

MS-MoDT RPL-P ITX D5

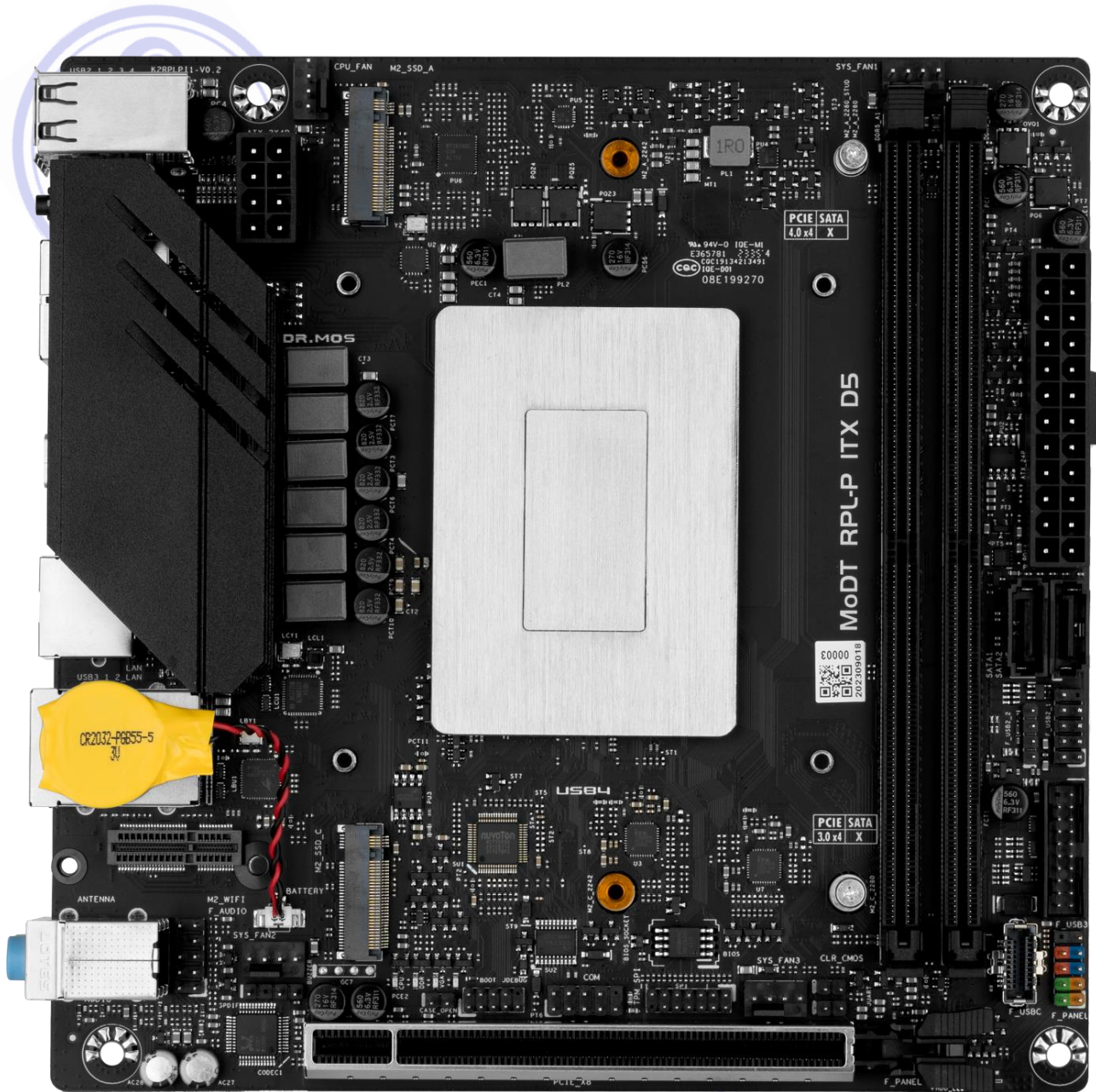
Manual

VER:A0

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Editorial department: Technology Department

Chapter I Motherboard Configuration Diagram



(This picture is for reference only, some details will be designed and adjusted according to the actual situation, please prevail in kind, our company reserves the right of interpretation)

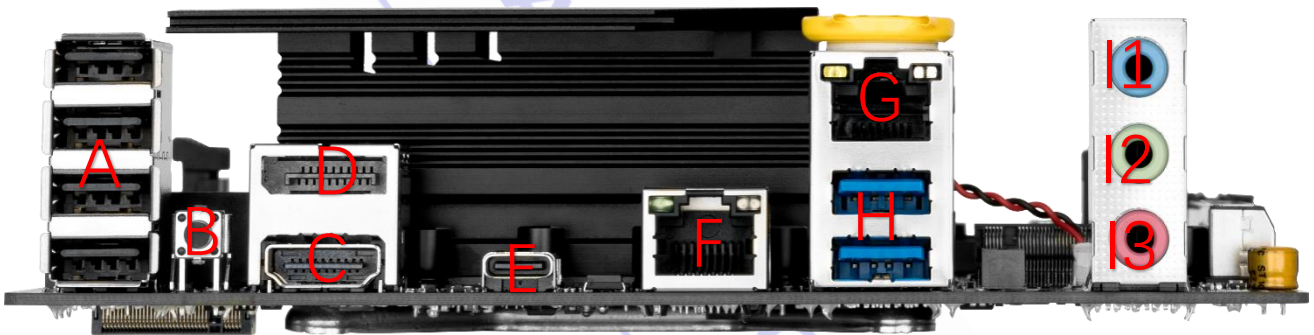
Chapter II Specifications

2.1. Motherboard hardware specifications

Motherboard Size	Micro ATX(170*170mm)
CPU	INTEL i7-13620H TDP: PL1 95W; PL2 168W
Chipset	Integration and CPU together
Memory (RAM)	2* DIMM DDR5 memory slots Supports dual-channel memory technology Supports 4800/5200/XMP/OC memory frequencies
Display	Shared display memory technology based on display capabilities with integrated graphics processor 1* DP 1.2 port, supports up to 4096x2160@60Hz resolution 2* HDMI 1.4 ports, supports up to 4096x2160@30Hz resolution
Extended Interface	1 PCIEX8 4.0 slot Supports AMD and NVIDIA discrete graphics cards
Audio	Integrated REALTEK ALC897 sound chip Supports simultaneous output of front and rear channels (requires setting in HD Audio Controller) Rear audio interfaces: 1* rear on-board LINE IN connector, 1* rear on-board LINE OUT connector, 1* rear on-board MIC_IN microphone connector. F_AUDIO pins: 1* set of front microphone pins, 1* set of front audio output pins 1* set of 3-pin F_SPDIF pins
Network	Integrated REALTEK 8125B NIC chip (10/100/1000/2500Mbit) Integrated INTEL I219V NIC chip (10/100/1000Mbit) 2* on-board RJ45 ports Supports Wake-on-LAN Support PXE disk-less, UEFI disk-less boot
SSD	2* PCIE 4.0 M.2 slots (supports PCIE X4/X2 channel SSD only) 1* PCIE 3.0 M.2 slot (supports PCIE X4/X2 channel SSD only) 2* SATA3.0 ports
USB	Onboard rear ports: 2* USB3.2 GEN1 ports, 4* USB2.0 ports, 1* TYPEC port (supports Thunderbolt 4) On-board pins: 1* set (2 pcs) of USB2.0 pins, 1* set (2 pcs) of USB3.2 GEN1 pins. 1* USB3.2 Gen2 Type-C front port (supports Thunderbolt 4)
In-board sockets	1* COM_A pin 3* sets of system fan pins, 1* set of CPU fan pins 1* set of chassis front control panel pins (F_PANEL) 1* set of front audio pins 1* set of Debug pins 1* set of TPM_SPI pins

Power	1* 24-PIN motherboard ATX power connector, 12V, 5V, 3.3V inputs 1* 8-PIN motherboard ATX 12V power connector, 12V input
Hardware monitoring	Voltage monitoring Temperature monitoring Fan monitoring Intelligent fan speed control
Operating system	Support Windows 10 64bit, Windows 11 64bit Ubuntu 64bit support
ESD protection	Air discharge $\pm 8KV$ Class C $\pm 6KV$ Class B Contact discharge $\pm 6KV$ Class C $\pm 3KV$ Class B *Tested with the whole machine well grounded

2.2. Motherboard Rear Port



A: 4-layer USB 2.0 port

Supports up to 480Mb theoretical transfer speed and is backward compatible with USB1.1 standard for connecting USB TYPE A devices.

B: Clear_CMOS button

It is used to restore the initial default state of Bios, lightly press 1-3S after power off.

C: HDMI port

HDMI 1.4 port, supports up to 4096x2160 @30Hz resolution for connecting to HDMI monitor ports.

D: DP port

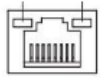
DP1.2 port, supports up to 4096x2160 @60Hz resolution for connecting to a DP monitor interface.

E: TYPE-C connector

Supports Thunderbolt 4, supports up to 40Gb theoretical speed transfer, and is backward compatible with USB 2.0 standard for connecting USB TYPE-C devices.

F: RJ45 port

Network cable interface for accessing a network cable to connect the host system to the network with a maximum bandwidth of 1000Mbps.

<p>Connection bandwidth indicator lights</p>  <p>Running lights</p> <p>Network socket</p>	Connection bandwidth indicator		Operation Indicator Light	
	bandwidths	lamp state	No data transmission	go out (of a fire etc)
	Connection-less	go out (of a fire etc)	during data transmission	vague (of speech)
	10Mbps	go out (of a fire etc)		
	100Mbps	Green Always On		
	1000Mbps	Orange color is always on		

G: RJ45 port

Network cable interface for accessing a network cable to connect the host system to the network, with a maximum bandwidth of 2500Mbps.

<p>Connection bandwidth indicator lights</p>  <p>Running lights</p> <p>Network socket</p>	Connection bandwidth indicator		Operation Indicator Light	
	bandwidths	lamp state	No data transmission	go out (of a fire etc)
	Connection-less	go out (of a fire etc)	during data transmission	vague (of speech)
	10Mbps	Green Always On		
	100Mbps	Green Always On		
	1000Mbps	Orange color is always on		
	2500Mbps	Orange color is always on		

H: Dual-layer USB3.2 GEN1 port

Supports up to 5Gb theoretical transfer speed and is backward compatible with USB 2.0 standard for connecting USB TYPE A devices.

I1: Audio-in connector (blue)

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

I2: Audio-out connector (light green)

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

I3: Audio-Microphone connector (pink)

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

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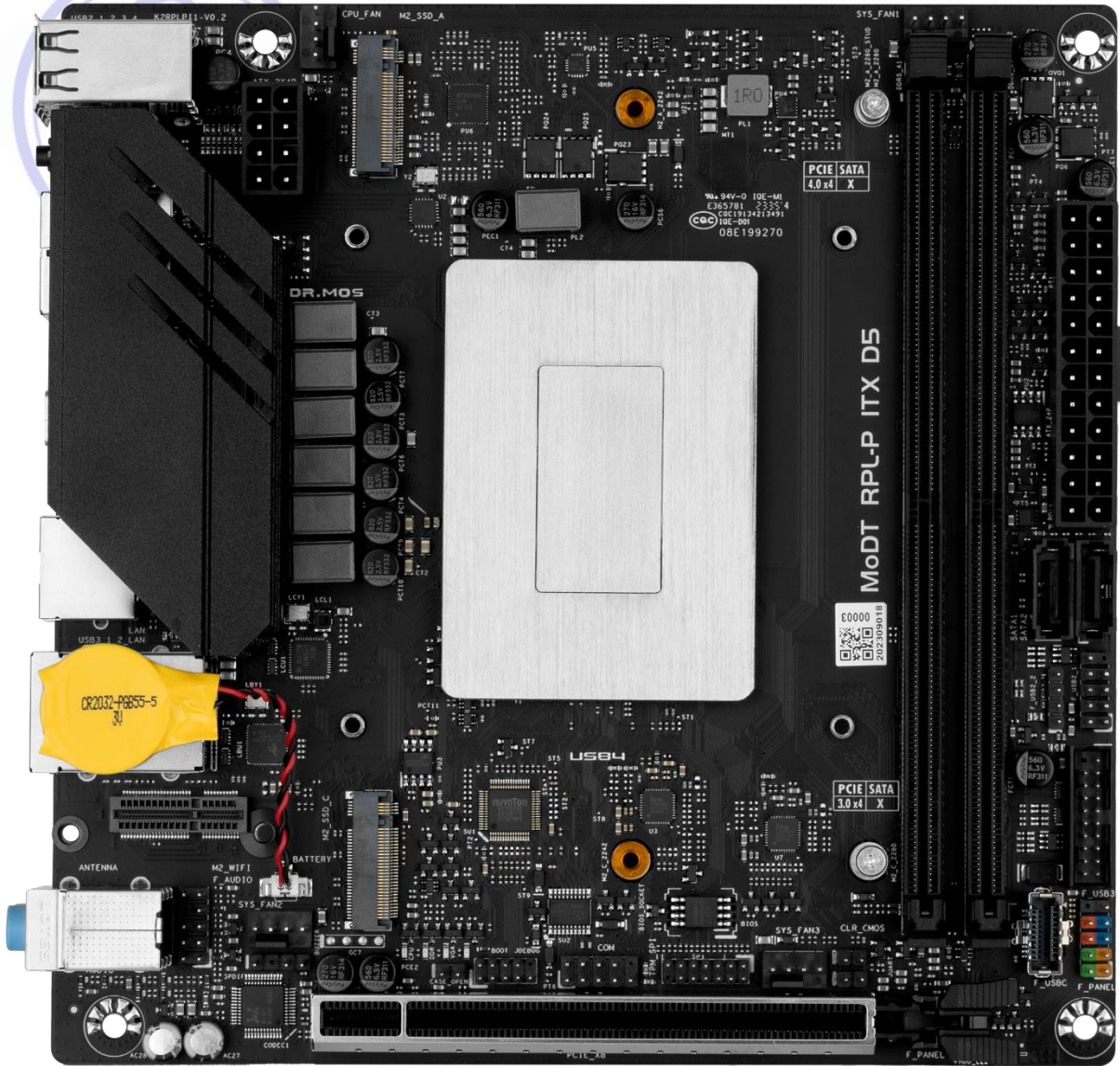
使用手册

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)

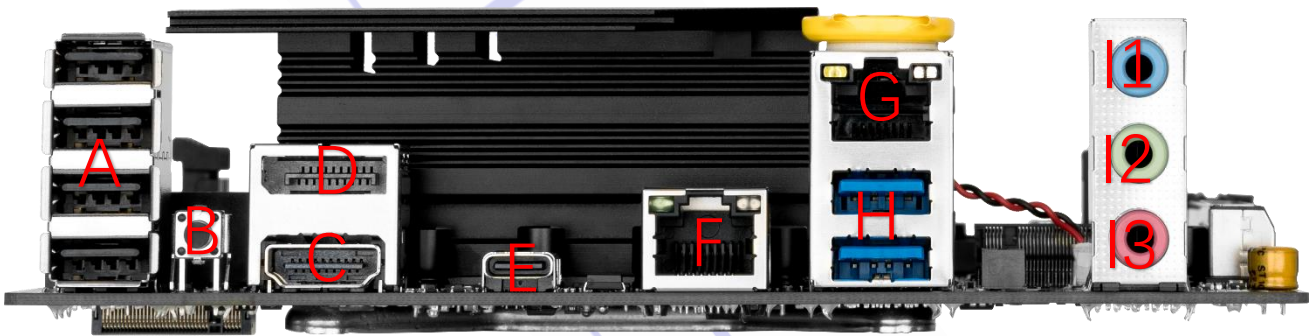
第二章 规格

2.1、主板硬件规格

主板尺寸	MicroATX (170*170mm)
CPU	INTEL i7-13620H TDP: PL1 95W; PL2 168W
芯片组	集成和 CPU 一起
内存	2 个 DIMM DDR5 内存槽 支持双通道内存技术 支持 4800/5200/XMP 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 DP1.2 接口，最高支持 4096x2160@60Hz 分辨率 2 个 HDMI1.4 接口，最高支持 4096x2160@30Hz 分辨率
扩展接口	1 个 PCIEX8 4.0 插槽 支持 AMD 和 NVidia 独立显卡
音频	集成 REALTEK ALC897 声卡芯片 支持前后声道同时输出（需要高清音频控制器中设置） 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 3 针 F_SPDIF 插针
网络	集成 REALTEK 8125B 网卡芯片 (10/100/1000/2500Mbit) 集成 INTEL I219V 网卡芯片 (10/100/1000Mbit) 2 个板载 RJ45 接口 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	2 个 PCIE 4.0 M, 2 插槽（仅支持 PCIE X4/X2 通道 SSD） 1 个 PCIE 3.0 M, 2 插槽（仅支持 PCIE X4/X2 通道 SSD） 2 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，一个 TYPEC 接口（支持雷电 4 功能） 板内插针：1 组（2 个）USB2.0 插针，1 组（2 个）USB3.2 GEN1 插针， 1 个 USB3.2 Gen2 Type-C 前置接口（支持雷电 4 功能）
板内插座	1 个 COM_A 插针 2 组系统风扇插针、1 组 CPU 风扇插针 1 组机箱前置控制面板插针（F_PANEL） 1 组前置音频插针 1 组 Debug 插针 1 组 TPM 插针
电源输入	1 个 24PIN 主板 ATX 供电接口，12V、5V、3.3V 输入

	1 个 8PIN 主板 ATX 12V 供电接口, 12V 输入
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

2.2、主板后置接口



A: 4 层 USB2.0 接口

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

B: Clear_Cmos 按钮

用于还原 Bios 初始默认状态, 断电后轻按 1-3S 即可。

C: HDMI 接口

HDMI1.4 接口, 最高支持 4096x2160 @30Hz 分辨率, 用于连接 HDMI 显示器接口。

D: DP 接口

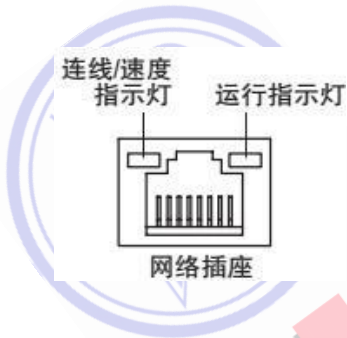
DP1.2 接口, 最高支持 4096x2160 @60Hz 分辨率, 用于连接 DP 显示器接口。

E: TYPE-C 接口

支持雷电 4 功能, 最高支持理论 40Gb 速度传输, 可向下兼容 USB2.0 标准, 用于连接 USB TYPE-C 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。

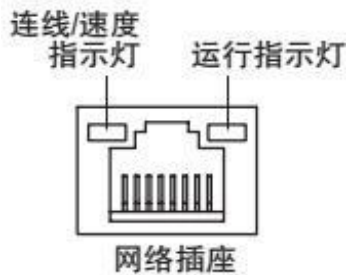


连接带宽指示灯	
带宽	灯状态
无连接	灭
10Mbps	灭
100Mbps	绿色常亮
1000Mbps	橙色常亮

运行指示灯	
无数据传输	灭
数据传输中	闪烁

G: 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 2500Mbps。



连接带宽指示灯	
带宽	灯状态
无连接	灭
10Mbps	灭
100Mbps	绿色常亮
1000Mbps	橙色常亮
2500Mbps	橙色常亮

运行指示灯	
无数据传输	灭
数据传输中	闪烁

H: 双层 USB3.2 GEN1 接口

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

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。