BXAL-10V2.0

Intel Alder Lake/Raptor Lake Processor
based Fanless Embedded PC with 2LAN, 6USB, 4HDMI

Features

- CPU: Intel® Alder Lake/Raptor Lake series processor
- Memory: Dual channel SO-DIMM DDR4 up to 64GB
- GPU: Integrated Intel Iris® Xe /UHD Graphics via CPU
- Ethernet: Intel i226 + Intel i219
- 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

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Introduction

The BXAL-10 V2.0 is a high-performance fanless embedded PC powered by Intel® Alder Lake and Raptor Lake processors, supporting Core™ i3-1215U, i7-1255U, and i7-1360P options. Built on Intel's hybrid architecture with Performance-cores and Efficient-cores, it delivers strong multi-threaded performance and power efficiency within a 15–28W power envelope. A rugged, passive cooling design enables reliable 24/7 operation across a wide operating temperature range of –20°C to 60°C, making the system well suited for long-term deployment in industrial and edge environments where stability and low maintenance are critical.

Designed for multi-display and I/O-intensive applications, the BXAL-10 V2.0 supports four independent HDMI 2.0 outputs, dual Ethernet (2.5GbE + 1GbE), and a rich set of expansion interfaces. Storage and connectivity options include PCIe Gen4 x4, multiple M.2 slots for NVMe SSD, SATA SSD, Wi-Fi/Bluetooth, and 4G modules, as well as a SATA 3.0 interface. With comprehensive hardware monitoring, watchdog support, and compatibility with Windows 10/11 and Linux (64-bit), the BXAL-10 V2.0 provides a flexible and dependable computing platform for applications such as digital signage control, monitoring systems, industrial gateways, and edge computing deployments.
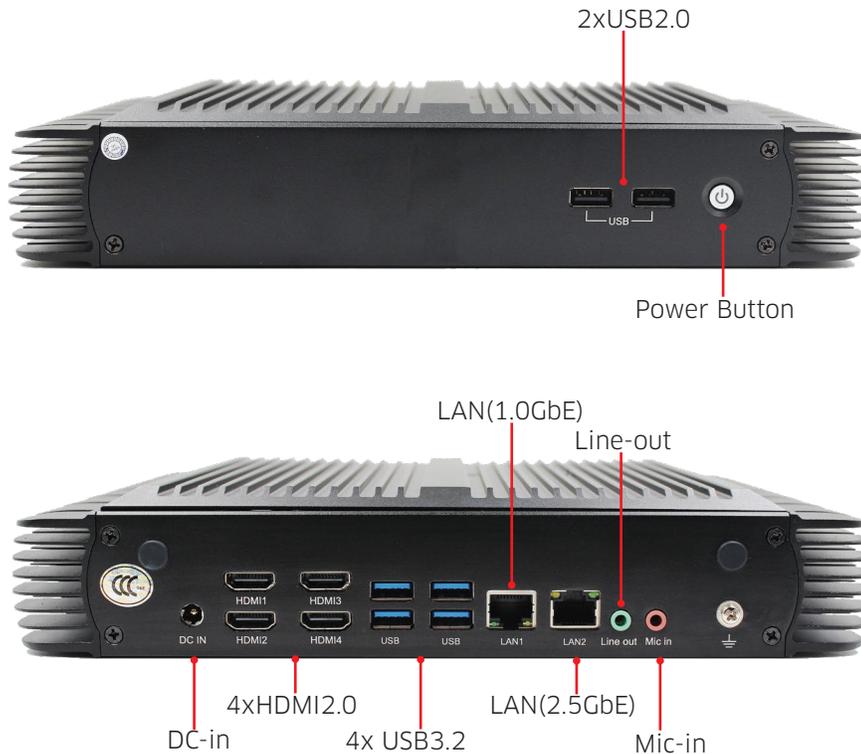
Linux™

ubuntu Linux

Windows

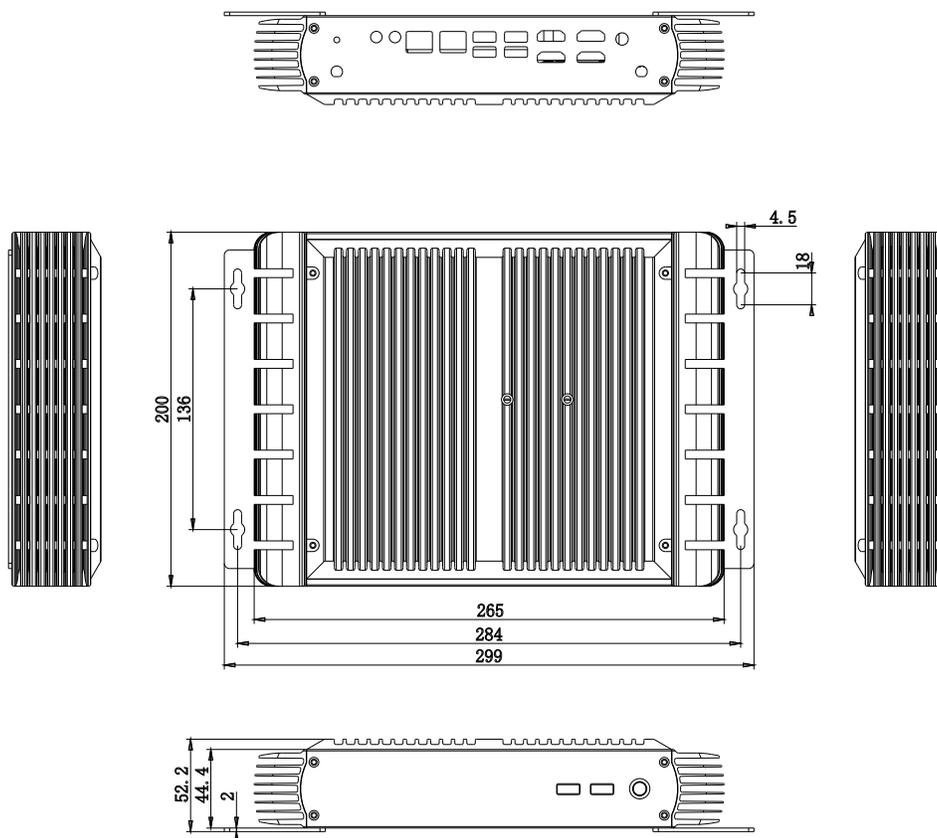H/W Monitor   Watchdog

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

I/O Interfaces

2xUSB2.0

USB

Power Button

LAN(1.0GbE)

Line-out

HDMI1 HDMI3

HDMI2 HDMI4

DC IN   USB   USB   LAN1   LAN2 Line out Mic in

4xHDMI2.0

DC-in   4x USB3.2

LAN(2.5GbE)

Mic-in

Technical Specifications

Processor	Alder Lake/Raptor Lake	Core i3-1215U	Core i7-1255U	Core i7-1360P
	Total Cores/Threads	6C/8T	10C/12T	12C/16T
	P-core Max Frequency	4.4 GHz	4.7 GHz	5.0 GHz
	E-core Max Frequency	3.3 GHz	3.5 GHz	3.7 GHz
	Cache	10 MB	12 MB	18 MB
	Processor Base Power	15 W	15 W	28 W
	BIOS	AMI UEFI BIOS		
Memory	Type	Dual Channel SO-DIMM DDR4		
	Max Capacity	64GB		
Display	GPU	Intel® Iris® Xe Graphics eligible/UHD Graphics depends on CPU		
	Display Port	4 x HDMI2.0		
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, 1 x Mic-in, supports audio header and amplifier header		
Hardware Monitoring		CPU temperature, system temperature, onboard voltage, watchdog		
Storage/Expansion	SATA	1 x SATA3.0		
	M.2_N	1 x M.2 Key M for 2280 NVMe SSD		
	M.2_S	1 x M.2 Key B for 2242 SATA SSD or 4G Module		
	M.2_E	1 x M.2 Key E for 2230 WiFi and Bluetooth, support CNVi		
	PCIe x4	1*PCIe x4 Gen 4 Slot		
Other I/O	USB2.0	2 x USB2.0		
	USB3.2	4 x USB3.2		
Dimension	Size	299mm x 200mm x 52.2mm (L x W x H)		
Power	Standard Port	19V/12V DC-in		
Temperature	Operating Temp.	-20℃ to 60℃		
	Storage Temp.	-40℃ to 80℃		
Cooling		Passive		
Operating System		Win 10/11 64bit, Linux 64bit		

Dimension(mm)

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