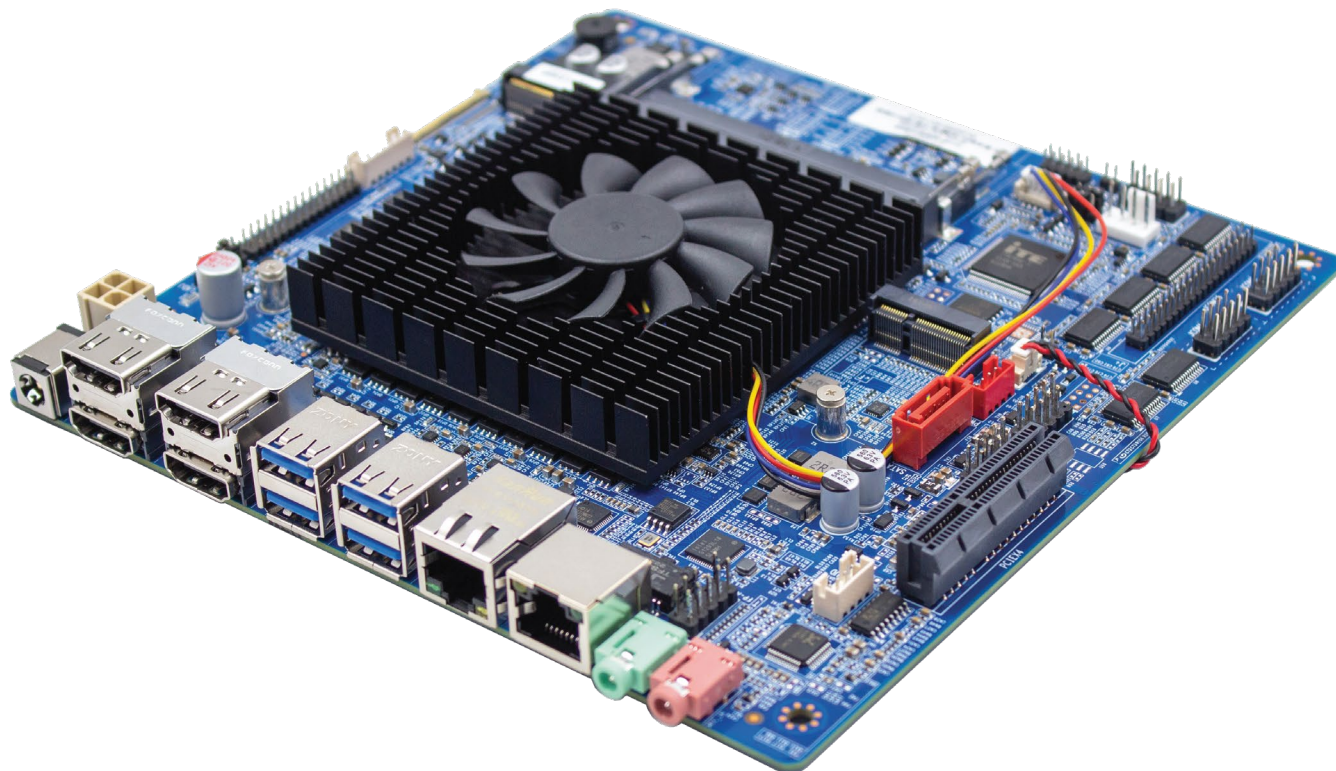


# AL-10

## Intel® Alder Lake-U/P Series Processor based Mini ITX Motherboard



### Features

- CPU: Intel® Alder Lake-U/P series processor
- Memory: Dual channel SO-DIMM DDR4 up to 64GB
- GPU: Intel Iris® Xe Graphics eligible/UHD Graphics depends on CPU
- Ethernet Controller: Intel i225/i226 + Intel i219
- Storage: 1xM.2 for NVMe 2280 SSD, 1xSATA
- Expansion: M.2 for WiFi, PCIe 4X
- Power: 19V DC-in



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## Introduction

Maxtang AL-10 is designed with the 12th Gen Intel Alder Lake P series and U series processor, up to 12 cores and 16 threads, 2.47x times faster graphics performance than the previous. Based on a small form factor design great for IoT deployments that require high-performance, enhanced graphics density. Supports 2xSO-DIMM DDR4 up to 64GB, features 4xHDMI2.0, 6xCOM, 4xUSB3.2+4xUSB2.0, 2xLAN, 1xSATA, 2xM.2 connector, PCIe4X, GPIO and optional TPM2.0 for added security.

The AL-10 drives more values for IoT use cases with differentiated capabilities, offers an immersive experience by Intel Xe Graphics/UHD graphics (varies on CPU), and supports 4K independent displays through 4xHDMI+1xLVDS/eDP+1x eDP/DP/HDMI. The motherboard is suitable for surveillance, digital signage, electronic gaming machine, and thin client.

## I/O Interfaces



H/W Monitor



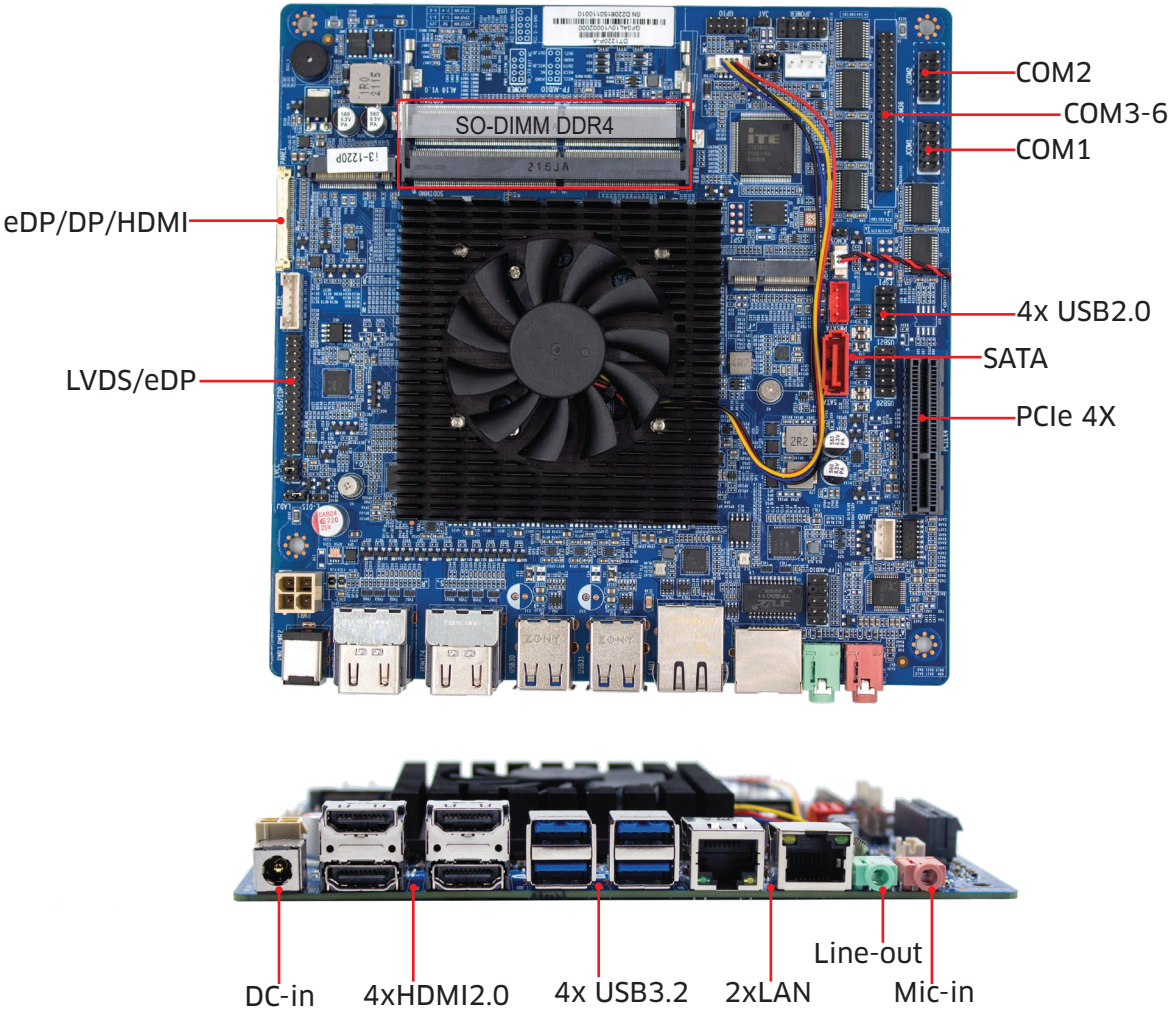
Watchdog



GPIO



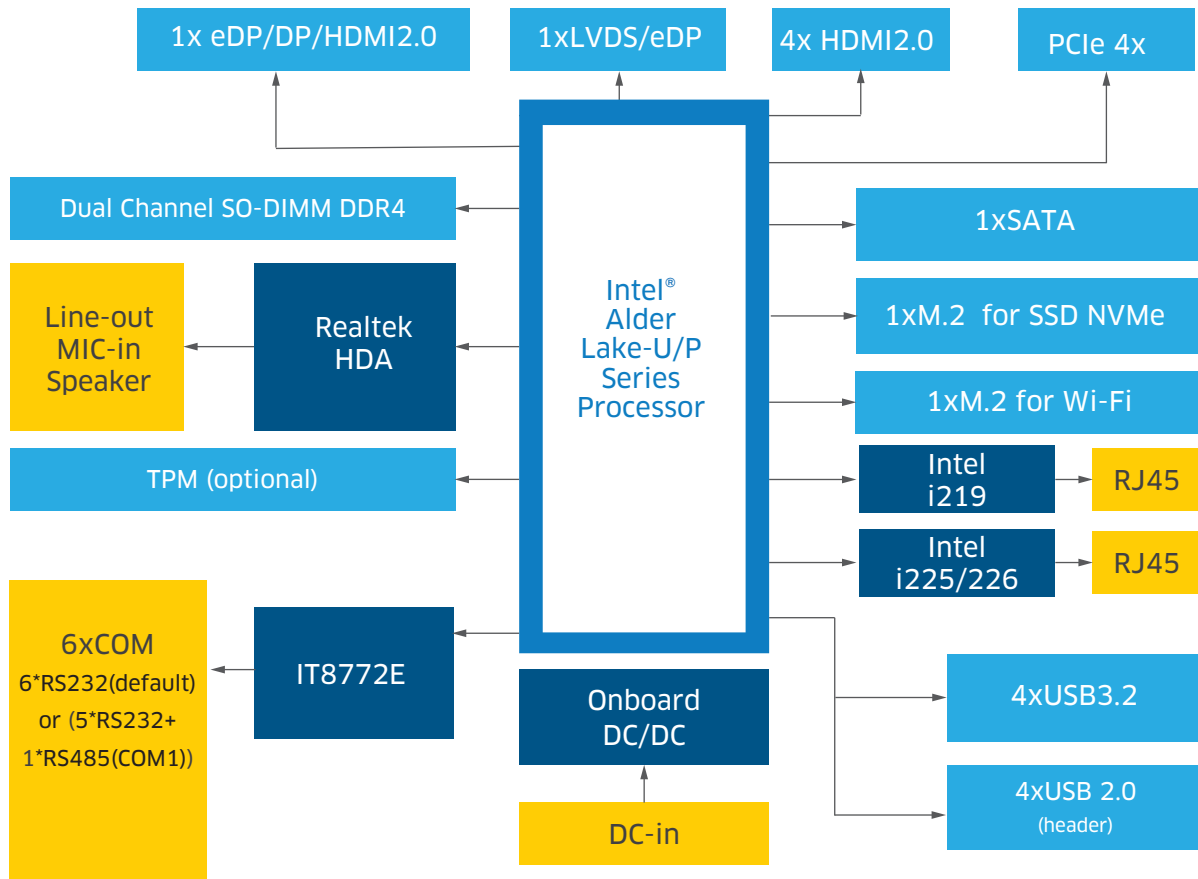
Brightness



## Technical Specifications

Processor	Alder Lake P Series	i7-1260P	i5-1240P	i3-1220P
	Total Cores/Threads	12C/16T	12C/16T	10C/12T
	# of Performance-cores	4	4	2
	# of Efficient-cores	8	8	8
	P-core Max Turbo Frequency	4.70 GHz	4.40 GHz	4.40 GHz
	E-core Max Turbo Frequency	3.40 GHz	3.30 GHz	3.30 GHz
	Cache	18 MB	12 MB	12 MB
	Processor base Power	28 W	28 W	28 W
Processor	Alder Lake U Series	i7-1255U	i5-1235U	i3-1215U
	Total Cores/Threads	10C/12T	10C/12T	6C/8T
	# of Performance-cores	2	2	2
	# of Efficient-cores	8	8	4
	P-core Max Turbo Frequency	4.70 GHz	4.40 GHz	4.40 GHz
	E-core Max Turbo Frequency	3.50 GHz	3.30 GHz	3.30 GHz
	Cache	12 MB	12 MB	10 MB
	Processor base Power	15 W	15 W	15 W
Memory	BIOS	AMI UEFI BIOS		
	Type	Dual Channel SO-DIMM DDR4		
Display	Max.Capacity	64GB		
	GPU	Intel Iris® Xe Graphics eligible/UHD Graphics depends on CPU		
Ethernet	Interface	4x HDMI2.0+1x LVDS/eDP+1x eDP/DP/HDMI2.0		
	Controller	1x Intel i225/226 Data Rate Per Port: 2.5GbE		
Audio		1x Intel i219 Data Rate Per Port: 1.0GbE		
	Interface	2xRJ45		
Hardware	Wake on LAN	Yes		
	Audio Codec	Realtek HD		
Storage	Interface	1xLine-out, 1xMic-in, supports audio header and amplifier header		
		CPU system temperature, onboard voltage, watchdog, and auto power on		
Expansion	M.2	1xM.2 for NVMe 2280 SSD		
	SATA	1		
I/O Interface	M.2	1x M.2 for WiFi, support Intel® Integrated Connectivity (CNVi)		
	PCIe4X	1		
Dimension	LAN	2		
	COM	6xCOM: 6*RS232(default) or 5*RS232+1*RS485(COM1)		
Power	USB3.2	4		
	USB2.0	4*header		
Operating System	GPIO	8		
	Audio	1xLine-out, 1xMic-in		
Power	TPM2.0	Onboard, optional		
	Size	170mm×170mm		
Power	Board Type	Mini-ITX		
	Standard Port	19V DC-in		
Power	Peripheral Input	For Fan and SATA		
	Operating Temp.	-20°C ~60°C		
Power	Storage Temp.	-40°C ~80°C		
	Operating System	Win10/11 64 bit, Linux 64 bit		

## Functional Block Diagram



## Order Information

Model Name	Description
DT1250P-A	DT MINI-ITX Intel Core i5-1250P AL10 2LAN 6*RS232 4HDMI+LVDS
DT1235U-A	DT MINI-ITX Intel Core i5-1235U AL10 2LAN 6*RS232 4HDMI+LVDS
DT1255U-A	DT MINI-ITX Intel Core i7-1255U AL10 2LAN 6*RS232 4HDMI+LVDS

\*For customized options, please consult regional sales. And please confirm the model name and description before purchasing. \*The model name and description might vary due to inventory changes.