MS-Challenger H510M-R

Manual

VER:A1.0

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# 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

Mainboard size	MicroATX (215*170mm)
CPU	Support for LGA 1200 slots 10th generation and 11th generation processors (CPU overclocking technology is not supported) TDP: 65W
chipset	Intel ® H510 High-speed chipset
memory	2 DIMM DDR4 memory slots The maximum support in total is 64GB Support for dual-channel memory technology Support for 3200 / 2933 / 2666 / 2400 / 2133 MHz
extended interface	1 PCIE X16 4.0 slot 1 PCIE X1 3.0 slot Support for AMD and NVIDIA independent graphics cards
audio	Integrated ALC897 sound card chip Supports 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_Aduio pins) Group 1 with 4pin horn SPEAKER pins
network	Integrated Realtek8111H Network Card chip (10 / 100 / 1000 Mbit) 1 onboard RJ 45 interface Support network arousal Support PXE no disk, UEFI no disk guide
storage	1 M.2 X4 3.0 slot (supports 2242/2280 PCIE X4/X2 channel SSD) Four SATA3.0 interfaces
USB	On-board rear interface: 2 USB 3.2 GEN 1 ports and 4 U SB2.0 ports Plate insert: 1 (2) U SB2.0 pins, 1 (2) USB 3.2 GEN 1 pins
Inside board socket	124 PIN motherboard ATX power supply interface 18 PIN motherboard ATX 12V power supply interface, 12V input 2 sets of system fan pins and 1 group of CPU fan pins (support intelligent fan adjustment) 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 UEFI Windows 10 64bit, UEFI Windows 11 64bit
	Support for Ubuntu 64bit
ESD protect	Air discharge ± 8 KV Class C ± 6 KV of grade B Contact discharge is ± 6 KV Class C ± 3 KV Grade B * Test of the whole machine under good grounding
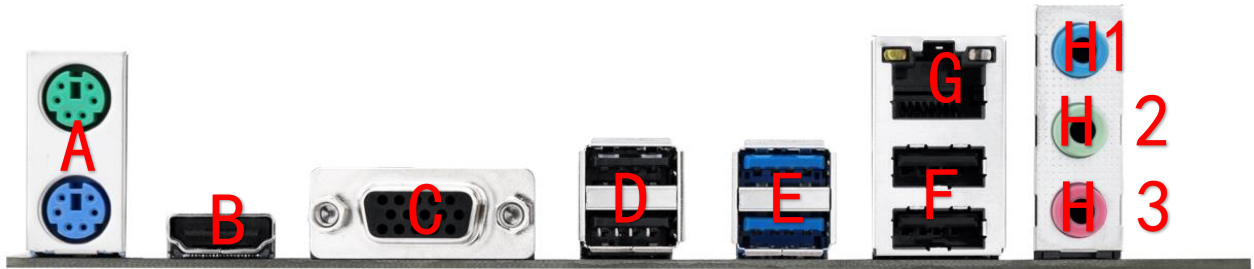
A: PS/2 interface

    A keyboard and a human mouse for connecting the PS / 2 interface

B: HDMI interface

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

C:VGA interface

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

D: 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.

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

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

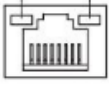F: Double-layer USB2.0 TYPE A interface

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

G: The 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 H510M-R

使用手册

**VER：A0**

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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(215*170mm)
CPU	支持 LGA1200 插槽 第 10 代和第 11 代处理器（不支持 CPU 超频技术） TDP：65W
芯片组	Intel®H510 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
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_Aduio 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（支持 2242/2280 PCIE X4/X2 通道 SSD） 4 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 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 UEIF Windows10 64bit，UEFI Windows11 64bit

ESD 防护	支持 Ubuntu 64bit
	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
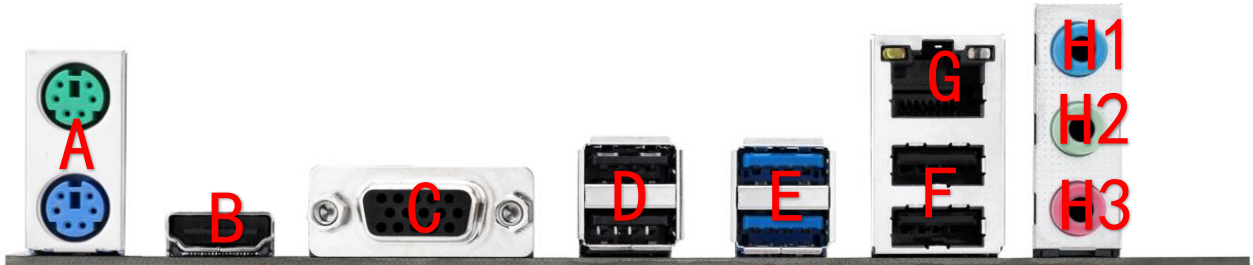
A：PS/2 接口
　　用于连接 PS/2 接口的键盘和者鼠标

B：HDMI 接口
　　最高支持 4096x2160@30Hz 分辨率（HDMI2.0 版本及 HDCP2.2），用于连接显示器。

C：VGA 接口
　　最高支持 1920x1080@60Hz 分辨率，用于连接显示器。

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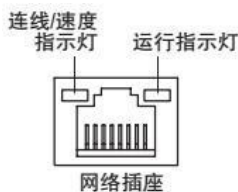　　最高支持 USB2.0 标准，可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

E：双层 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。

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。

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

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。