

# BRAV-7823

Intel Core Ultra CPU, 6\*LAN, 4\*GMSL2, 3\*USB Type C, 1\*HDMI, 4\*COM, 2\*CAN, 8\*Iso. DIO, Audio out+Mic, 1\*M.2 M-key, 1\*M.2 B-key, 1\*M.2 E-key, DC-IN 9~36V

**JHCTECH** IoT Computer Connecting the Data

Edge Computing System  
BARV Series



## Key Features

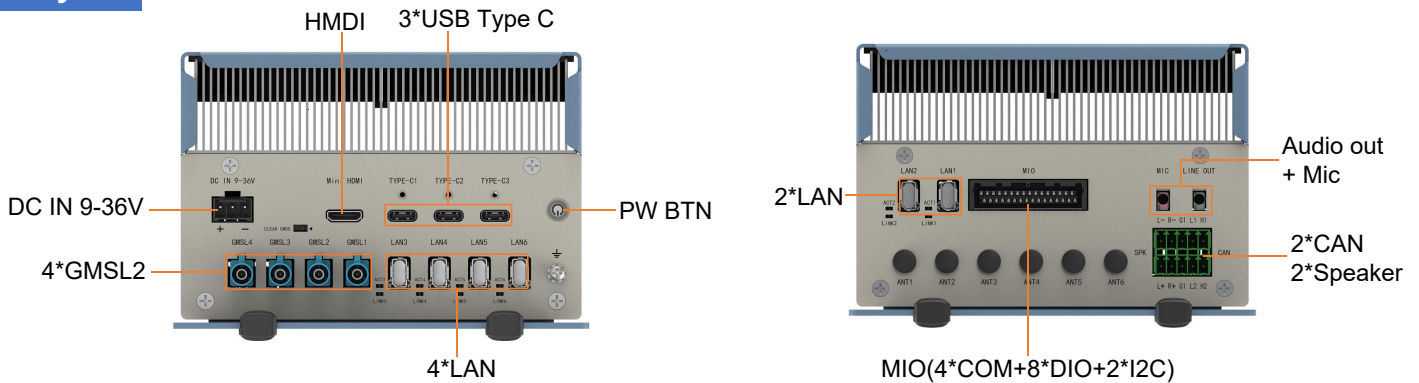
- Intel® Panther lake-H SoC CPU
- Onboard LPDDR5x 8533MHz memory, Max. 64GB
- 1\*M.2 2280 M-Key PCIeX4 NVMe
- 1\*HDMI2.1 UHD display port, Audio out+Mic
- 6\*Gig LAN, 3\*USB Type C, 4\*GMSL2, 2\*CAN2.0, 2\*RS232/422/485+2\*RS232 8\*Isolated DIO, 2\*I2C
- 1\*M.2 B-key and 1\*M.2 E-key support 4G LTE/5G NR and WIFI7+BT5.4
- DC-IN 9~36V power input , with OVP,OCP and SCP
- Aluminum-magnesium alloy chassis, Automotive-grade shock resistance design, Compact design



## Product Overview

The BRAV-7823 is powered by an Intel® Core™ Ultra Series 3 Panther lake-H CPU, supporting up to 64GB onboard memory. It features multi-network, multi-I/O, and multi-expansion , DC 9~36V wide power input, with OVP,OCP and SCP protect Aluminum-magnesium alloy chassis,fan cooling and compact design. It is ideal for embodied robots and humanoid robots.

## IO Layout

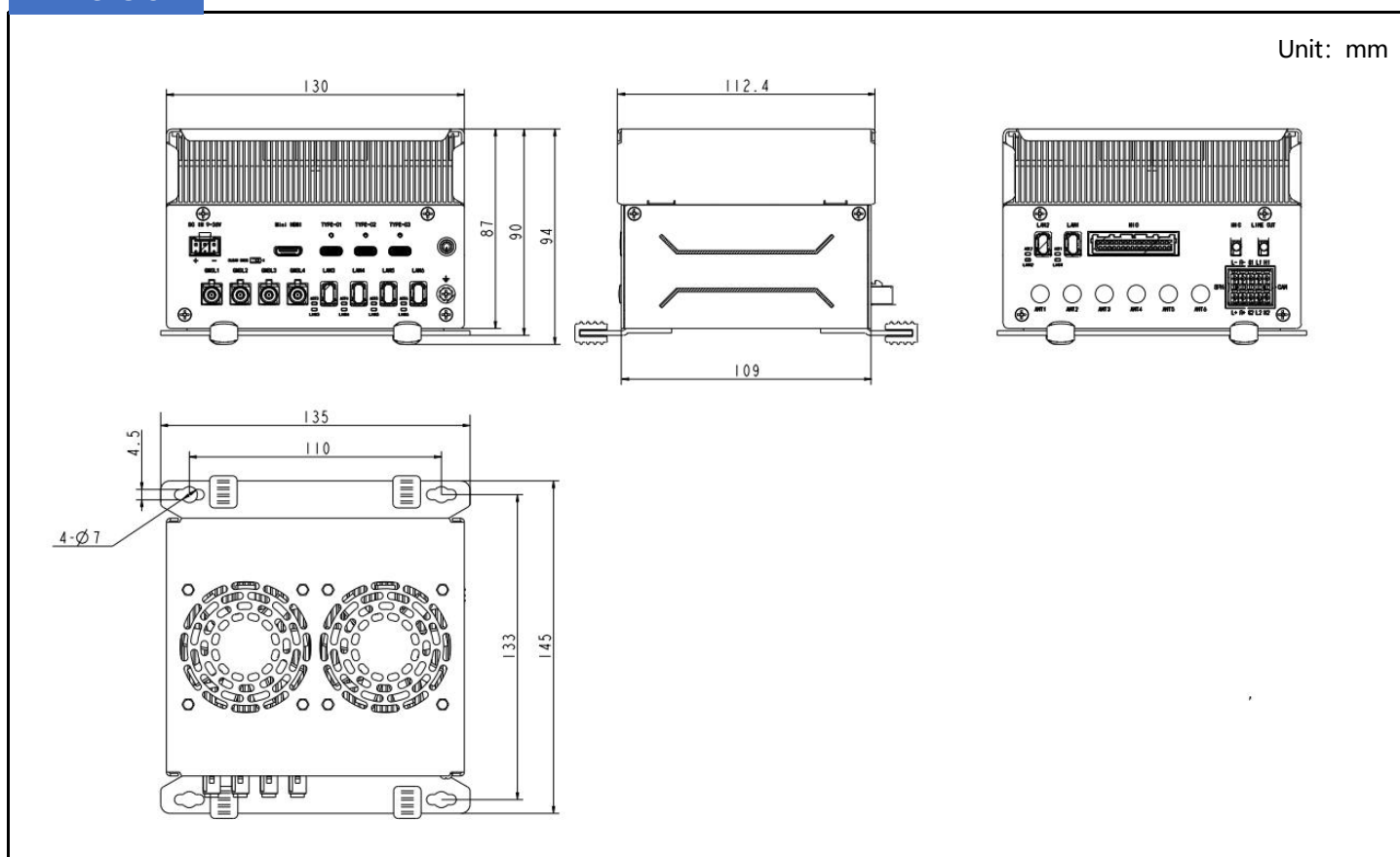


## Product SPEC

CPU	Intel® Core™ Ultra CPU , Panther Lake-H: Ultra X7 358H and Ultra 5 338H
Memory	Dual channel LPDDR5x-8533MHz, Onboard up to 64GB
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 Wifi7 +BlueTooth 5.4)
Graphics	Intel® Arc™ B390/B370 GPU Peak 98~122TOPS(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 7680*4320@60Hz (HDMI 2.1 FRL)
NPU	Intel® NPU Peak 47~50TOPS(INT8), Supports OpenVINO™, WindowsML, DirectML, ONNX RT
IPU	Intel® Image Processing Unit Version 7.5, Max Resolution (IPU) 16MP
Audio	Realtek ALC 897 Audio HDA codec , Support Audio Line-Out+MIC, Dual channel 3W/8Ω Amplifier speaker
LAN	6* Intel® I210AT Gig LAN Chip (RJ45,10/100/1000Mbps), Supports WOL
Storage	1 * M.2 2280 M - Key (PCIeX4 Gen4, Support PCIE X4 NVMe)
I/O Interface	6*Gig-LAN(IX61G2 w/LED); 1*Mini HDMI (Type C); 3*USB Type C(5*USB3.2+5*USB2.0); 4*GMSL2(Fakra); 2*16pin MIO(2*RS232/422/485+2*RS232, 8*Isolated DIO,2*I2C); 1*Mic+1*Audio-out (3.5mm phone jack) 2*5pin terminal block (2*CAN2.0, Dual channel Amplifier speaker)
Control SW	1* Power button w/LED, Clear Cmos dip
Power Supply	DC-IN 9~36V wide power input ,3pin 3.96mm terminal block interface ,with short circuit, over voltage and over current protection, TDP: TBD
OS Support	Windows 10 64 bit, Windos 11 64 bit, Linux
Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second

Structure	Aluminum extrusion thermal enclosure, SGCC frame; fan cooling and compact design
Color	Silk Grey+Pastel Blue
Mounting	Desktop Mounting with anti-vibration rubber pads
Dimension	(L*W*H) : Main box: 130*112.4*87mm; Including mounting bracket: 135*145*94mm
Operating temperature	-20°C~50°C, with airflow
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C, Non-condensing
Vibration	5grms/5~500Hz/random/in working (SSD);
Shock	50g peak acceleration(11ms duration)(SSD);
Certification/EMC	CE/FCC Class A

## Dimension



## Ordering Info.

Model No.	CPU and Memory	Introduction
BRAV-7823-S001	Intel Ultra 5 338H, LPDDR5x 16GB	6*LAN, 4*GMSL2, 3*USB Type C(5*USB3.2+5*USB2.0)
BRAV-7823-S002	Intel Ultra X7 358H, LPDDR5x 32GB	1*Mini HDMI, Audio out+Mic, 2*Chanle Amplifier speaker, 2*CAN2.0, 1*MIO(2*RS232/422/485 + 2*RS232, 8*Iso.DIO, 2*I2C), 1*M.2 M-key NVMe, 1*M.2 B-key, 1*M.2 E-key, DC-IN 9~36V.
PA-120DC19 component	AC/DC power adapter, DC 19V/6.32A 120W + X Standard Power Cable	
Standard Package	1*2x5-pin Phoenix connector; 1*DC-IN connector with DF63-3S-3.96C assembly; 1* Mini HDMI to HDMI Type A cable; 2* USB Type C cables; 2*IX40G-A-10S assembly to RJ45 cables; 1*ZH05-16DP-HU(A) connector for MIO assembly	
IX40G Network Cable	IX40G-A-10S assembly to RJ45 network cable, 25cm in length	
USB Type C Cable	USB Type C male to dual USB3.0 Type A female cable, 25cm in length	
GMSL2 Interface Cable	Fakra to Fakra, female to female, 100cm in length	