

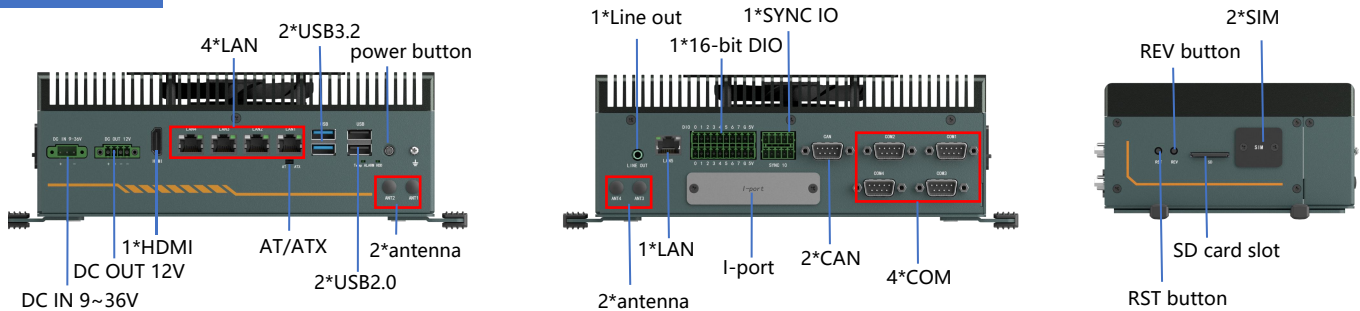
## Key Features

- NVIDIA Jetson AGX Orin 32/64G, 200/275TOPS
- 8/12\*Cores ARM Cortex-A78AE CPU, 2.2GHz(maximum frequency)
- NVIDIA Ampere GPU with Tensor Cores
- Onboard 32/64G 256bit LPDDR5 Ram and 64GB eMMC, 1\*M.2 M-Key NVME and optional 1\*2.5 "SATA bay
- 1\*HDMI, 1\*Audio Line-out, 5\*LAN, 2\*USB3.2, 2\*USB2.0, 4\*COM, 2\*CAN, 16-bit DIO,1\*SYNC IO
- 1\*F-Mini PCIe and 1\*M.2 B-Key support 4G LTE or 5G NR, 1\*M.2 E-Key support Wifi&BT wireless routes
- DC9~36V wide power input, with OVP, OCP and SCP
- Aluminum-magnesium alloy chassis, Fan cooling design

## Product Overview

BRAV-7131 is equipped with NVIDIA Jetson AGX Orin 32/64GB module, 8/12 cores ARM CPU and high performance GPU, up to 200/275TOPS AI performance, onboard 32/64G memory and 64G storage, multichannel IO and clock synchronization, DC 9~36V wide voltage power supply. It can be used as MEC(Multi-Access Edge Computing) for intelligent transportation, machine vision, intelligent logistics and other industries.

## IO Layout

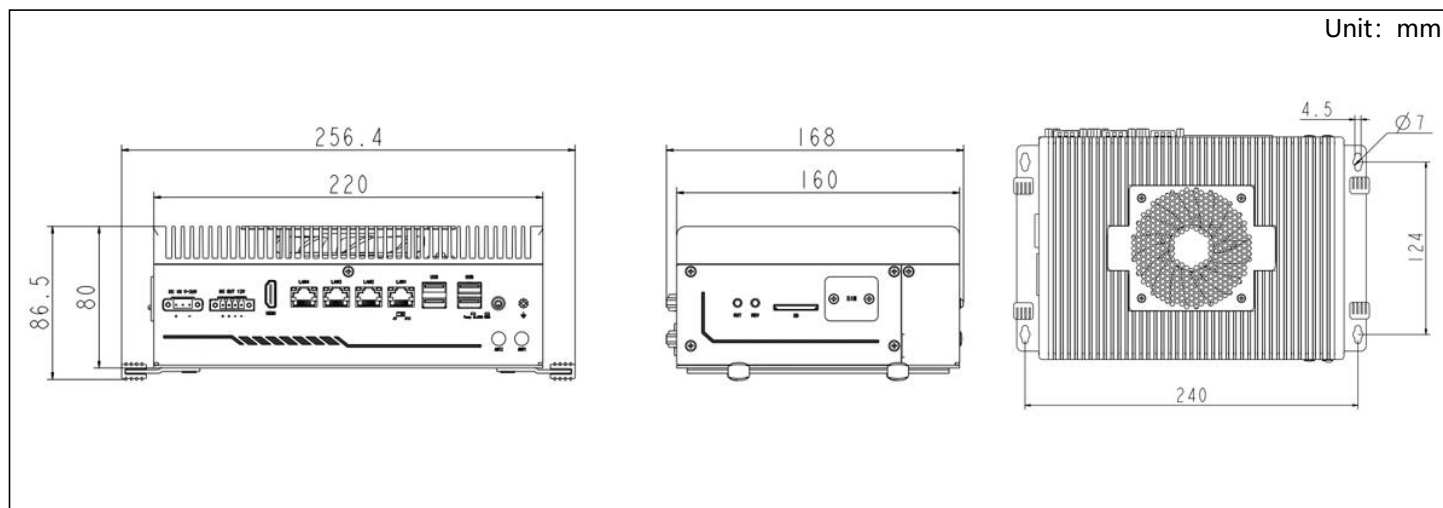


## Product SPEC

CPU	8*Cores Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2+4MB L3, maximum frequency 2.2GHz(S001); 12*Cores Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2+6MB L3,maximum frequency 2.2 GHz(S002)
GPU	1792*Cores NVIDIA Ampere Architecture GPU 930MHz, with 56*Tensor Cores(S001) 2048*Cores NVIDIA Ampere Architecture GPU 1.3GHz, with 64*Tensor Cores(S002)
DL Accelerator VS Accelerator	2*NVDLA v2, PVA v2.0, AI performance up to 200(S001)/275(S002) TOPS(INT8)
Memory	Onboard 32GB(S001)/64GB(S002) 256-bit LPDDR5, the maximum bandwidth up to 204.8GB/s
Expansion	1*Full size Mini PCIe, with SIM card slot, PCIe X1 + USB2.0 signal, support 4G LTE ,Ethernet port or CAN port and other function modules; 1*M.2 3052 B-key, with SIM card slot, PCIe X1 + USB2.0 signal, support 4G LTE or 5G NR wireless function module; 1*M.2 2280 M-Key , PCIe X4 signal, support NVMe high-speed memory card or edge AI computing module; 1*M.2 2230 E-Key , PCIe X1 + USB2.0 signal, support gigabit bandwidth WiFi6/BT5.0
Graphics	Video code : (H.265)H.264, AV1:1 *4K60,3*4K30,6*1080p60,12*1080p30 (S001);2*4K60,4*4K30,8*1080p60,16*1080p30 (S002); Video decode : (H.265)H.264, VP9, AV: 1*8K30,2*4K60,4*4K30,9*1080p60,18*1080p30(S001); 1*8K30,3*4K60,7*4K30,11*1080p60,22*1080p30(S002); The highest resolution of HDMI 2.0 is 4096*2304@60Hz
Audio	Realtek ALC564, support stereo channel output
LAN	5*Intel I210AT PCIe Gig. Ethernet, 10/100/1000Mbps, supports WOL
Storage	Onboard 64GB eMMC 5.1, optional 1*2.5" HDD/SSD SATA bay, up to 6Gbps; 1*M.2 Type 2280 M-Key, PCIeX4 signal, support NVMe high-speed memory card; 1*Micro SD card
Clock synchronization	1*SYNC IN and 1*SYNC OUT, support network and GPS/BDS clock timing
DIO and serial port	8-bit 2.5KV Iso. DI (TTL signal), 8-bit 2.5KV Iso. DO (TTL signal); 2*2.5KV Iso. RS485, max baud rate 115200Hz; 2* Non-isolated RS232, max baud rate 230400Hz

I/O Interface	Front I/O: 4*RJ45; 1*HDMI; 2*USB3.2(Gen2 10Gbps, Type A); 2*USB2.0 (Type A); Rear I/O: 1*Line out; 1*RJ45; 2*RS485(2*DB9 male)+2*RS232(2*DB9 male); 2*Iso. CAN (1*DB9); 1*16-bit Iso. DIO (2*10pin Phoenix terminal); 1*SYNC IO (2*5pin Phoenix terminal); 1*I-port ; Side I/O: 1*SIM card slot; 1*SD card slot
I-port	Supports inside M.2 and Mini PCIe modules expansion interfaces lead wire
LED	1*Power LED(on power button), 1*HDD LED, 1*CPU temp warning LED
Control SW	1* Power button w/LED, 1*RST button, 1*REV button, AT/ATX SW
Power Supply	DC 9~36V wide power input, 3-pin 3.81mm terminal block, with short circuit, over voltage and over current protection, TDP: 50.4W DC 12V output up to 3A, 4-pin 3.5mm terminal block
OS Support	Linux Ubuntu 18.04 and 20.04 with JetPack
Structure	Aluminum-magnesium alloy chassis, fan Cooling, SGCC frame
Color	Granite gray + Graphite black
Mounting	Desktop Mounting with anti-vibration rubber pads
Dimension	(L*W*H): Main box: 220*168*80mm; Including mounting bracket: 256.4*168*86.5mm
Net weight	3.25KG
Operating temperature	-20°C ~ 60°C, airflow
Storage Temperature	-40°C~85°C
Storage Humidity	10~90%@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.	Module	Introduction
BRAV-7131-S001	Jetson AGX Orin 32GB memory, 64GB eMMC	1*HDMI, 5*RJ45, 2*USB3.2, 2*USB2.0, 2*Iso. RS485, 2*RS232, 2*Iso. CAN, 1*16-bit Iso. DIO, 1*SYNC IO, 1*Line out, 1*Mini PCIe w/SIM, 1*M.2 B-Key w/SIM, 1*M.2 E-key, 1*M.2 M-Key, 1*Micro SD, 1*I-port, optional 1*2.5" SATA Bay, DC-IN 9~36V, DC-OUT 12V
BRAV-7131-S002	Jetson AGX Orin 64GB memory, 64GB eMMC	
PA-120DC19	AC/DC power adapter, DC19V/6.32A, 120W	
PA-220DC24	AC/DC power adapter, DC24V/9.17A, 220W (When DC-OUT 12V is used.)	