

MS-Challenger H810ITX WIFI

Specification

Ver A0

Edited on 2/08, 2025

Editing Department: Overseas Operations Department



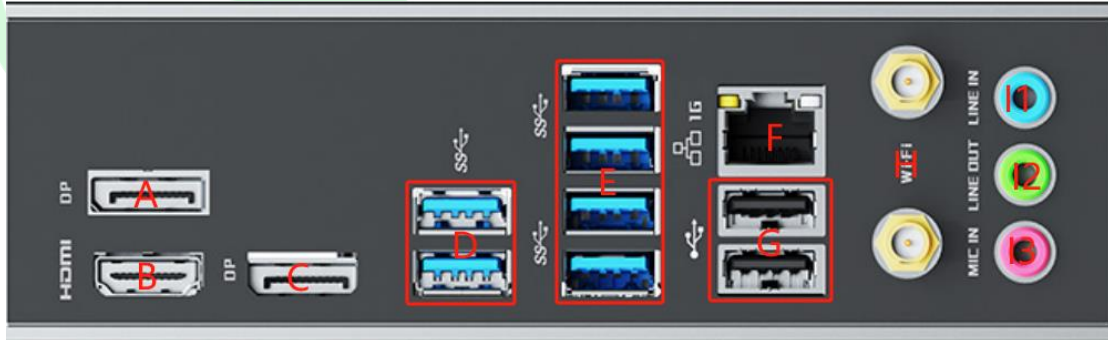
(This drawing is for reference only, some details will be adjusted according to the actual situation, please refer to the actual design, our company reserves the right to explain)

Motherboard Size	ITX 170mm x 170mm
CPU	Intel® LGA1851 slot for Intel® Core™ Ultra processor Intel Default: PL1:125W PL2:250W 56s Maxsun Default(BIOS Default Setting): PL1:188W PL2:250W 8s Performance: PL1:220W PL2:300W 8s
Chipset	Intel® H810 chipset
Memory (RAM)	2x DIMM DDR5, maximum capacity 96GB Dual channel memory architecture is supported Supports Intel® Extreme Memory Profile (XMP) Support 6400/5600/4800 MHz does not support ECC Memory
Display	2 x DisplayPort 1.2 display interface, support up to the specified 4K@60Hz 1 x HDMI™ 2.0 display interface with maximum 4K@60Hz support * Graphics specifications may vary for different CPU types, see www.intel.com * for more details
Extended Interface	From Intel® Core™ Ultra processor: 1 x PCIe X16 slot (supports PCIe 5.0X16 mode)
Audio	Realtek ALC897 HD audio codec Support simultaneous output of front and back channels (need to be set in HD audio controller) The rear is equipped with 3 audio ports: 1 rear on-board LINE IN interface, 1 rear on-board LINE OUT interface, 1 rear on-board MIC_IN microphone interface. F_AUDIO pin: 1 set of front microphone pins, 1 set of front audio output pins (These two pins are F_Audio pins)
Network	1 * Intel® I219V 1Gb Ethernet interface 1 * Intel® AX101 Wireless Card: supports Wi-Fi 6 and Bluetooth® v5.2 Support network wake-up Support PXE diskless, UEFI diskless boot
stockpile	A total of 2 * M.2 slots and 4 * SATA 6Gb/s interfaces are supported From Intel® H810 chipset: M.2_A slot (Key_M) : supports PCIe 5.0X4 /X2 mode and supports 2280 lengths M.2_B slot (Key_M) : supports PCIe 4.0X4 /X2 mode and supports 2280 lengths 4 * SATA 6Gb/s interface
USB	Onboard USB (4 ports) : 1 * USB 5G 19Pin pin, supports 2 additional USB 5G ports 1 * USB 2.0 9Pin, supports 2 additional USB 2.0 ports Rear USB (total 8 ports) : 4 * USB 10G Type-A interface



	<ul style="list-style-type: none">2* USB 10G Type-A interface2* USB 2.0 Type-A interface
I/O Panel	<ul style="list-style-type: none">2 * DisplayPort 1.21 * HDMI™ 2.01 * CLR_CMOS shortcut button4 * USB 10G Type-A interface2 * USB 10G Type-A interface2* USB 2.0 Type-A interface1 * Intel® 1Gb Ethernet interface1 * Wi-Fi antenna interface3 * Audio jack
Hardware monitoring	<ul style="list-style-type: none">Voltage monitoringTemperature monitoringFan monitoringIntelligent fan speed control (supported by the motherboard, intelligent fan speed control also requires fan support)
Operating system	<ul style="list-style-type: none">Supports Windows11 64bitIt supports Ubuntu 64bit
ESD protection	<ul style="list-style-type: none">Air discharge ± 8KV C level±4KV class BContact discharge ± 6KV C level± 4KV class B* Test the whole machine under the condition of good grounding
In-board I/O ports	<ul style="list-style-type: none">Power related interface1 *24 Pin ATX power connector2 * 8 Pin +12V power connectorFan related interface1 * 4 Pin CPU fan connector1 * 4 Pin PUMP connector (support DC speed regulation)1 * 4 Pin case fan connectorStorage related interfaces2 * M.2 slots (Key_M)4 * SATA 6Gb/s interfaceOnboard USB interface1 * USB 5G 19Pin pin, supports 2 additional USB 5G ports1 * USB 2.0 9Pin, supports 2 additional USB 2.0 portsOther interfaces1 * 3 Pin ARGB interface1 * COM port connection pin1 * 4pin Buzzer1 * Front panel audio interface1 * 10-1 Pin system panel interface1 * CLR_CMOS reset pin1 * TPM port connection pin
Features	<ul style="list-style-type: none">Distributed Debug lightsMaxsun Sync lighting controlCLR_CMOS shortcut buttonResizable bar technique

Packaging specification	Color box size: 240*206*58.5mm
	Net weight: 0.64 kg
	Gross weight: 0.925kg
	Outer box size: 505*435*337mm
	FCL weight: 18.5kg
	Packing quantity: 20PCS



A: DP interface

The highest support supports the provisions of 4K@60Hz, can support audio and video output at the same time.

B: HDMI interface

The highest support supports the provisions of 4K@60Hz, can support audio and video output at the same time.

C: DP interface

The highest support supports the provisions of 4K@60Hz, can support audio and video output at the same time.

D: Double layer USB 10G Type-A interface

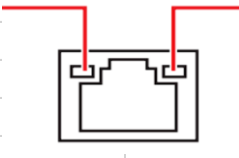
It supports up to 10Gb speed transmission, and is compatible with USB1.1 and USB2.0 standards. It is used to connect USB TYPE A devices.

E: Four-layer USB 10G Type-A interface

It supports up to 10Gb speed transmission, and is compatible with USB1.1 and USB2.0 standards. It is used to connect USB TYPE A devices.

F: RJ45 network cable interface

Used for access network cable to connect the host system to the network, the maximum bandwidth of 1000Mbps.

Activity Link LED			Speed LED	
Status	Description		Status	Description
Off	No link	Off	10Mbps connection	
Yellow	Linked	Green	100Mbps connection	
Blinking	Data activity	Orange	1000Mbps/2.5Gbps connection	

G: Double layer USB 2.0 Type-A interface

Supports up to USB 2.0 standard, backward compatible with USB 1.1 standard. For connecting USB TYPE A devices.

H: WiFi antenna interface

The WIFI interface is integrated with Intel[®] AX101 wireless network card, which supports Wi-Fi 6 and Bluetooth[®] 5.2. The corresponding driver must be installed correctly to use it normally.

I1: Audio-in interface (blue)

Used to receive audio input devices, such as mobile phone audio input.

I2: Audio-out interface (light green)

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

I3: Audio-Microphone interface (pink)

It is used to access audio input devices such as radio devices such as microphones.



MS-Challenger H810ITX WIFI

使用手册

VER:A0

编辑时间：2025 年 02 月 08 日

编辑部门：商科集团产品部

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

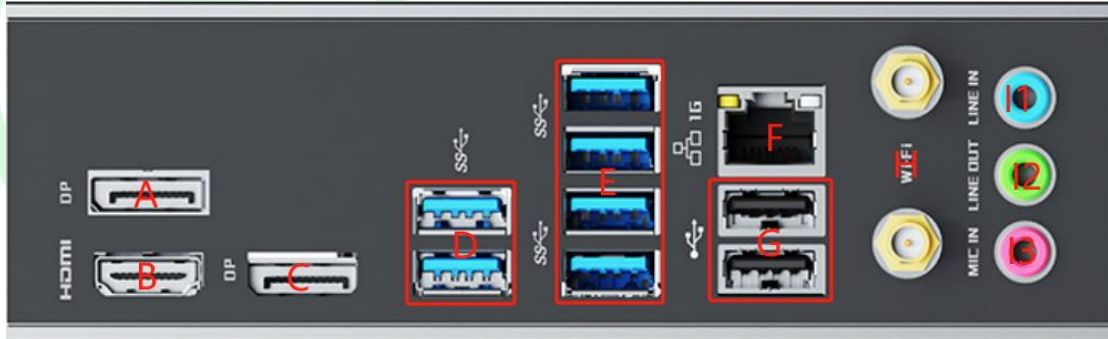
2.1、主板硬件规格

主板尺寸	ITX 板型 170mm x 170mm
CPU	英特尔® LGA1851 插槽, 适用于英特尔® 酷睿™ Ultra 处理器 英特尔默认: PL1:125W PL2:250W 56s 铭瑄推荐(BIOS 默认设置): PL1:240W PL2:240W 8s 极致性能: PL1:250W PL2:300W 8s
芯片组	英特尔® H810 芯片组
内存	2x DIMM DDR5, 最大容量 96GB 支持双通道内存架构 支持 Intel® Extreme Memory Profile (XMP) 支持 6400/5600/4800 MHz 不支持 ECC Memory
显示	2 x DisplayPort 1.2 显示接口, 支持规定的最高 4K@60Hz 1 x HDMI™ 2.0 显示接口, 支持规定的最高 4K@60Hz * 不同类型 CPU 的图形规格可能有所不同, 详情请参阅 www.intel.com *
扩展接口	来自英特尔® 酷睿™ Ultra 处理器 : 1 x PCIe X16 插槽 (支持 PCIe 5.0 X16 模式)
音频	Realtek ALC897 高清音频编解码器 支持前后声道同时输出 (需要高清音频控制器中设置) 后置配备 3 个音频接口: 1 个后置板载 LINE IN 接口, 1 个后置板载 LINE OUT 接口, 1 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	1 *英特尔® I1219V 1Gb Ethernet 接口 1 *英特尔® AX101 无线网卡 : 支持 Wi-Fi 6 与 Bluetooth® 5.2 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	共支持 2 * M.2 插槽 和 4 * SATA 6Gb/s 接口 来自英特尔® H810 芯片组 : M.2_A 插槽 (Key_M): 支持 PCIe 4.0 X4/X2 模式, 支持 2280 长度 M.2_B 插槽 (Key_M): 支持 PCIe 4.0 X4/X2 模式, 支持 2280 长度 4 * SATA 6Gb/s 接口
USB	板载 USB (共 4 个接口) : 1 * USB 5G 19Pin 接针, 支持 2 个额外的 USB 5G 接口 1 * USB 2.0 9Pin 接针, 支持 2 个额外的 USB 2.0 接口 后置 USB (共 8 个接口) :



	<p>4 * USB 10G Type-A 接口 2* USB 10G Type-A 接口 2* USB 2.0 Type-A 接口</p>
后置面板 I/O 设备接口	<p>2 * DisplayPort 1.2 1 * HDMI™ 2.0 2 * USB 10G Type-A 接口 4 * USB 10G Type-A 接口 4 * USB 2.0 Type-A 接口 1 * Intel® 1Gb Ethernet 接口 1 * Wi-Fi 天线接口 3 * 音频插孔</p>
硬件监控	<p>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）</p>
操作系统	<p>支持 Windows11 64bit 支持 Ubuntu 64bit</p>
ESD 防护	<p>空气放电 ±8KV C 级 ±4KV B 级 接触放电 ±6KV C 级 ±4KV B 级 *整机接地良好的情况下测试</p>
内置 I/O 设备接口	<p>电源相关接口 1 *24 Pin ATX 电源连接器 2 * 8 Pin +12V 电源连接器 风扇相关接口 1 * 4 Pin CPU 风扇接头 1 * 4 Pin PUMP 水泵接头 (支持 DC 调速) 1 * 4 Pin 机箱风扇接头 存储相关接口 2 * M.2 插槽 (Key_M) 4 * SATA 6Gb/s 接口 板载 USB 接口 1 * USB 5G 19Pin 接针, 支持 2 个额外的 USB 5G 接口 1 * USB 2.0 9Pin 接针, 支持 2 个额外的 USB 2.0 接口 其他接口 1* 3 Pin ARGB 接口 1 * COM 端口接针 1 * 4pin Buzzer 蜂鸣器插针 1 * 前面板音频接口 1 * 10-1 Pin 系统面板接口 1 * CLR_CMOS 重置接针 1 * TPM 端口接针</p>
特有功能	<p>分布式 Debug 灯 Maxsun Sync 灯光控制 CLR_CMOS 快捷按钮 Resizable bar 技术</p>
包装尺寸及重量	<p>彩盒尺寸: 240*206*58.5mm 单板重量: 0.64 kg 单片彩包重量: 0.925kg 外箱尺寸: 505*435*337mm 整箱重量: 18.5kg</p>

装箱数量：20PCS



A: DP 接口

最高支持支持规定的 4K@60Hz, 可支持声像同时输出。

B: HDMI 接口

最高支持支持规定的 4K@60Hz, 可支持声像同时输出。

C: DP 接口

最高支持支持规定的 4K@60Hz, 可支持声像同时输出。

D: 双层 USB 10G Type-A 接口

最高支持理论 10Gb 速度传输, 可向下兼容 USB1.1、USB2.0 标准,用于连接 USB TYPE A 设备。

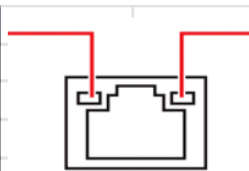
E: 四层 USB 10G Type-A 接口

最高支持理论 10Gb 速度传输, 可向下兼容 USB1.1、USB2.0 标准,用于连接 USB TYPE A 设备。

F: RJ45 网线接口

用于接入网线将主机系统连接到网络, 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	1.0/2.5/5.0Gbps 连接

G: 双层 USB 2.0 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。

H: WiFi 天线接口

WiFi 接口内部集成了英特尔® AX101 无线网卡, 支持 Wi-Fi 6 与 Bluetooth® 5.2 需要正确安装相应的驱动程序才能正常使用。



I1: Audio-in 接口(蓝色)

用于接收音频输入设备，如手机音频输入。

I2: 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。

I3: 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。