 个 4PIN 主板 ATX 12V 供电接口，12V 输入 1 组系统风扇插针、1 组 CPU 风扇插针 1 组机箱前置控制面板插针（F_PANEL）
硬件监控	电压监测 温度监测 风扇监测 智能风扇控速（主板已作支持，智能风扇控速也需风扇支持）
操作系统	支持 Windows10 64bit， Windows11 64bit 支持 Ubuntu 64bit

ESD 防护	空气放电 ± 8KV C 级 ±6KV B 级 接触放电 ± 6KV C 级 ± 3KV B 级 *整机接地良好的情况下测试
包装尺寸	单板重量：400g 外箱尺寸：510*280*300mm 整箱重量：7.92KG



A：WiFi 天线接口

WIFI 接口内部集成了 RTL8821CE 无线网卡，支持 Wi-Fi5 与 Bluetooth® 4.2

B:HDMI 接口

HDMI1.4 接口，最高支持 4096x2160@30Hz 分辨率（支持 HDCP2.2），用于连接 HDMI 显示器接口。

C：单层 USB2.0 TYPE A 接口

最高支持 USB2.0 标准，可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

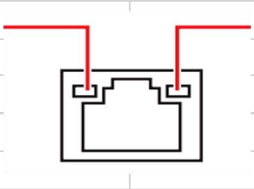
D：双层 USB3.2 GEN1 接口

最高支持理论 5Gb 速度传输，可向下兼容 USB1.1、USB2.0 标准,用于连接 USB TYPE A 设备。

E：RJ45 接口

网线接口，用于接入网线将主机系统链接到网络，最高带宽 1000Mbps。

运行指示灯	
状态	描述
关闭	无链接
黄色	已链接
闪烁	数据传输



速度指示灯	
状态	描述
关闭	10Mbps 连接
绿色	100Mbps 连接
橙色	1000Mbps 连接

F：双层 USB2.0 TYPE A 接口

最高支持 USB2.0 标准，可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

G1：Audio-in 接口(蓝色)

用于接收音频输入设备，如手机音频输入。

G2：Audio-out 接口（浅绿色）

用于接入音频输出设备，如耳机、音箱等外放设备。

G3：Audio-麦克风接口（粉红色）

用于接入音频输入设备，如麦克风等收音设备。

铭瑄科技 Maxsun Technology