BRAV-7721-S001

Intel® Alder Lake-S LGA1700 CPU, 3*LAN, 6*USB3.2, 8K DP+4K HDMI , 2*PCIe5.0 X8+2*PCIe4.0 X4, 2*2.5" SATA bay, 1000W DC IN 12V.

JHCTECH

IoT Computer Connecting the Dots

MEC System——BARV Series

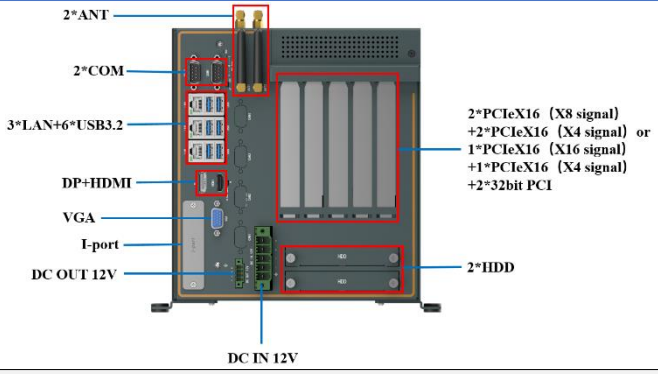
Key Features

- Intel® 12th Gen Alder lake-S LGA1700 CPU
- Intel® Q670 Chipset
- 2*DDR5 4800MHz SODIMM, up to 64GB
- 1*DP+1*HDMI and 1*VGA, UHD 8K+4K three independent displays
- 2*Intel® I226V Gigabit LAN, 1*Intel® I219LM Gigabit LAN, support iAMT12.0
- 2*PCIe X16 (X8 signal)+2*PCIe X16 (X4 signal), four PCIe expansions
- 2*2.5" SATA3.0 Bays, 1*M.2 2280 PCIeX4 NVMe
- Support TPM2.0 and iVpro technology
- Fanless cooling for CPU , AI/GPU card with efficient fan cooling design
- Support dual 450W GPU + dual 75W/150W AI acceleration cards
- 1000W DC IN 12V, and wide temperature fanless AC-DC power adapter with PFC

Product Overview

BRAV-7721-S001 is a workstation-grade Edge computing system, powered by Intel® Alder Lake-S series CPU, Q670 chipset, dual-channel DDR5 memory, and four PCIe expansions. Flexible optional computing power, multi IO interfaces, high PFC power supply , high efficiency cooling solution and industrial grade reliability design, very suitable for V2X MEC, highway event detection, unmanned experiment vehicle and high-precision machine vision and other fields and applications.

IO Layout



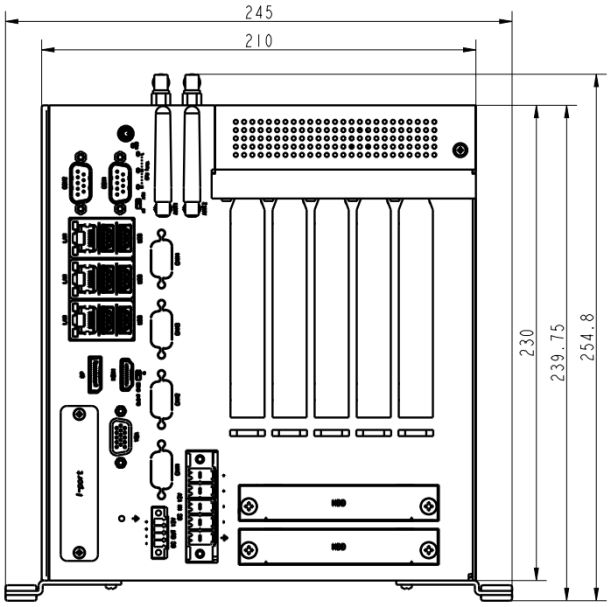
Product SPEC

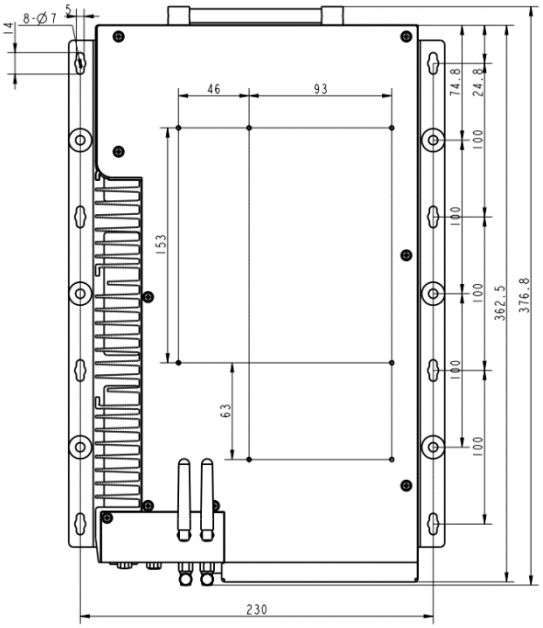
CPU+PCH	Intel® Alder lake-S 12th-Gen Core™ i9/i7/i5/i3/Pentium/Celeron LGA1700 CPU，Intel® Q670 PCH
Memory	2*262-Pin SODIMM, dual channel DDR5 4800MHz, up to 64GB
Expansion	1*Full size Mini PCIe (PCIeX1+USB signal) with SIM slot, for 4G LTE modem or PCIe signal I/O module 1*full size mSATA，with SATA3.0 signal, max 6Gbps 1*M.2 B-Key 3052 (PCIeX1+USB signal) with a SIM slot, support 5G NR modem 1*M.2 2280 M-Key (Gen4, X4 signal, from PCH), support NVME high-speed SSD or PCIe signal module 2*PCIe X16 (Gen5, X8 signal, from CPU), support two highest power consumption 450W GPU card or AI acceleration card (the length of the card must be less than 300mm) 2*PCIe X16 (one is Gen4 and the other is Gen3, X4 signal, from PCH), support 2*75W consumption AI acceleration card (the length of the card must be less than 300mm)
Graphics	Intel® UHD Graphics, Supports DirectX 12, OpenGL 4.5，OpenCL 3.0, DP max res. 7680*4320@60Hz, HDMI max res. 4096*2160@60Hz, VGA max res. 1920*1200@60Hz, support three independent displays
LAN	2*Intel I226V Gig. Ethernet, PCIeX1 full bandwidth, 10/100/1000Mbps; 1*Intel I219LM Gig. Ethernet, 10/100/1000Mbps, support iAMT12.0 and vPro (only Core I5/I7/I9 CPU)
Storge	2*2.5 "SATA3 easy-plug SATA bays, larger capacity thickness15mm HDD, support Raid0/1; 1*M.2 2280 M-key(Gen4, PCIeX4 signal), support NVMe ultra-high speed storage; 1*full size mSATA，with SATA3.0 signal, max 6Gbps
DIO	Optional 16bit DIO, TTL signal, programmable input/output
I/O Interface	3*RJ45 Gig-LAN; 4*USB3.2(gen2.0 10Gbps, Type A,); 2*USB3.2(gen1.0 5Gbps, Type A); 2*RS232/422/485(via BIOS, DB9 male); 1*VGA+1*DP+1*HDMI; 2*USB2.0(pin header inside); 16bit DIO (2*10pin header inside); 1*F_Audio (pin header inside)
I-port	Support 16bit DIO pin header lead wire , USB2.0 or Mini PCIe and other expansion interfaces lead wire
LED	1*Power LED(on power button), 1*HDD LED, 3*CPU temp LED (Red is warning , Yellow is high, Green is normal)
Control SW	1*Power button w/LED, AT/ATX dip, Clear Cmos dip
Power Supply	DC IN 12V, 5-pin 7.62mm Term., with short circuit(SCP) and overcurrent(OCP) protection, maximum output power 1000W TDP: TBD

Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second
OS Support	Windows 11，Windows 10 IoT Enterprise 2021 LTSC, Ubuntu, SuSe, Red Hat Enterprise, Wind River Linux, Wind River VxWorks 7
Structure	SGCC frame, Aluminum-magnesium alloy chassis, temperature control by PWM fan
Color	Granite gray + Black
Mounting	Desktop Mounting, with anti-vibration rubber pads
Dimension	(W*H*D)：245*376.8*254.8 mm
Net weight	TBD
Operating temperature	-20℃～60℃, airflow
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C, Non-condensing
Vibration	5grms/5~500Hz/random/in working (SSD); 1grms/5~500Hz/random/in working (HDD)
Shock	50g peak acceleration(11ms duration)(SSD); 20g peak acceleration(11ms duration)(HDD)
Certification/EMC	CE/FCC Class A

Dimension

Unit：mm





Ordering Info.

Model No.	Introduction	Expansion
BRAV-7721-S001	Edge Computing system, Intel® 12th Gen Alderlake-S LGA1700 CPU, Q670 PCH, 2*DDR5 SODIMM, 3*LAN, 6*USB3.2, 2*USB2.0 (inside), 2*COM, 1*VGA, 1*DP, 1*HDMI, 16bit DIO(inside), 1*I-Port, 2*2.5" SATA bay, 1*Mini PCIe, 1*mSATA, 1*M.2 B-Key, 1*M.2 M-Key, DC 12V.	Default: ECX-254 riser card, 2*PCIeX16 (X8 signal) + 2*PCIeX16 (X4 signal) Optional: ECX-275 riser card, 1*PCIeX16 (X16 signal) + 1*PCIeX16 (X4 signal) + 2*32bit PCI
Recommend GPU /AI Module	Support a maximum 2*450W GPU + 2*75W/150W AI accelerate card (the length of the card must be less than 300mm)	
UHP-500DC12	AC/DC power adapter，DC12V@41.7A, 90-264V AC input, DC 12V output, wide temperature fanless, 500W	
LMF1000-20B12	AC/DC power adapter，DC12V@80A, 90-264V AC input or 120-370V DC input, DC 12V output, 1000W, low-nose fan	

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