

MS-Challenger H610M

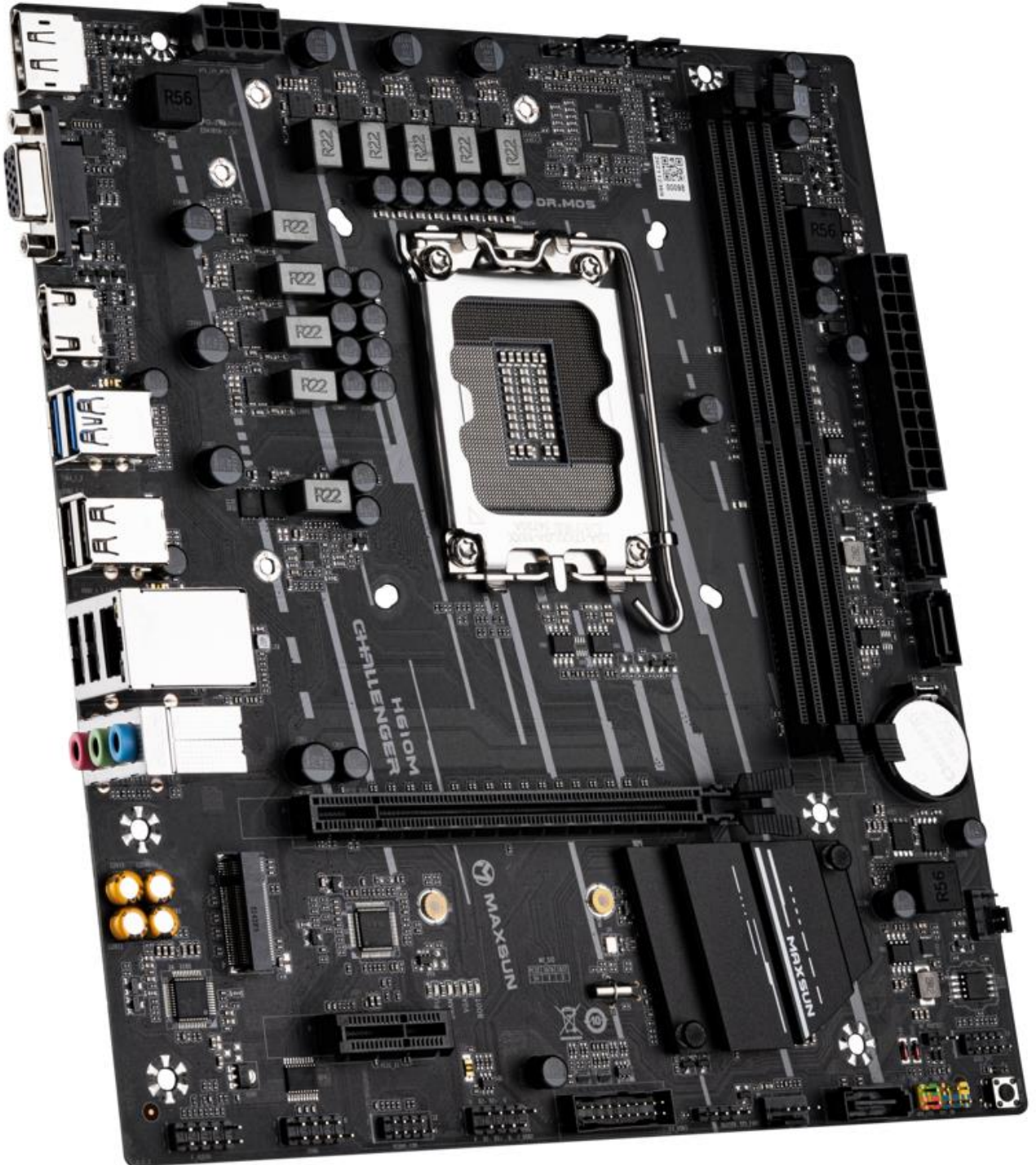
Manual

VER:A0

Editorial time: October 19,2022

Editorial Department: Technology Department

Chapter I Mainboard configuration diagram



(This drawing is for reference only, and some details will be designed and adjusted according to the actual situation. Please take the physical object, and our company reserves the right of interpretation)

Chapter II Specifications

2.1 Motherboard hardware specifications

Main board size	MicroATX(225*205mm)
CPU	Support for LGA 1700 slots 12th generation processor (CPU overclocking technology is not supported) TDP: 95W
chipset	Intel ® H610 High-speed chipset
memory	2 DIMM DDR4 memory slots The maximum support total is 64GB Support for dual-channel memory technology Support for 3200 / 2933 / 2666 / 2400 / 2133 MHz
display	Based on the display function of the integrated graphics card processor, the shared display memory technology is adopted 1 HDMI 1.4 port with up to 4096x2160@30Hz resolution (HDMI version 2.0 and HDCP 2.2) 1 VGA interface with maximum support of 1920 * 1080@60Hz resolution 1 DP1.2 interface, up to 7680x4320 @30Hz resolution
extended interface	1 PCIEX16 4.0 slot, 1 PCIEX 1 3.0 slot Support for AMD and NVIDIA independent graphics card, support for PCIe resizable bar technology (need CPU and graphics card synchronization support)
audio	Integrated ALC897 sound card chip Support the simultaneous output of the front and rear sound channels Rear audio interface: 1 rear on-board LINE IN interface, 1 rear on-board LINE OUT interface, and 1 rear on-board MIC_ IN microphone interface F_A UDIO pin: 1 set of front microphone pins and 1 set of front audio output pins (the 2 pins are F_Audio pins) Group 1 of 4pin horn SPEAKER pins
network	Integrated Realtek8111H Network Card chip (10 / 100 / 1000 Mbit) 1 onboard RJ45 interface Support network arousal Support PXE no disk, UEFI no disk guide
storage	1 M.2 X4 3.0 slot (only supports 2242/2280 PCIe X4/X2 channel SSD) 3 SATA 3.0 interfaces
USB	On-board rear interface: 2 USB3.2 GEN 1 interfaces and 4 USB2.0 interfaces In board pins: 1 group (2) of USB2.0 pins, 1 group (2) of USB3.2 GEN1 pins
Inside board socket	1 24PIN motherboard ATX power supply interface 1 8PIN motherboard ATX 12V power supply interface, 12V input 1 COM_A pin 2 groups of system fan pins and 2 groups of CPU fan pins (except PUMP pins support intelligent fan adjustment)

	1 set of CLR _ CMOS button 1 Debug pin insert 1 Bios burning needle 1 ME protection pin 1 group chassis front control panel pin (F_PANEL)
Hardware monitoring	Voltage monitoring temperature monitoring Fan monitoring Intelligent fan speed control (the main board has been supported, the intelligent fan speed control also needs fan support)
operating system	Support for U EIF Windows 10 64bit, UEFI Windows 11 64bit Support for Ubuntu 64bit
ESD protect	Air discharge ± 8 KV Class C ± 6 KV for grade B Contact discharge is ± 6 KV Class C ± 3 KV Grade B * Test of the whole machine under good grounding



A: DP interface

DP1.2 interface, up to 4096x2160@60Hz resolution, used to connect the DP display interface.

B:VGA interface

Up to 1920x1080@60Hz resolution support for connecting the display.

C: HDMI interface

Up to 4096x2160@30Hz resolution (HDMI version 2.0 and HDCP 2.2), for connecting the display.

D: Double-layer USB3.2 GEN1 TYPE A interface

Up to support theoretical 5Gb speed transmission, downward compatible with USB1.1 standard, for connecting USB TYPE A devices.

E: Double-layer USB2.0 TYPE A interface

Up to the USB2.0 standard support, downward compatible with the USB1.1 standard. For connecting to the USB TYPE A devices.


F: Double-layer USB2.0 TYPE A interface

Up to the USB2.0 standard support, downward compatible with the USB1.1 standard. For connecting to the USB TYPE A devices.

G: RJ45 interface

Network cable interface, used to access the network cable to link the host system to the network, with a maximum bandwidth of 1000M bps.

Connection
bandwidth
indicator lights



Running lights

Network socket

Connect the bandwidth indicator light	
tape width	The lamp state
connectionless	go out
10M bps	Green is always bright
100M bps	Green is always bright
1000M bps	Orange is always bright

Run the indicator light	
No data transmission	go out
In data transmission	twinkle

H1: LINE IN interface (blue)

For receiving audio input devices, such as mobile phone audio input.

H2: LINE OUT interface (light green)

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

H3: Audio-Microphone interface (pink)

For accessing audio input devices, such as microphone and other radio devices.



MS-挑战者 H610M

使用手册

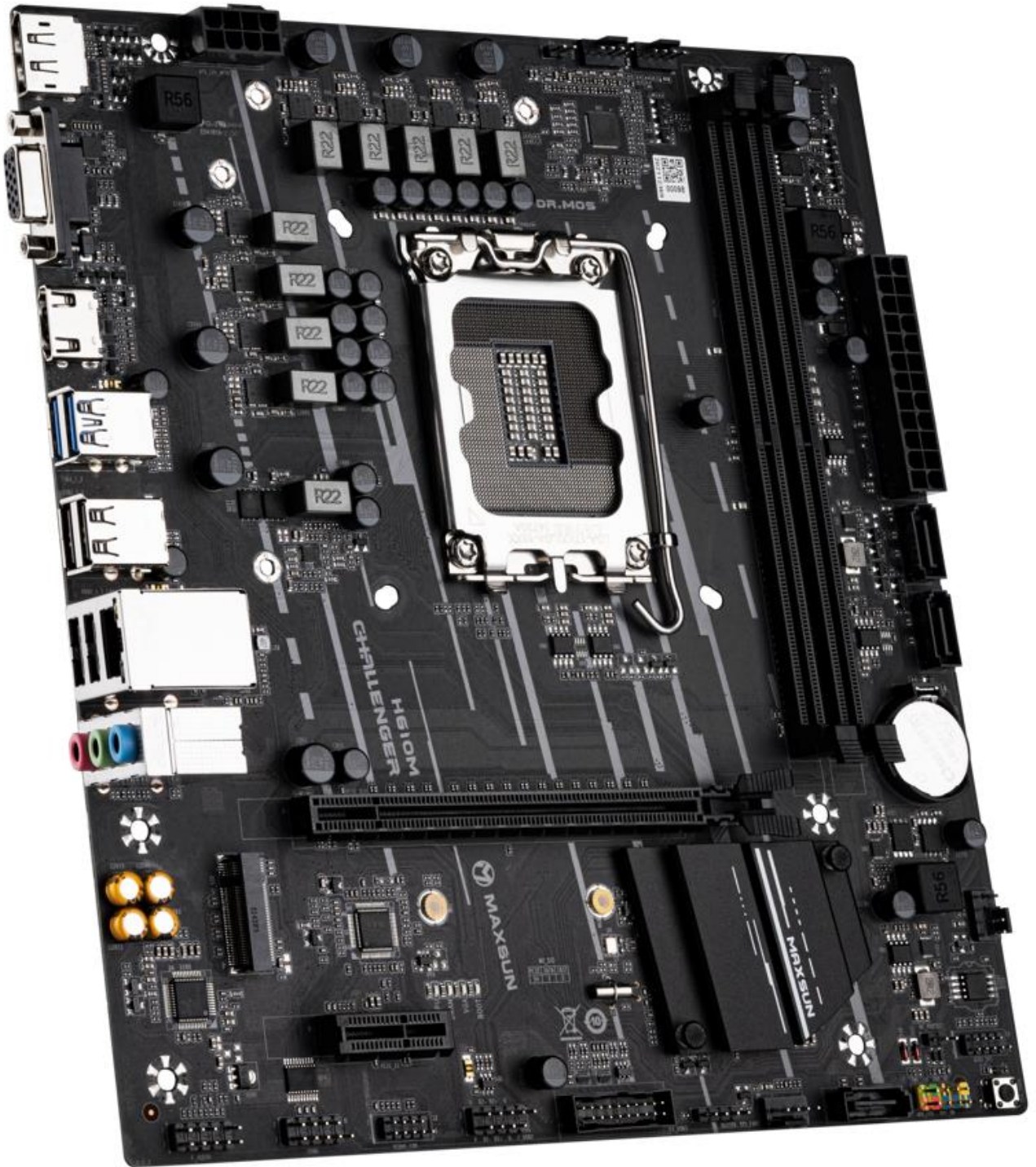
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SHANGKE GROUP

编辑时间：2022 年 10 月 19 日

编辑部门：商科集团技术部

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*205mm)
CPU	支持 LGA1700 插槽 第 12 代处理器 (不支持 CPU 超频技术) TDP: 95W
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
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 (HDMI2.0 版本及 HDCP2.2) 1 个 VGA 接口, 最高支持 1920*1080@60Hz 分辨率 1 个 DP1.2 接口, 最高支持 7680x4320 @30Hz 分辨率
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、支持 PCIe resizable bar 技术 (需 CPU 和显卡同步支持)
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) 1 组 4pin 喇叭 SPEAKER 插针
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 (紧支持 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 8PIN 主板 ATX 12V 供电接口, 12V 输入 1 个 COM_A 插针 2 组系统风扇插针、2 组 CPU 风扇插针 (除 PUMP 插针外都支持智能风扇调节) 1 组 CLR_CMOS 按钮 1 个 Debug 插针 1 个 Bios 烧录插针 1 个 ME 保护插针

	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 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: DP 接口接口

DP1.2 接口, 最高支持 4096x2160@60Hz 分辨率, 用于连接 DP 显示器接口。

B: VGA 接口

最高支持 1920x1080@60Hz 分辨率, 用于连接显示器。

C: 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。

D: 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。

E: 双层 USB2.0 TYPE A 接口

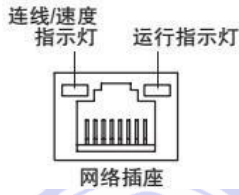
最高支持 USB2.0 标准, 可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

F: 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。

G: 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。



带宽	灯状态
无连接	灭
10Mbps	绿色常亮
100Mbps	绿色常亮
1000Mbps	橙色常亮

无数据传输	灭
数据传输中	闪烁

- H1: LINE IN 接口 (蓝色)
用于接收音频输入设备, 如手机音频输入。
- H2: 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。
- H3: 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。

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