

ABP-3000 AI

8th Gen Intel® Core™ U-series Processor (Whiskey Lake) Ultra-slim Fanless Edge AI Computing System



Features

- 8th Generation Intel® Core™ U-series processor (Whiskey Lake)
- Ultra-slim and cableless design supports wide range temperature of 0°C to 60°C with fanless operation
- Advanced AI Accelerator supports up to 26 Tera-Operations Per Second (TOPS) with best-in-class power efficiency of 3 TOPS/W
- 4-port USB 3.1 support up to 10Gbps data transfer
- 4 Independent GigE LAN with 2 IEEE 802.3at PoE*
- SIM Socket for 5G/WiFi/4G/3G/LTE/GPRS/UMTS
- 9V to 50V DC wide range Power Input
- Ignition Power Control, TPM 2.0
- Expansion : M.2 Key B, M.2 Key E and Mini PCIe
- Optional VHub One-Stop AIoT Solution Service supports OpenVINO based AI accelerator and advanced Edge AI applications



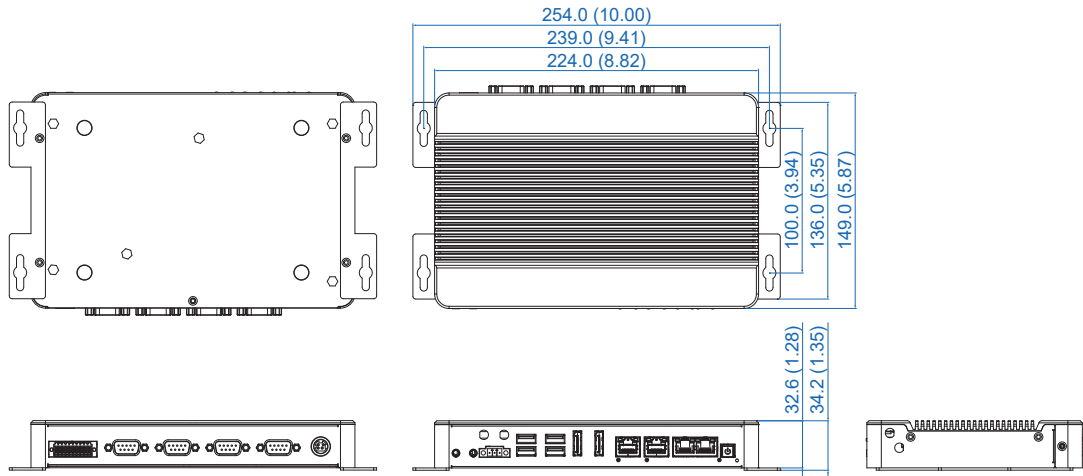
Specifications

System	
Processor	Quad Core Intel® Core™ i7-8665UE/i3-8145UE Processor (Whiskey Lake)
Chipset	Intel® SoC (Cannon Lake)
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2400MHz Memory, up to 64GB (ECC/Non-ECC)
AI Accelerator	
Processor	Hailo-8™ AI Processor, up to 26 TOPS
Framework	TensorFlow, ONNX
I/O Interface	
Serial	4 COM RS-232/422/485 (ESD 8kV)
USB	4 USB 3.1 (External)
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO
LED	HDD, PoE*
SIM Card	2 Internal SIM Card Socket
Expansion	
Mini PCIe	1 Mini PCIe Socket for PCIe/USB/SIM Card
LED	<ul style="list-style-type: none"> ▪ 1 M.2 Key E Socket (PCIe x1) ▪ 1 M.2 Key B Socket (PCIe x2/USB 3.1)
Graphics	
Graphics Processor	Intel® UHD Graphics 620
Interface	2 DisplayPort : Up to 4096 x 2304 @60Hz
Storage	
M.2	1 M.2 Key B Socket (PCIe x2/SATA)
Audio	
Audio Codec	Realtek ALC888A-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out
Ethernet	
LAN 1	GigE LAN by Intel® Ethernet Controller I350
LAN 2	GigE LAN by Intel® Ethernet Controller I350

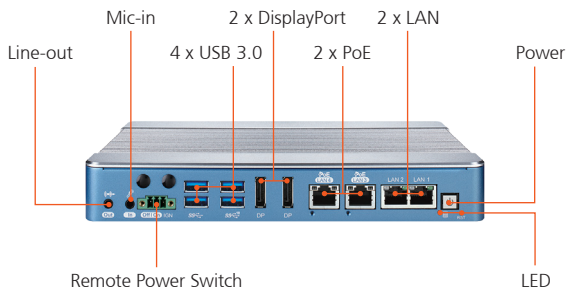
PoE	
LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350 with Power On/Off Control
LAN 4	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350 with Power On/Off Control
Power	
Power Input	9V to 50V, DC-in
Power Interface	Mini DIN
Ignition Control	16 Model
Remote Switch	3-pin Terminal Block : On, Off, IGN
Others	
TPM	Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Management	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.
Software Support	
OS	Windows 10, Linux
Mechanical	
Dimensions (W x L x H)	224.0mm x 149.0mm x 32.6mm (8.82" x 5.87" x 1.28")
Weight	1.4 kg (3.09 lb)
Environment	
Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	0°C to 70°C (32°F to 158°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 75°C
Shock	<ul style="list-style-type: none"> ▪ IEC 60068-2-27 ▪ SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	<ul style="list-style-type: none"> ▪ IEC 60068-2-64 ▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

Dimensions

Unit : mm/ inch



Front I/O



Rear I/O



Order Information

ABP-3000 AI-8665U	ABP-3000, onboard Intel® Core™ i7-8665UE, 4 GigE LAN with 2 PoE*, 4 USB 3.1, 4 COM, 16 Isolated DIO, 3 M.2, 1 Mini PCIe
ABP-3000 AI-8145U	ABP-3000, onboard Intel® Core™ i3-8145UE, 4 GigE LAN with 2 PoE*, 4 USB 3.1, 4 COM, 16 Isolated DIO, 3 M.2, 1 Mini PCIe

Optional Software

VHub AI Developer	AI Development Kit
VHub ROS	AMR Development Kit
VHub EtherCAT	I/O Control Platform

Accessories

DDR4 32G	Certified DDR4 32GB 3200MHz RAM
DDR4 16G	Certified DDR4 16GB 3200MHz RAM
DDR4 8G	Certified DDR4 8GB 3200MHz RAM
DDR4 4G	Certified DDR4 4GB 3200MHz RAM
PWA-120WM4P	120W, 24V, 90V AC to 264V AC Power Adapter with 4-pin Mini-DIN Connector
TMK2-20P-100	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
TMK2-20P-500	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
TMB-TMBK-20P	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
M.2 Storage Module	M.2 Key M/Key B PCIe Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth Module	WiFi & Bluetooth Module with Antenna