

# 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



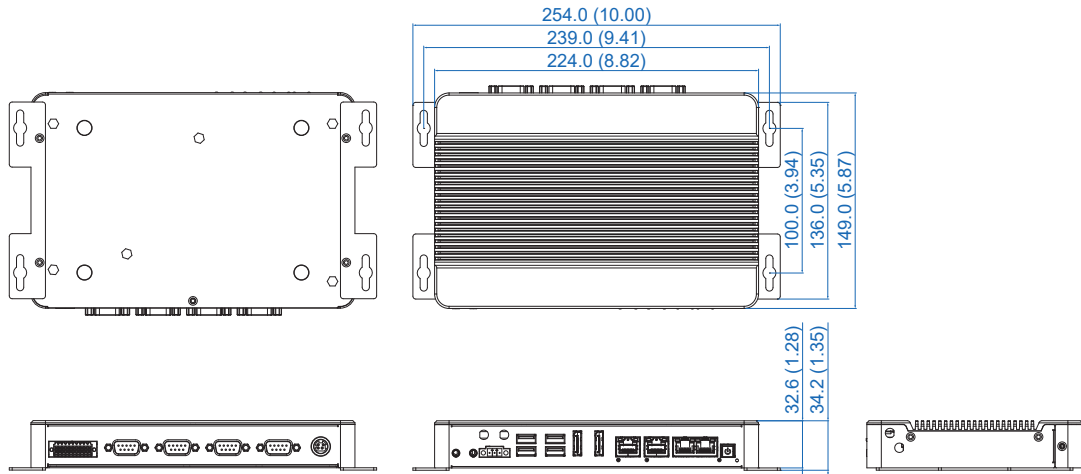
## Specifications

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"> <li>▪ 1 M.2 Key E Socket (PCIe x1)</li> <li>▪ 1 M.2 Key B Socket (PCIe x2/USB 3.1)</li> </ul>
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

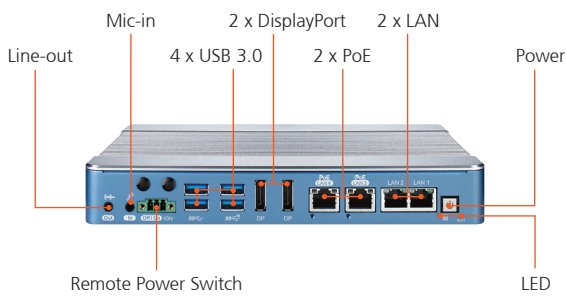
PoE	
LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350 with Power On/Off Control
LAN 4	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350 with Power On/Off Control
Power	
Power Input	9V to 50V, DC-in
Power Interface	Mini DIN
Ignition Control	16 Model
Remote Switch	3-pin Terminal Block : On, Off, 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"> <li>▪ IEC 60068-2-27</li> <li>▪ SSD : 50G @ wallmount, Half-sine, 11ms</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-64</li> <li>▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis</li> </ul>
EMC	CE, FCC, EN50155, EN50121-3-2

## Dimensions

Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

<b>ABP-3000 AI-8665U</b>	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
<b>ABP-3000 AI-8145U</b>	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

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

### Accessories

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

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