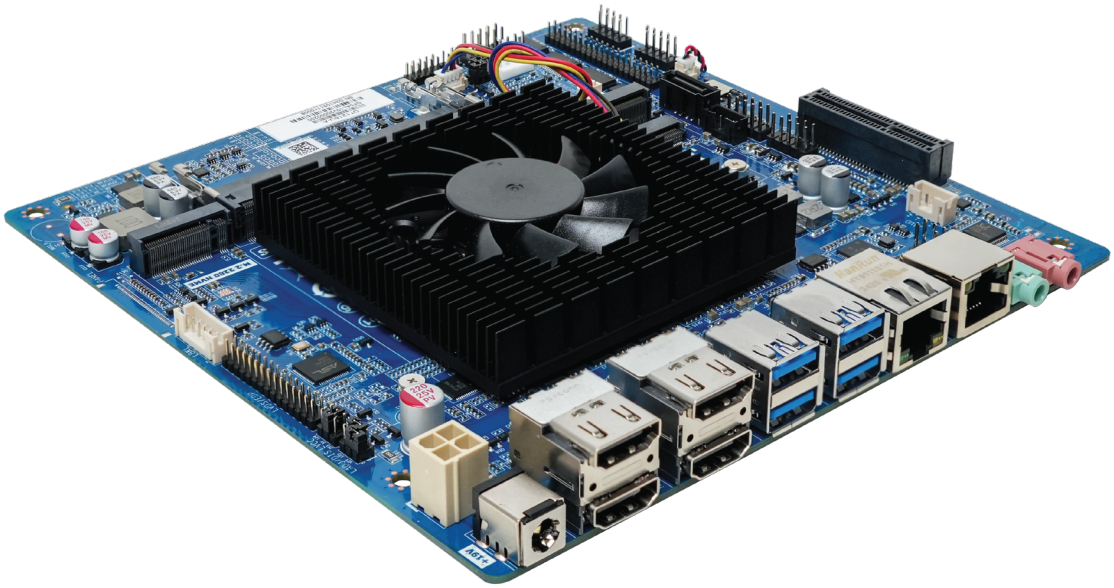
DATASHEET

AL-10V2.0

Intel® Alder Lake/Raptor Lake-U/P Series Processor based Mini ITX Motherboard with 6COM, 4HDMI



Features

- CPU: Intel® Alder Lake/Raptor Lake-U/P series processor
- Memory: Dual channel SO-DIMM DDR4 up to 64GB
- GPU: Intel Iris® Xe Graphics eligible/UHD Graphics, display via 4xHDMI+LVDS
- Ethernet: Intel® i226(2.5GbE) + Intel® i219(1.0GbE)
- Storage: M.2 Key M for NVMe SSD, M.2 Slot for SATA SSD/4G, SATA3.0
- Expansion: M.2 Key E for WiFi & BT, PCIe x4 Slot
- Power: 19V/12V DC-in

intel prestige partner Builder

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MAXIMIZING YOUR COMPUTING PRODUCTIVITY

Introduction

The Maxtang AL10V2.0 is a compact and versatile Mini-ITX industrial motherboard built on the latest 12th Gen Intel® Alder Lake processors (P and U series). Offering a wide range of CPU options from Core ™ i7, i5, to i3, it delivers up to 12 cores and 16 threads with efficient performance per watt. Supporting dual-channel DDR4 memory up to 64GB and Intel Iris® Xe/UHD Graphics, the board is capable of driving up to four independent 4K displays via HDMI and LVDS/eDP interfaces, making it ideal for digital signage, retail solutions, kiosks, industrial automation, and multi-screen environments.

To meet diverse application needs, the AL10V2.0 integrates dual Intel Ethernet controllers (2.5GbE + 1GbE), M.2 NVMe/SATA storage expansion, M.2 Key B for 4G modules with Nano SIM support, M.2 Key E for WiFi/BT, and a PCIe x4 Gen 4 slot for additional add-ons. Rich I/O includes 6 COM ports, multiple USB3.2/USB2.0, GPIO, and Realtek ALC897 audio, alongside essential industrial features such as TPM 2.0 security, watchdog timer, hardware monitoring, and auto power-on. With its 19V DC input, wide -20°C to 60°C operating temperature range, and reliable Mini-ITX 170mm x 170mm design, the AL10V2.0 delivers a flexible, secure, and high-performance platform tailored for embedded and industrial computing applications.

Linux™

ubuntu Linux

Windows

H/W Monitor

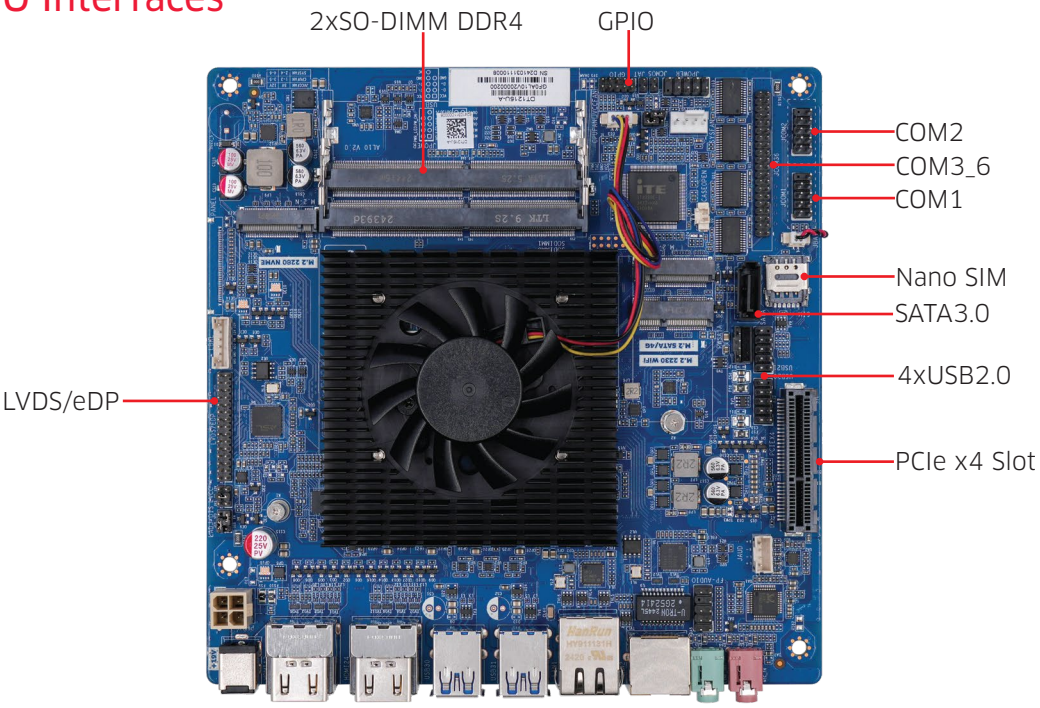
Watchdog

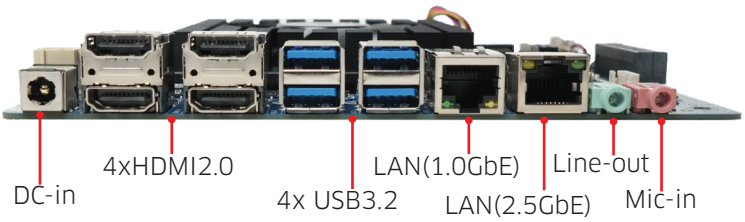
GPIO

Brightness

HDMI™ HIGH-DEFINITION MULTIMEDIA INTERFACE

I/O Interfaces



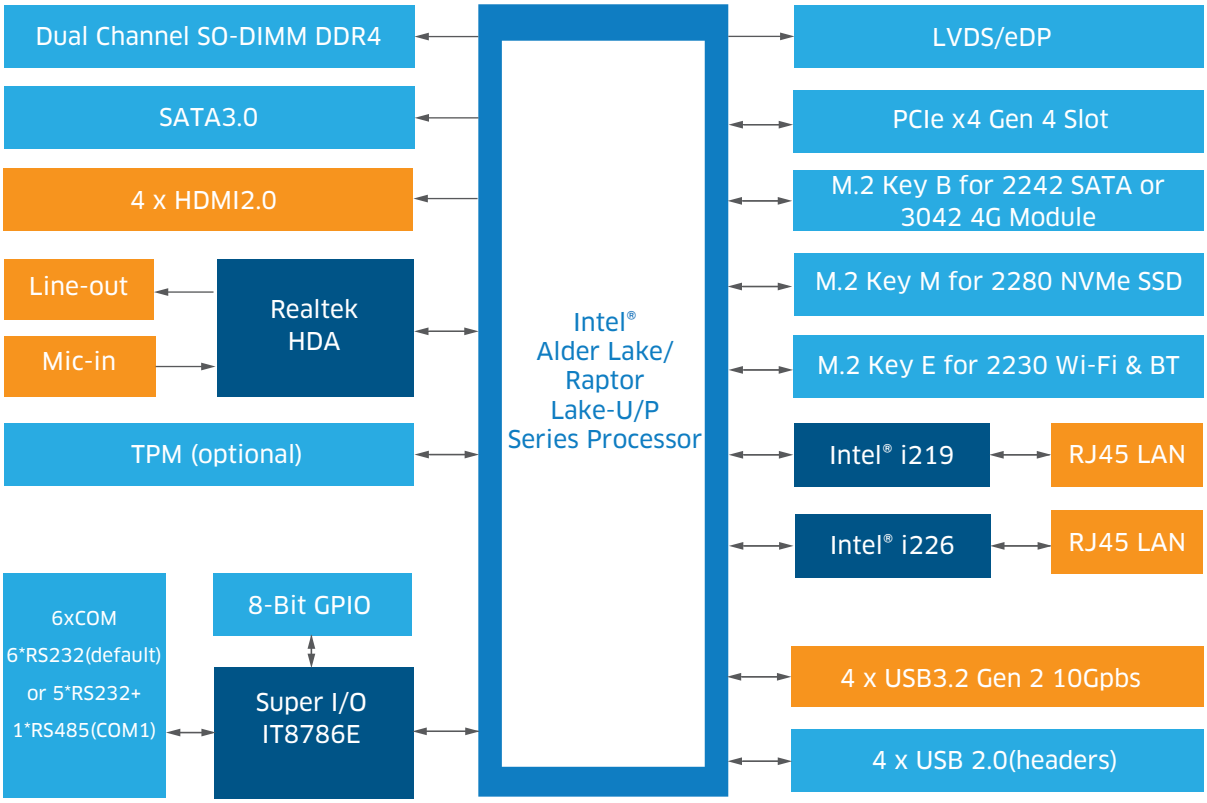


Technical Specifications

Processor	**Alder Lake P Series**	**i7-1260P**	**i5-1240P**	**i3-1220P**
	Total Cores/Threads	12C/16T	12C/16T	10C/12T
	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	8 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
	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
	BIOS	AMI UEFI BIOS		
Memory	Type	Dual Channel SO-DIMM DDR4		
	Max.Capacity	64GB		
Display	GPU	Integrated Intel Iris® Xe Graphics eligible/UHD Graphics		
	Interface	4 x HDMI2.0+1x LVDS/eDP		
		support four 4K independent displays. Max. four screens for mutiple displays.		
Ethernet	Controller	1 x Intel i226, Data Rate Per Port: 2.5GbE		
		1 x Intel i219, Data Rate Per Port: 1.0GbE		
	Interface	2 x RJ45		
	Wake on LAN	Yes		
Audio	Audio Codec	Realtek HD ALC897		
	Interface	1 x Line-out, 1xMic-in, supports audio header and amplifier header		
Hardware Monitoring		CPU system temperature, onboard voltage, watchdog, auto power on		
Storage	M.2_N	1 x M.2 Key M for 2280 NVMe SSD		
	M.2_S	1×M.2 Key B for 2242 SATA SSD or 4G Module		
	SATA	1 x SATA3.0		
Expansion	M.2_E	1 x M.2 Key E for 2230 WiFi and Bluetooth, support CNVi		
	PCIe x4	1*PCIe x4 Gen 4 Slot		
	SIM	1x Nano SIM Slot		
Other I/O	COM	6 x COM: 6*RS232 by default, or 5*RS232+1*RS485(COM1) optional		
	USB3.2	4 x USB3.2(ports)		
	USB2.0	4 x USB2.0(headers)		
	GPIO	8-bit		
	TPM2.0	Onboard, optional		
Dimension	Size	170mm x 170mm		
	Form Factor	Mini-ITX		
Power	Standard Port	19V/12V DC-in		
	Peripheral Input	For Fan and SATA		
	Operating Temp.	-20°C ~60°C		
	Storage Temp.	-40°C ~80°C		
Operating System		Win10/11 64 bit, Linux 64 bit		

* All specifications and photos are subject to change without notice.

Block Diagram



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Order Information

Model Name	Description
DT1250P-A	DT MINI-ITX Intel Core i5-1250P AL10V20 2LAN 6*RS232 4HDMI+LVDS
DT1235U-A	DT MINI-ITX Intel Core i5-1235U AL10V20 2LAN 6*RS232 4HDMI+LVDS
DT1255U-A	DT MINI-ITX Intel Core i7-1255U AL10V20 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.

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