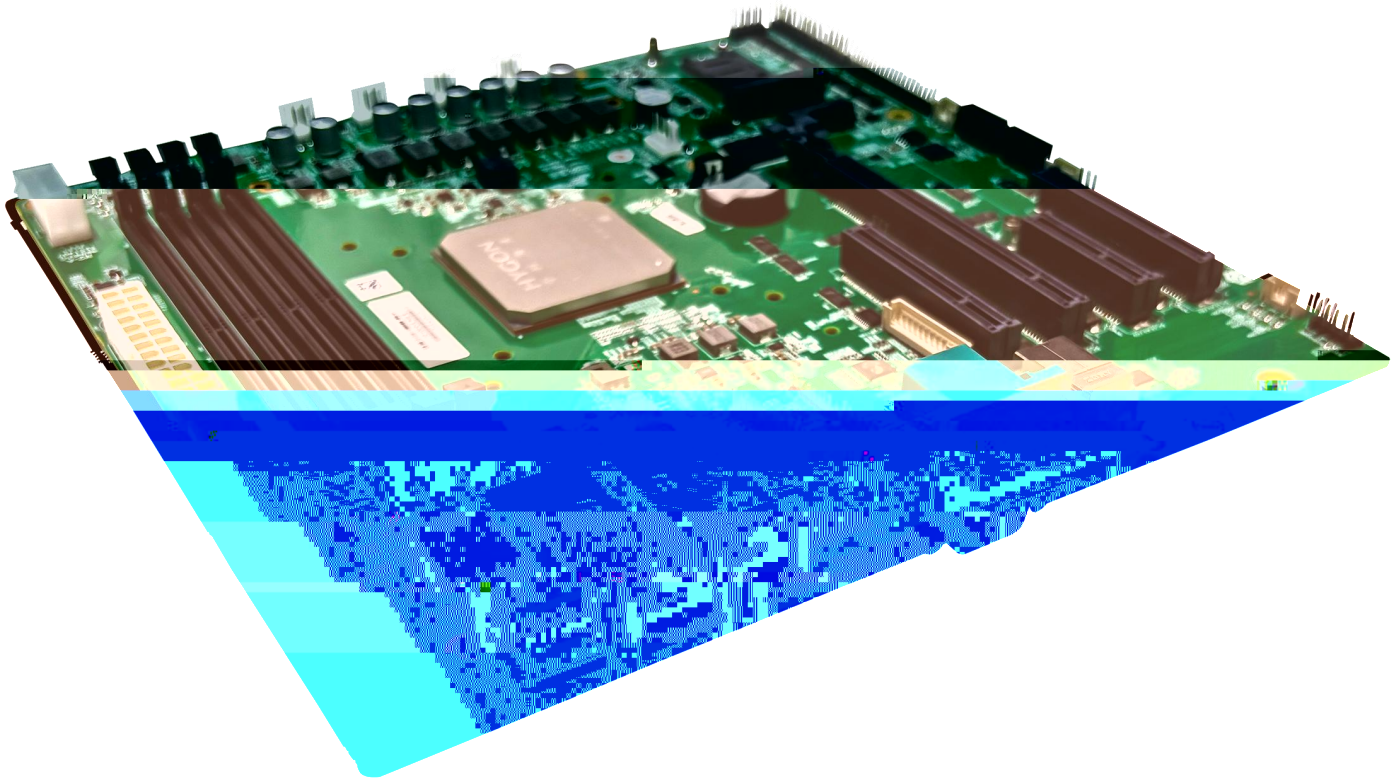


## HG3490 Micro ATX Motherboard



### Features

- **CPU:** HG3490 Processor
- **Memory:** Dual Channel UDIMM DDR5 up to 128GB
- **Display:** Expansion GPU
- **Ethernet:** 2 x RJ45, Intel® Ethernet I210AT or RTL8111H/YT8601
- **Storage:** M.2\_2280 support NVMe & SATA, SATA 3.0
- **Expansion:** PCIe 16X, 2x PCIe 8X, PCIe 4X, Mini PCIe, M.2\_2242
- **I/O:** 8x USB3.1, 3x USB2.0, 8bit GPIO, 1x LPC, 1x RS232/485, 7x RS232
- **System:** KOS, UOS, Linux
- **Power:**

**HYGON**  
中科海光

## Introduction

232/485, 7x RS-232) HG3490 (1x RS-



The Maxtang® OTM-F312 is a Micro-ATX motherboard built around the domestic HG3490 processor. It supports dual-channel DDR5 memory with a maximum capacity of 128GB, making it suited for various high-performance industrial applications.

The board is equipped with extensive connectivity options, including 8 COM ports (1 RS-232/485, 7 RS-232), 11 USB ports, and multiple PCIe slots (x16/x8/x4), providing robust support for device control, image acquisition, and industrial communication.

The board integrates M.2 and SATA 3.0 interfaces, offering flexible storage options for both NVMe and SATA SSDs. With an integrated watchdog timer and optional TCM security module, it maintains compatibility with KOS, UOS, and Linux—suitable for both trusted computing initiatives and open-system environments.

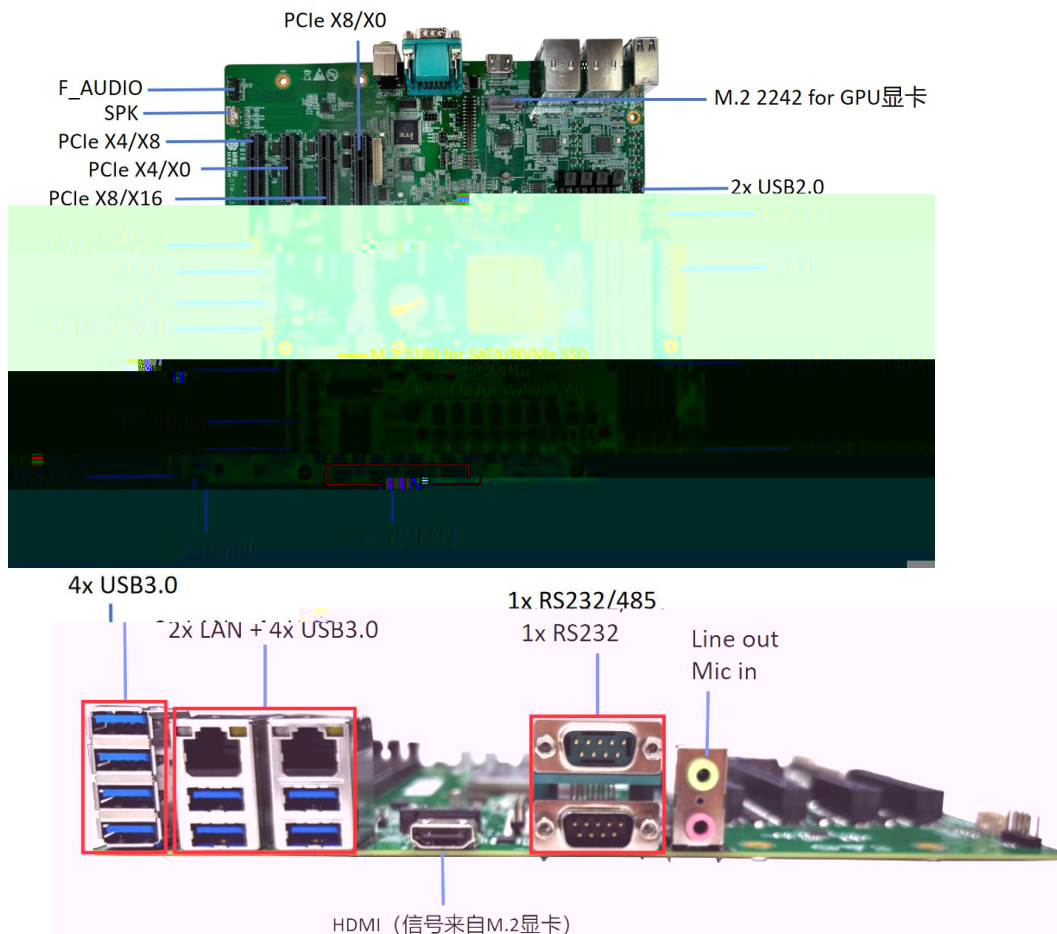
Designed with industrial-grade temperature tolerance (-10 to 60 °C), the OTM-F312 ensures long-term stable operation in complex environments. It is widely applicable in fields including industrial automation, rail transportation, cybersecurity, and smart manufacturing.



GPIO

Watchdog

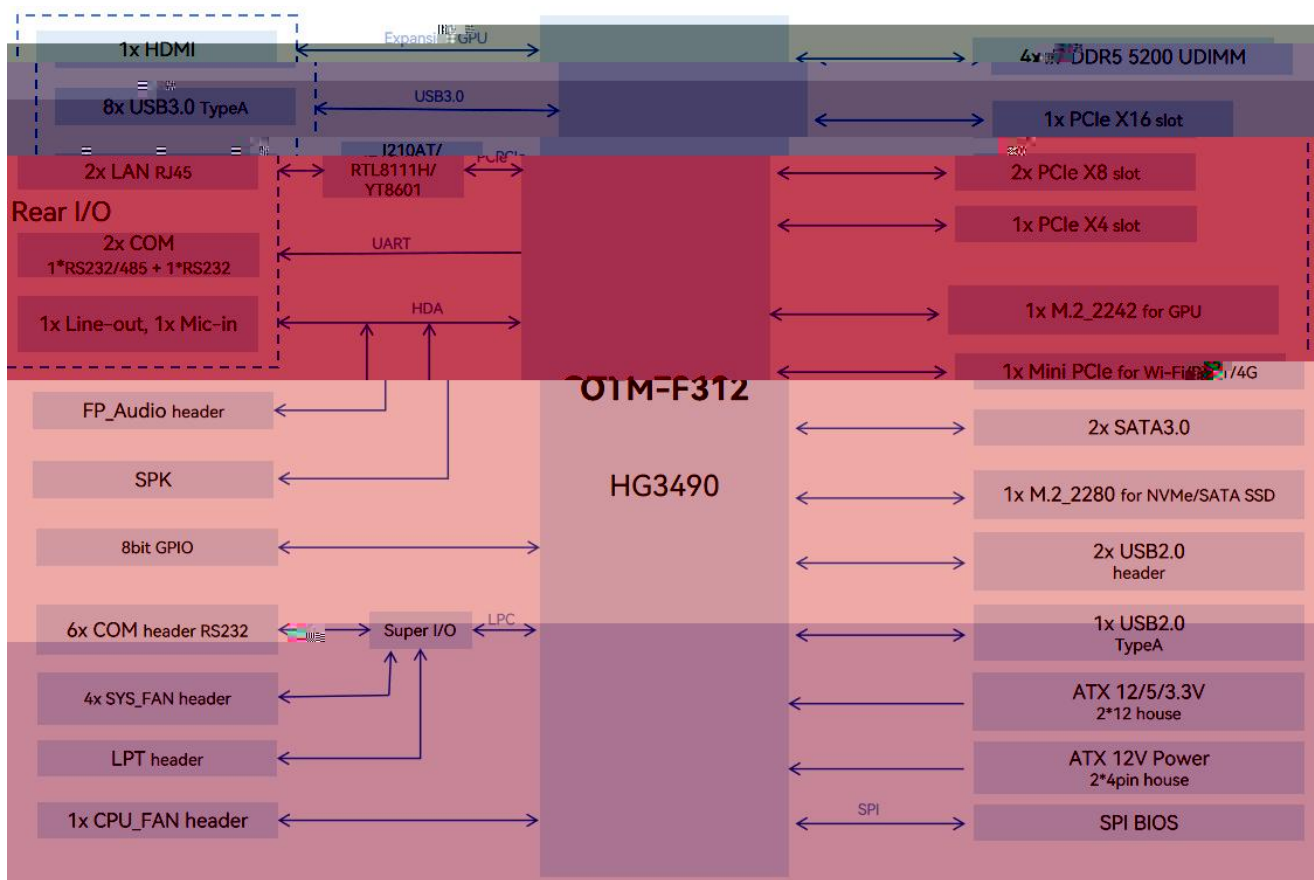
## I/O Interfaces



## Introduction

Processor	CPU	HG3490	
	Socket	BGA	
	Chipset	/	
	CPU TDP	130W	
	Technology	Dual channel DDR5 5200 MHz	
Memory	Max capacity	128GB	
	Socket	4x UDIMM 288Pin	
Graphics	GPU	Expansion GPU, M.2 or PCIe slot	
	Controller	LAN 1: Intel® Ethernet I210AT or RTL8111H/YT8601 LAN 2: Intel® Ethernet I210AT or RTL8111H/YT8601	
	Speed	LAN 1: 10/100/1000 Mbps	LAN 2: 10/100/1000 Mbps
Expansion Slot	Mini PCIe	1x Mini PCIe slot for Wi-Fi/BT/4G	
	M.2	1x M.2 2242 slot for GPU	
Ethernet	PCIe	Slot 1:1x PCIe X8/NA (X8 slot) Slot 2:1x PCIe X8/X16 (X16 slot) Slot 3:1x PCIe X4/NA (X4 slot) Slot 4:1x PCIe X4/X8 (X8 slot)	
	M.2	1x M.2_2280 slot for NVMe/SATA SSD	
Storage	SATA3.0	2	
	Display	1x HDMI (via Expansion GPU)	
Rear I/O	RJ-45	2	
	Serial	1x RS-232/485, 1x RS-232	
	USB3.0	8	
	USB2.0	/	
	Audio	1x Line-out, 1x Mic-in	
	Display	/	
	Internal Connector	USB2.0	3
Internal Connector	LPC	1	
	Serial	6x RS-232	
	GPIO	8 bit	
	Other	1x CPU_FAN, 4x SYS_FAN, SIM slot	
	TCM		
	Power Requirement		1 255
Power Requirement	Input Mode	ATX	
	Standard Port	24-pin ATX + 2*4 Pin ATX	
	output socket	1x 4Pin CPU_FAN, 4x 4Pin SYS_FAN	
Environment	Operating Temp.	-10 ~ 60 (14 ~ 140 )	
	Storage Temp.	-20 ~ 70 (-4 ~ 158 )	
Other	OS	KOS, UOS, Linux	

## Functional Block Diagram



## Order Information

\* For customization, please contact your regional sales representative. Confirm model details before purchase, as they may vary.

Order Number	Model Name	Description
	OTM-F312	M-ATX 3490 OTM-F312 4DDR5 UDIMM 2LAN 8COM 1*PCIE16X+2*PCIE8X+1*PCIE4X

SHENZHEN MAXTANG COMPUTER CO. LTD.

303, 3/F, Building 2, Runzhi R&D Center, Xin'an Street, Bao'an District, Shenzhen, 518133 China

Tel: +86 755 86143003 | Fax: +86 755 86143003 | sales@detangpc.com

[www.maxtangpc.com](http://www.maxtangpc.com)