

BRAV-7821

Intel Core Ultra CPU, 3*LAN, 4*USB, 1*HDMI+1*DP, 2*COM, 1*M.2 M-key, 1*M.2 B-key, 1*M.2 E-key, 1*Mini PCIe, 1*PCIeX16, 1*2.5" SATA Bay, DC-IN 12V

JHCTECH

IoT Computer
Connecting the Data

Edge Computing System
BARV Series



Key Features

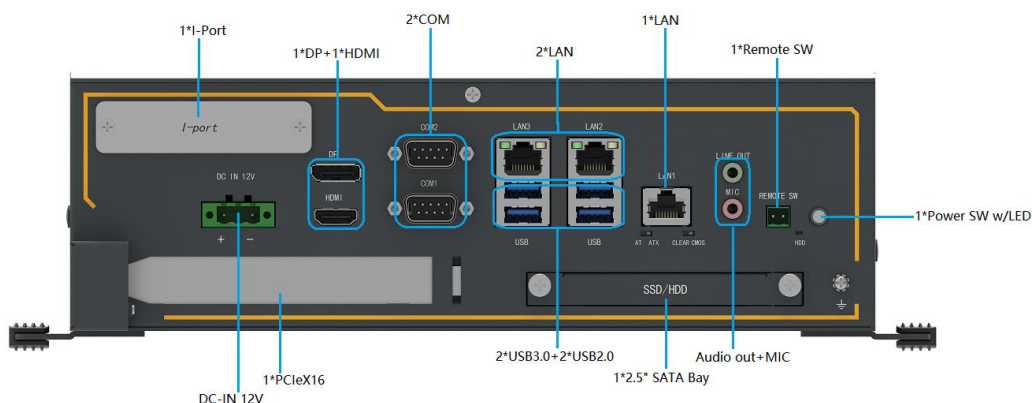
- Intel® Core Ultra Series 2 SoC CPU
- 2*DDR5 5600MHz SODIMM Max. 96GB
- 1*M.2 PCIeX4 NVME and 1*2.5" SATA3.0 Bay
- 1*HDMI2.1+1*DP 2.1, 2 UHD independent displays
- 3*Gig LAN, 2*USB3.2, 2*USB2.0
- 1*M.2 B-key and 1*M.2 E-key support 4G LTE/5G NR and WIFI6+BT5.x
- DC-IN 12V power input, with OVP,OCP and SCP
- Aluminum-magnesium alloy chassis, Fan cooling design



Product Overview

The BRAV-7821 is powered by an Intel® Core™ Ultra Series 2 SoC CPU, supporting up to 96GB of RAM. It features multi-network, multi-display, multi-storage, and multi-expansion capabilities, powered by DC 12V/10A input. Designed for MEC (Multi-access Edge Computing) edge computing, it is ideal for industries such as smart transportation, machine vision, intelligent logistics and medical imaging.

IO Layout

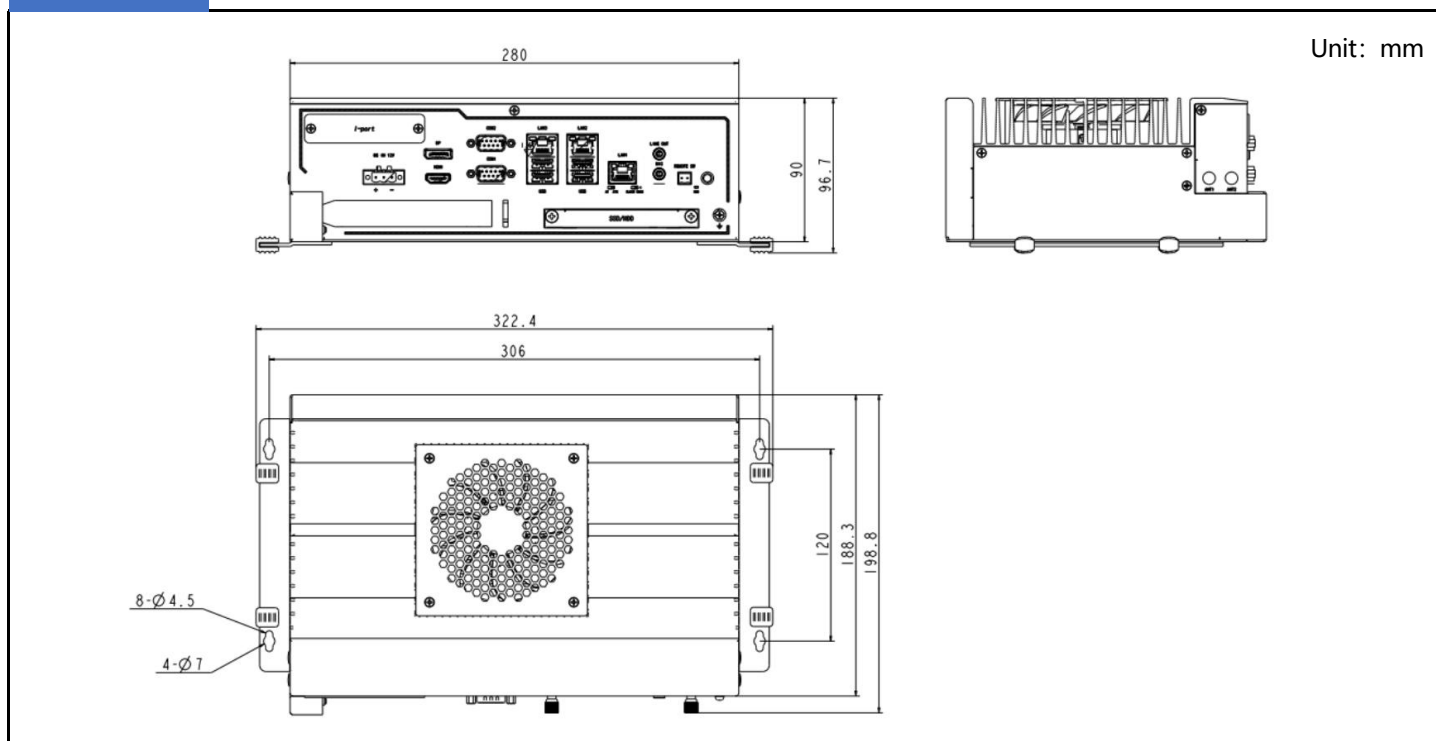


Product SPEC

CPU	Intel® Core™ Ultra CPU , Arrow Lake-H: Ultra 5 225H or Ultra 7 255H
Memory	Dual channel DDR5-5600 MHz, 2 * SODIMM Slot, up to 96GB
Expansion	1 * M.2 3042/3052 B-Key (PCIe+USB2.0, Support 4G LTE/5G NR) , with 1 * Nano SIM Card Slot 1 * M.2 2230 E- Key(PCIe+USB2.0), Support Wifi6 +BlueTooth 5.x) 2* M.2 2280 M- Key (PCIeX4, Gen4, Support NVMe or 10Gig-LAN) 1* PCIeX16 (PCIe 4.0 X8), Adapter I/O card: power less than 60W and length less than 170mm 1* Mini PCIe Full size (PCIeX1 or SATA3.0) , support PCIeX1/SATA SSD auto detect
Graphics	Intel® Arc™130T Peak 63TOPS(INT8) or 140T Peak 74TOPS(INT8) , Supports DirectX12.2, OpenGL 4.6 and OpenCL 3.0, H.264,H.265 (HEVC) and AV1 Hardware Encode/Decode, VP9 Bitstream & Decoding, max resolution up to 4096 x 2304 @ 60Hz (HDMI 2.1 TMDS) and 7680 x 4320 @ 60Hz (DP 2.1)
NPU	Intel® AI Boost, Peak 13TOPS(INT8), Supports OpenVINO™, WindowsML , DirectML , ONNX RT
Audio	Realtek ALC 897 Audio HDA codec , Support Audio Line-Out and MIC
LAN	1* Intel® I219LM Gig LAN Chip (RJ45,10/100/1000Mbps), Supports iAMT(Specify CPU model) 2* Intel® I210AT Gig LAN Chip (RJ45,10/100/1000Mbps)
Storage	1 * M.2 2280 M- Key (PCIeX4 Gen4, Support PCIE X4 NVMe) 1* 2.5" SATA3.0 6.0Gbps, Easy-Plug SATA Bay 1* Mini PCIe Full size (PCIeX1 or SATA3.0) , support PCIeX1/SATA SSD auto detect
I/O Interface	3*Gig-LAN(RJ45 w/LED); 1*HDMI (Type A)+1*DP (Type A) ; 2*USB3.2(Type A) +2*USB2.0 (Type A); 2*RS232/422/485 (DB9 Male) ; 1*MIC+1*Line-out (3.5mm phonejack) Internal I/O: 1*eDP; 2*USB2.0(2*4 header)
I-Port	Support internal 1*eDP、 2*USB2.0 or M.2/Mini PCIe and ect. expansion module

Control SW	1* Power button w/LED, AT/ATX dip, Clear Cmos dip
Power Supply	DC-IN 12V power input ,3-pin 5.0mm terminal block interface ,with short circuit, over voltage and over current protection, TDP: TBD
OS Support	Windows 10/11 64-bit, Linux
Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second
Structure	Aluminum extrusion thermal enclosure, SGCC frame
Color	Black and Granite Gray
Mounting	Desktop Mounting with anti-vibration rubber pads
Dimension	(L*W*H) : Main box: 280.0*198.8*90mm; Including mounting bracket: 322.4*198.8*96.7mm
Operating temperature	-20°C ~ 65°C, 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



Ordering Info.

Model No.	CPU	Introduction
BRAV-7821-S001	Intel Ultra 5 225H	2*DDR5 SODDIM, 3*LAN, 2*USB3.2, 2*USB2.0 , 1*HDMI,1*DP, 2*COM, 1*MIC, 1*Line- out, 1*M.2 M-key, 1*M.2 B-key, 1*M.2 E-key, 1*Mini PCIe(PCIex1/SATA3.0), 1*PCIex16(X8 signal), 1*2.5" SATA Bay, DC-IN 12V.
BRAV-7821-S002	Intel Ultra 7 255H	
PA-120DC12 component	AC/DC power adapter, DC 12V/10A 120W + X Standard Power Cable	