



# MS-Challenger H610M-F

Manual

VER:A 0

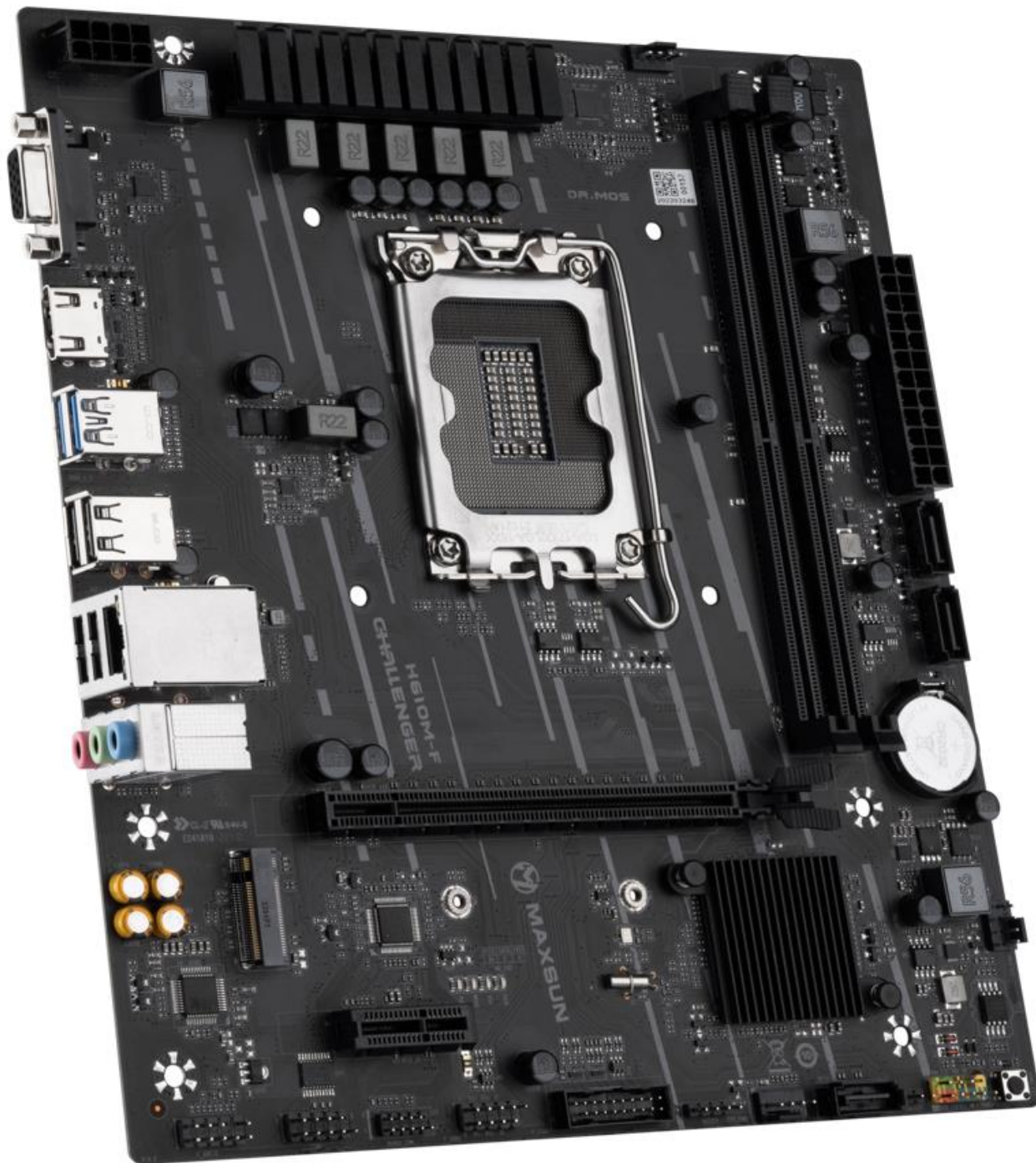


SHANGKE GROUP

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# Chapter I Mainboard configuration diagram



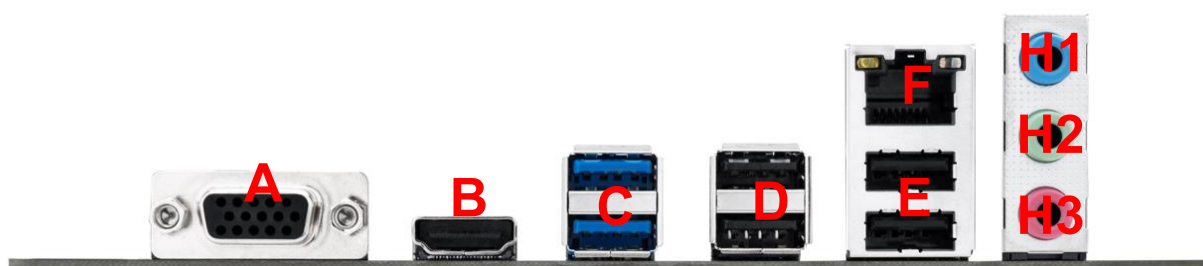
(This drawing is for reference only, and some details will be designed and adjusted according to the actual situation. Please take the physical object, and our company reserves the right of interpretation)

## Chapter II Specifications

### 2.1 Motherboard hardware specifications

Mainboard size	MicroATX (225*195mm)
CPU	Support for LGA 1700 slots The 12th generation processor (CPU overclocking technology is not supported) TDP: 75W
chip set	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
extended interface	1 PCIE X16 4.0 slot 1 PCIE X1 3.0 slot Support AMD and NVIDIA independent graphics card, DG1 independent graphics card
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_AUDIO 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 Realtek8111E 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) 3 SATA 3.0 interfaces
USB	On-board rear interface: 2 USB 3.2 GEN 1 ports and 4 USB2.0 ports Plate insert: 1 (2) USB2.0 pins, 1 (2) USB 3.2 GEN 1 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 1 debug outlet 1 CLR_CMOS button 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 $\pm 8$ KV Class C $\pm 6$ KV for grade B Contact discharge is $\pm 6$ KV Class C $\pm 3$ KV Grade B * Test of the whole machine under good grounding



A:VGA interface

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

B: The HDMI interface

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

C: 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.

D: Double-layer USB2.0 TYPE A interface

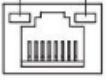
Up to the USB2.0 standard support, downward compatible with the USB1.1 standard. For connecting to the USB TYPE A devices.

E: Double-layer 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: The RJ 45 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.

<p>Connection bandwidth indicator lights</p> <p>Running lights</p>  <p>Network socket</p>	Connect the bandwidth indicator light		Run the indicator light	
	tape width	The lamp state	No data transmission	go out
	connectionless	go out	In data transmission	twinkle
	10M bps	Green is always bright		
	100M bps	Green is always bright		
	1000M bps	Orange is always bright		

#### G1: LINE IN interface (blue)

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

#### G2: LINE OUT interface (light green)

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

#### G 3: Audio-Microphone interface (pink)

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