

# SY- Challenger H610M-D

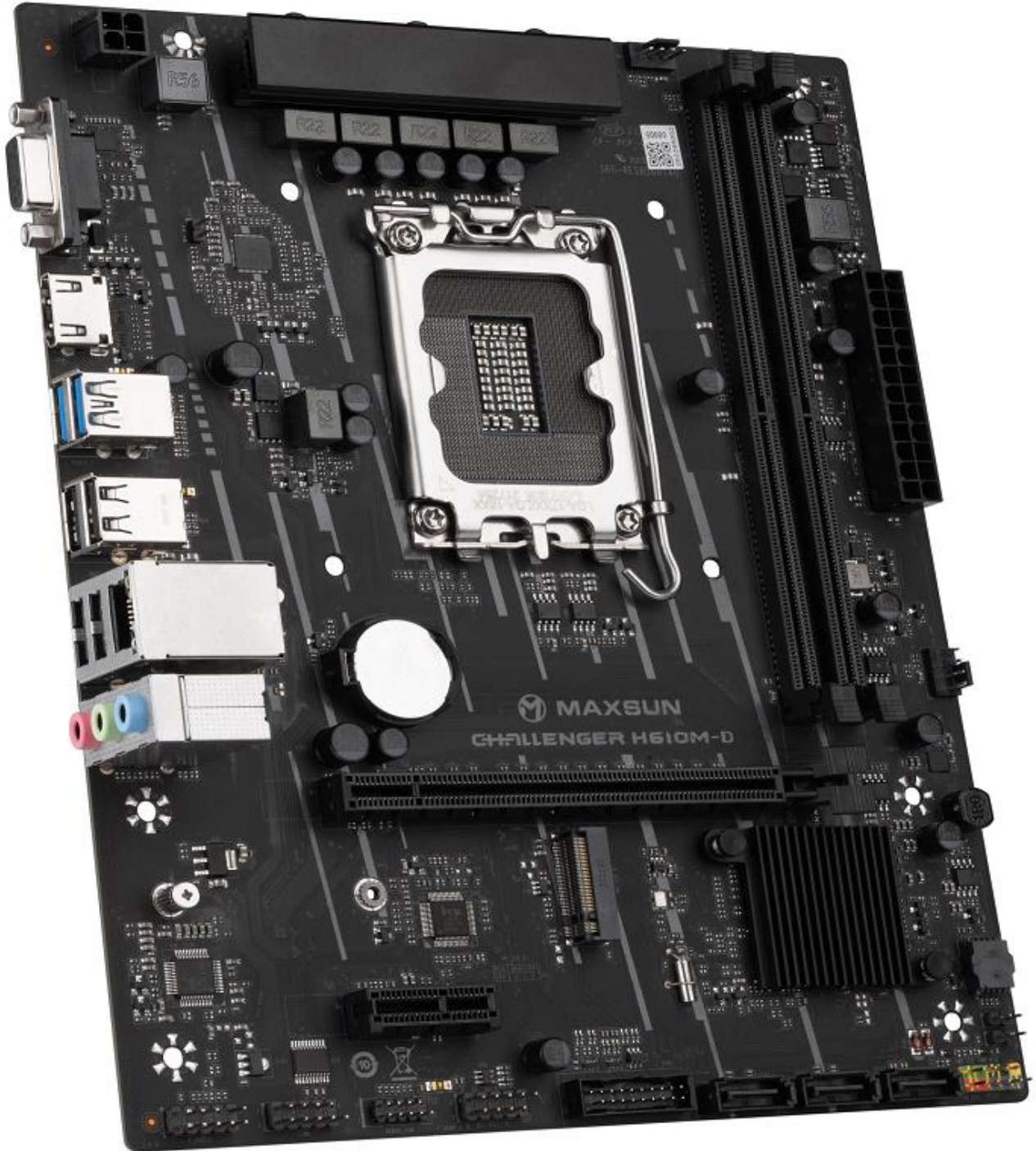
**Manual**

VER:A0

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Editorial Department: Technical Department of Shangke Group

## Chapter I Configuration Diagram of Mainboard



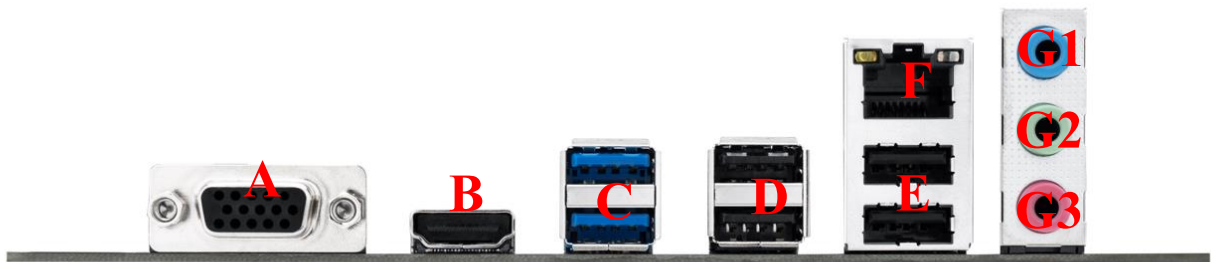
(This drawing is for reference only, and some details will be designed and adjusted according to the actual situation. Please refer to the material object, and our company reserves the right to interpret it.)

# Chapter II Specifications

## 2.1 motherboard hardware specifications

Mainboard size	MicroATX(225*180mm)
CPU	Support LGA1700 slot 12th/13th generation processor (CPU overclocking technology is not supported) TDP: 65W
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.
expansion interface	1 PCIE X16 4.0 slot 1 PCIE X1 3.0 slot Support AMD and NVIDIA discrete graphics cards and Taipower DG1 discrete graphics cards.
audio	Integrated ALC897 sound card chip Support simultaneous output of front and rear channels 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_Audio pin groups).
network	Integrated Realtek 8111H network card chip (10/100/1000Mbit) 1 onboard RJ45 interface Support network wake-up Support PXE diskless and UEFI diskless boot.
storage	1 M.2 X4 3.0 slot (supporting 2242/2280 PCIE X4/X2 channel SSD) 3 SATA3.0 interfaces
USB	On-board rear interface: 2 USB3.2 GEN1 interfaces and 4 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/8PIN motherboard ATX 12V power supply interface with 12V input. 1 COM_A pin 1 debug pin 1 burning pin 1 CLR_CMOS pin 1 sets of system fan pins and 1 set of CPU fan pins (supporting intelligent fan adjustment) 1 set of chassis front control panel pins (F_PANEL)
Hardware monitoring	Voltage 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	Support UEFI Windows10 64bit, UEFI Windows11 64bit. Support Ubuntu 64bit
ESD protection	Air discharge $\pm$ 8KV Level C $\pm$ 6KV Class B Contact discharge $\pm$ 6KV Level C $\pm$ 3KV Class B *Test with the complete machine grounded well



**A:VGA interface**

Supports up to 1920x1080@60Hz resolution, which is used to connect monitors.

**B: HDMI interface**

Supports up to 4096x2160@30Hz resolution (HDMI2.0 version 2.0 and HDCP2.2), which is used to connect monitors.

**C: double-layer USB3.2 GEN1 TYPE A interface.**

The maximum support theory is 5Gb speed transmission, which can meet the backwards compatibility USB1.1 standard and be used to connect USB TYPE A devices.

**D: double-layer USB2.0 TYPE A interface**

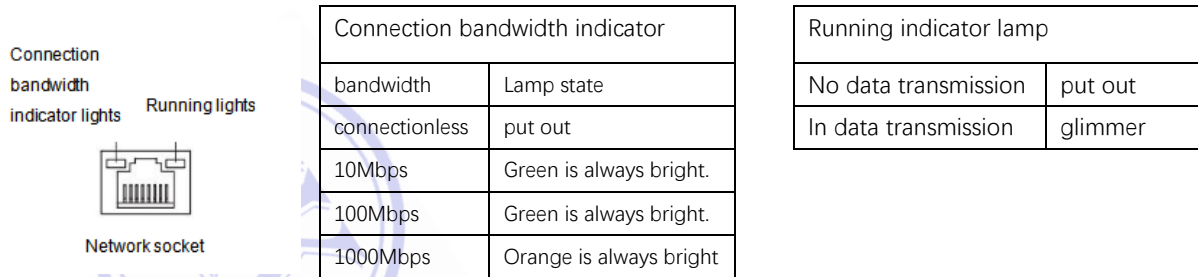
Up to support USB2.0 standard, but backwards compatibility USB1.1 standard. Used to connect USB TYPE A devices.

**E: 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.

F: RJ45 interface

Network cable interface, which is used to access the network cable to link the host system to the network, with a maximum bandwidth of 1000Mbps.



G1: LINE IN interface (blue)

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

G2: line 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-挑战者 H610M-D

使用手册

VER:A0

SHANGKE GROUP

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# 第一章 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)

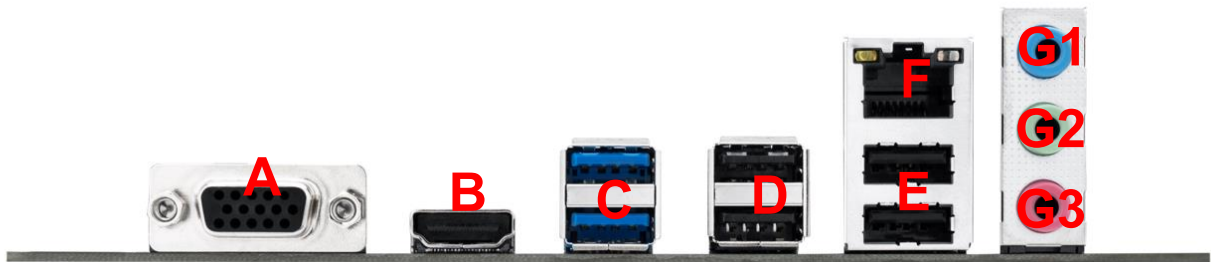
## 第二章 规格

### 2.1、主板硬件规格

主板尺寸	MicroATX (225*180mm)
CPU	支持 LGA1700 插槽 第 12/13 代处理器 (不支持 CPU 超频技术) TDP: 65W
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
扩展接口	1 个 PCIEX16 4.0 插槽 1 个 PCIEX1 3.0 插槽 支持 AMD 和 NVidia 独立显卡、台电 DG1 独立显卡
音频	集成 ALC897 声卡芯片 支持前后声道同时输出 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_Audio 插针组)
网络	集成 Realtek8111H 网卡芯片 (10/100/1000Mbit) 1 个板载 RJ45 接口 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	1 个 M.2 X4 3.0 插槽 (支持 2242/2280 PCIe X4/X2 通道 SSD) 3 个 SATA3.0 接口
USB	板载后置接口: 2 个 USB3.2 GEN1 接口, 4 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/8PIN 主板 ATX 12V 供电接口, 12V 输入 1 个 COM_A 插针 1 个 debug 插针 1 个烧录插针 1 个 CLR_CMOS 插针 2 组系统风扇插针、1 组 CPU 风扇插针 (支持智能风扇调节) 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 UEFI Windows10 64bit, UEFI 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



**A: VGA 接口**

最高支持 1920x1080@60Hz 分辨率, 用于连接显示器。

**B: HDMI 接口**

最高支持 4096x2160@30Hz 分辨率 (HDMI 2.0 版本及 HDCP 2.2), 用于连接显示器。

**C: 双层 USB3.2 GEN1 TYPE A 接口**

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

**D: 双层 USB2.0 TYPE A 接口**

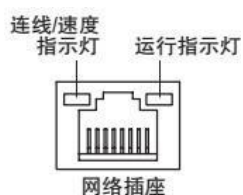
最高支持 USB2.0 标准, 可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

**E: 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。

**F: 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。



连接带宽指示灯	
带宽	灯状态
无连接	灭
10Mbps	绿色常亮
100Mbps	绿色常亮
1000Mbps	橙色常亮

运行指示灯	
无数据传输	灭
数据传输中	闪烁

G1: LINE IN 接口 (蓝色)

用于接收音频输入设备, 如手机音频输入。

G2: LINE 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。

