MS-Challenger A520M-K

Manual

VER:A0

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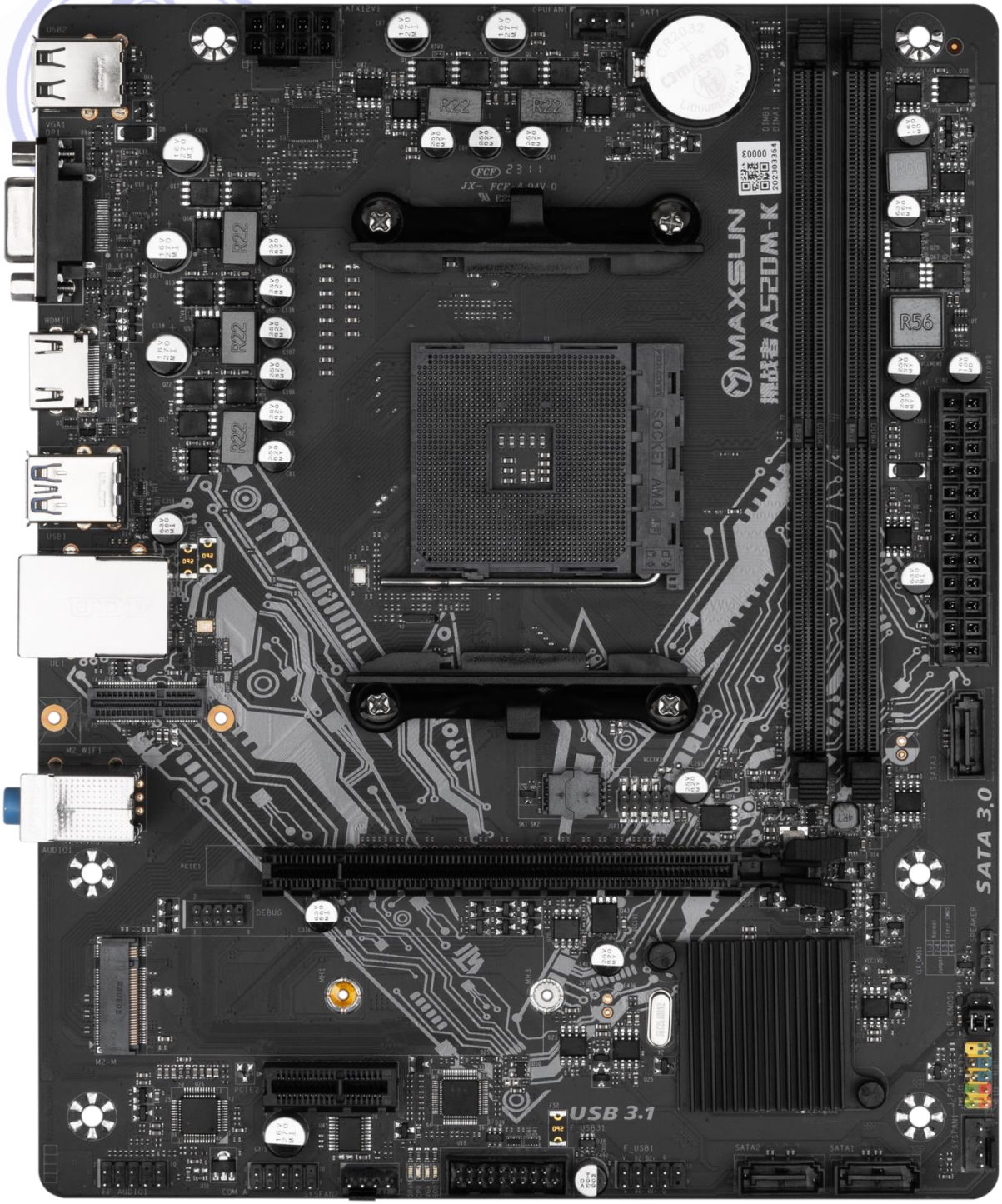
Chapter I Motherboard configuration diagram



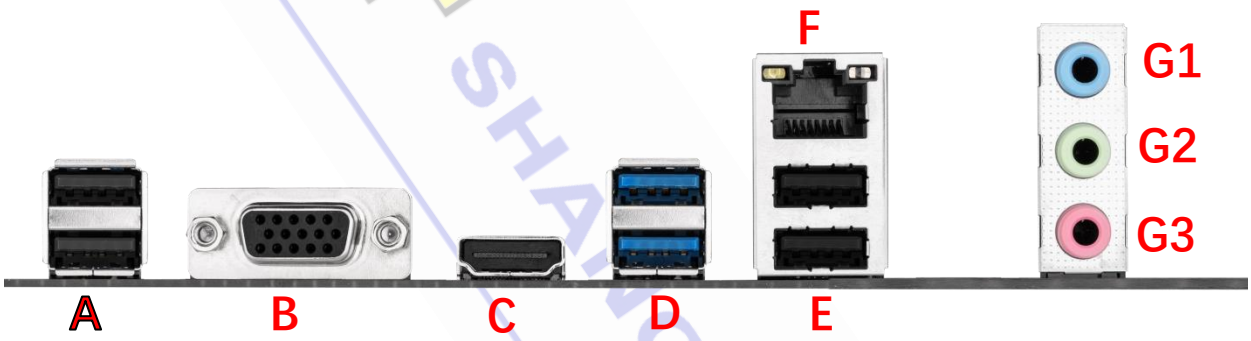
(This figure is for reference only, some details will be designed and adjusted according to the actual situation, please refer to the actual object, our company reserves the right to explain)

Chapter II Specifications

2.1, Motherboard hardware specifications

Motherboard size	Micro ATX(225*180mm)
CPU	Support for AMD AM4 socket AMD Ryzen the following processors: CPU for Ryzen3000, 4000, 5000 (CPU overclocking technology is not supported) Ryzen+ Radeon 4000, 5000 CPU (does not support CPU overclocking technology) TDP: 65W (3+2 phase power supply)
Chipset	AMD A520 Chipset
Memory	2x DIMM DDR4 memory slots Up to a total of 64GB is supported Dual-channel memory technology is supported Support for 3200/2933/2666/2400/2133 MHZ frequency memory
Display	Based on the display function of integrated graphics card processor, using shared display memory technology 1x HDMI 1.4 port, the highest resolution support 2560x1440@60Hz 1x VGA port, up to 1920*1080@60Hz resolution
Expansion port	1x PCIE 3.0 X16 slot 1x PCIE 3.0 X1 slot Support for AMD and NVIDIA standalone graphics cards
Audio	Integrated REALTEK ALC897 sound card chip Rear audio port: 1x rear on-board LINE IN port, 1x rear on-board LINE OUT port, and 1x rear on-board MIC_IN microphone port. F_AUDIO pins: 1x set of front microphone pins, 1x set of front audio output pins 1x set of 4-PIN SPEAKER Speaker pins
Network	Integrated REALTEK 8111H NIC chip (10/100/1000Mbit) 1x on-board RJ45 port Support for network wake-up Supports PXE diskless and UEFI diskless boot
Storage	1x M.2 3.0 X4 slots (NVMe and SATA types supported) 3x SATA 3.0 ports
USB	Onboard rear ports: 2x USB3.0 ports, 4x USB2.0 ports Onboard pins: 1x set (2) of USB2.0 pins, 1x set (2) of USB3.0 pins
In-board socket	1x 24-PIN motherboard ATX power supply port 1x 8-PIN motherboard ATX 12V power port with 12V input 2x sets of system fan pins, 1x set of CPU fan pins 1x set of CLR_CMOS pins 1x COM pin 1x WIFI port (CNVI not supported) 1x set of chassis front control panel pins (F_PANEL)
Hardware	Voltage monitoring

monitoring	Temperature monitoring Fan monitoring Intelligent fan speed control (motherboard has been supported, intelligent fan speed control also needs fan support)
Operating system	Support for Windows10 64bit, Windows11 64bit Support for Ubuntu 64bit
ESD protection	Air discharge ± 8KV Class C ±6KV Class B Contact discharge ± 6KV Class C ± 3KV Class B * Test when the whole machine is well grounded



A: Dual layer USB2.0 TYPE A port

Up to support theoretical 480Mbps speed transmission, backward compatible with USB1.1 standard.Used to connect USB TYPE A devices

B:VGA port

Supports up to 1920x1080@60Hz resolution for connecting monitors.

C:HDMI port

HDMI1.4 port, the highest resolution is 2560x1440@60Hz, used to connect to the HDMI display port.

D: Dual layer USB3.0 port

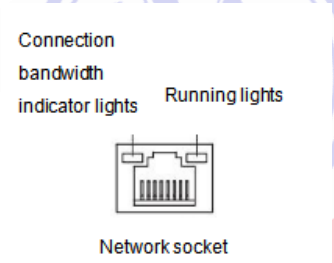
Supports up to theoretical 5Gbps speed transmission and is backward compatible with USB2.0 and USB1.1 standards for connecting USB TYPE A devices.

E: Dual layer USB2.0 TYPE A port

Support up to theoretical 480Mbps speed transmission, backward compatible with the USB1.1 standard.Used to connect USB TYPE A devices.

F: RJ45 port

Network cable port, used to access the network cable to connect the host system to the network, maximum bandwidth 1000Mbps.



Connection bandwidth indicator	
Bandwidth	Light State
Unconnected	destroy
10Mbps	Steady green
100Mbps	Steady green
1000Mbps	Steady orange

Running indicator	
No data transfer	destroy
Data in transit	Flicker

G1: Audio-in port (blue)

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

G2: Audio-out port (light green)

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

G3: Audio- Microphone port (pink)

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

MS-挑战者 A520M-K

使用手册

VER:A0

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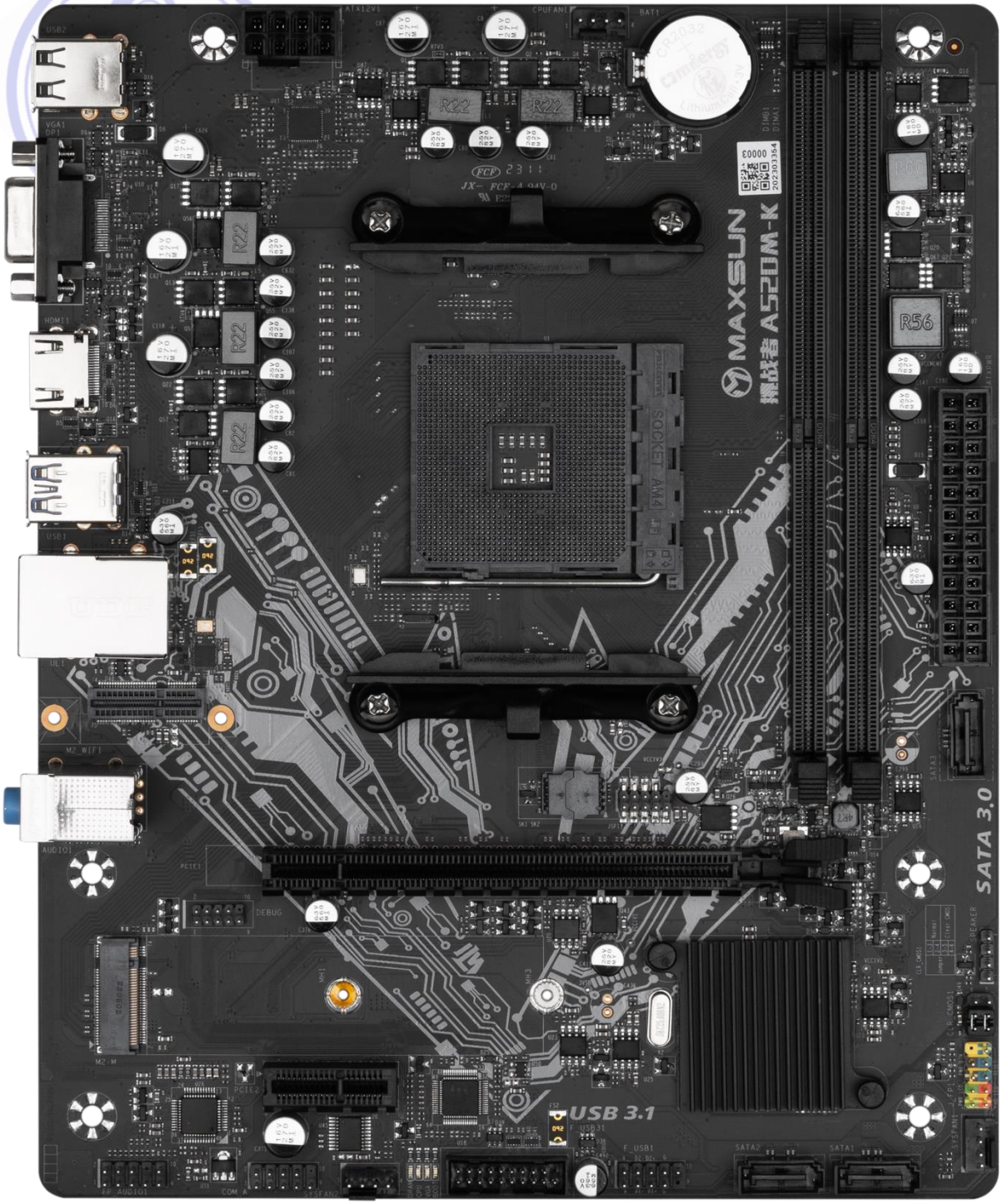
第一章 主板配置图



（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(225*180mm)
CPU	支持 AMD AM4 插槽 AMD Ryzen 以下处理器： Ryzen3000、4000、5000 的 CPU(不支持 CPU 超频技术) Ryzen+Radeon 4000、5000 的 CPU(不支持 CPU 超频技术) TDP：65W（3+2 相供电）
芯片组	AMD A520 Chipset
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 Memeroy 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 2560x1440@60Hz 分辨率 1 个 VGA 接口，最高支持 1920*1080@60Hz 分辨率
扩展接口	1 个 PCIE 3.0 X16 插槽 1 个 PCIE 3.0 X1 插槽 支持 AMD 和 NVidia 独立显卡、
音频	集成 REALTEK ALC897 声卡芯片 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 3.0 X4 插槽（支持 NVMe 与 SATA 类型） 3 个 SATA3.0 接口
USB	板载后置接口：2 个 USB3.0 接口，4 个 USB2.0 接口 板内插针：1 组（2 个）USB2.0 插针，1 组（2 个）USB3.0 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 1 组 CLR_CMOS 插针 1 个 COM 插针 1x WIFI 接口 (不支持 CNVI) 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

A：双层 USB2.0 TYPE A 接口

最高支持理论 480Mbps 速度传输，可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备

B:VGA 接口

最高支持 1920x1080@60Hz 分辨率，用于连接显示器。

C:HDMI 接口

HDMI1.4 接口，最高支持 2560x1440@60Hz 分辨率，用于连接 HDMI 显示器接口。

D：双层 USB3.0 接口

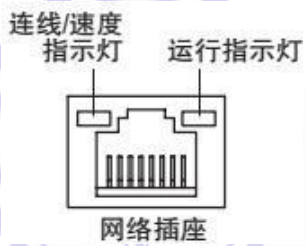
最高支持理论 5Gbps 速度传输，可向下兼容 USB2.0 和 USB1.1 标准,用于连接 USB TYPE A 设备。

E：双层 USB2.0 TYPE A 接口

最高支持理论 480Mbps 速度传输，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连接到网络，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: 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。