AIR-120

AI Inference System with Intel® Atom® Processor and Hailo-8 AI Acceleration Module

Features

- Intel® Atom™ x7433RE, Processor N97, and Core™ i3-N305
- Empowered by Hailo-8 M.2 AI module up to 26 TOPS
- 2 independent display: HDMI + DP
- Vertical I/O: 2 x LAN, 4x USB, 2 x COM
- Rich AI toolkits for runtime integration and model deployment
- Flexible expansion with 3x M.2:
  1 x B key 2280, 1 x B key 3052, 1 x E key 2230
- Suitable for Industrial usage:
  -20~60°C wide temperature and 12-24V wide voltage support

WISE-DeviceOn HAILO EdgeAI SDK

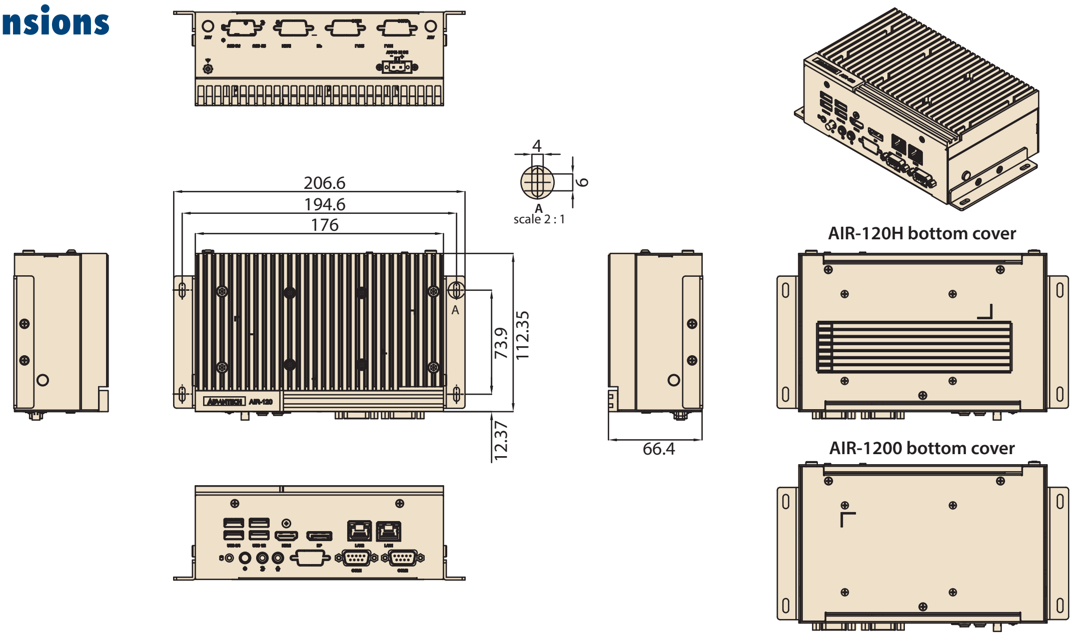
Specifications

Processor System	CPU	x7433RE	N97	i3-N305
	Frequency	1.5GHz	2.0GHz	1.8GHz
	Max. Frequency	3.4 GHz	3.60 GHz	3.80 GHz
	Core	4	4	8
	CPU TDP	9W	12W	15W
	System Chipset	Integrated in CPU		
Memory	Technology	DDR5 4800 MHz 262 pin SODIMM		
	Capacity	Max. capacity 16GB		
Graphics	Chipset	Intel® UHD Graphics		
	Graphic Engine	DX12, OGL4.0, OCL1.2, HW Encode: HEVC/H265, AVC/H264, VP9 HW Decode: HEVC/H265, AVC/H264, VP9		
	HDMI/DP	1 x HDMI 2.0, up to 4096 x 2160 x 24bpp@48-60Hz 1 x DP1.4a, up to 4096 x 2304 x 36bpp@60Hz		
Storage	M.2	1x B-Key 2280 (SATA or PCIe x1)		
	SSD	1 x 2.5" SATAIII Drive bay [#1]		
I/O Interface	LAN1	100/1000/2500 Intel i226 2.5GbE		
	LAN2	10/100/1000 Intel i210 GbE, support EdgeBMC, Out of Band remote control		
	USB 2.0/USB 3.2	2/2		
	Audio	1 x Mic-in, 1 x Line-out, Realtek ALC888S HD Audio		
	COM	2 x RS-232/422/485 (default COM1, COM2) 2 x RS-232 (optional COM3,COM4)		
	DIO	1 x DB9, 8 bit (optional)		
	CANBus	2 x DB9 for CAN-FD (optional)		
Expansion	M.2	1 x E-Key 2230 (PCIex1, USB2.0) 1 x B-Key 3052 w/ Nano SIM (PCIex2, USB 2.0) [#2] 1 x B-Key 2280 (SATA, PCIe x1)		
Trusted Platform Module	TPM 2.0	NPCT764AABYX		
Power Requirement	Power Input Voltage	12-24 V_{DC}		
	Power Type	ATX/AT mode (Default ATX)		
Power Consumption	Typical (OS idle mode)	9.59W	11.93W	12.05W
	Max. (Full load: CPU/Memory Only)	22.87W	29.27W	45.2W
Physical Characteristics	Mounting	Wall Mounting/ Din rail Mounting		
	Dimensions (W x H x D)	176 x 112.35 x 66.4 mm		
	Weight	1.6 kg (3.5 lb)		
Environment	Operating Temperature	-20 ~ 60 °C, with 0.7m/s air flow (With extended temp. peripherals)		
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185°F)		
	Relative Humidity	95% @ 40 °C (non-condensing)		
	Vibration during Operation	3 Grms, IEC60068-2-64, random, 5~500 Hz, 1hr/axis (with Wall Mount)		
	Shock during Operation	30 G, IEC-60068-2-27, half sine, 11 ms duration (with Wall Mount)		
Software Support	Microsoft Windows	Windows 11 IoT 64-bit		
	Linux	Ubuntu 24.04		
Certification	EMC	CE/FCC Class B, Heavy Industry 61000-6-4, 61000-6-2, CCC, BSMI		
	Safety	UL, CB, CCC, BSMI		

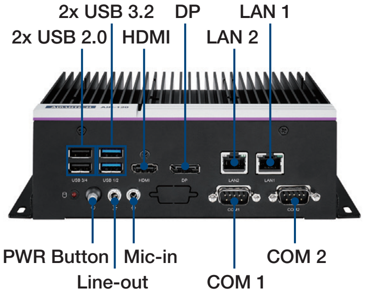
#1 The AIR-120H SKU does not support the 2.5" SATA SSD because of the thermal heatsink design.
#2 For the AIR-120H SKU, the M.2 B-Key 3052 slot is by default bundled with the Hailo AI module.

Dimensions

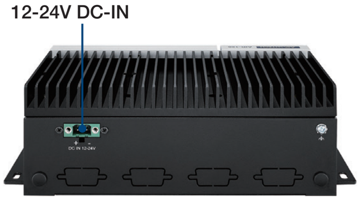
Unit: mm



Front View



Rear View



Ordering Information

Part No.	CPU	M.2 B Key 3052	M.2 B Key 2280	M.2 E Key 2230	2.5" SATA SSD	HDMI	DP	LAN	COM	DIO	CANBus	USB	Operating Temperature	Made in
AIR-120H-B0A1E	N97	Built-in Hailo-8 AI module	1	1	Not support	1	1	2	2 x RS232/422/485, 2 x RS232 (Optional)	1 (optional)	2 (optional)	2x USB 3.2 2x USB 2.0	-20~60°C	China
AIR-120H-S8A1E	i3-N305													
AIR-120H-B5A1E	x7433RE													
AIR-1200-B0A1E	N97	1	1	1	1									
AIR-1200-S8A1E	i3-N305													
AIR-1200-B5A1E	x7433RE													
AIR-120H-B0A1U	N97	Built-in Hailo-8 AI module	1	1	Not support	1	1	2	2 x RS232/422/485, 2 x RS232 (Optional)	1 (optional)	2 (optional)	2x USB 3.2 2x USB 2.0	-20~60°C	Taiwan
AIR-120H-S8A1U	i3-N305													
AIR-120H-B5A1U	x7433RE													
AIR-1200-B0A1U	N97	1	1	1	1									
AIR-1200-S8A1U	i3-N305													
AIR-1200-B5A1U	x7433RE													

Packing List

Part Number	Description
-	1 x AIR-120 unit
1960052226N004	2 x Wallmount
2006R12000	1 x User manual (Simplified Chinese)
36WSWPDOBUND11	1 x WISE-DeviceOn Package
1652000099	1x Phoenix connector counterpart
1960110006N000	M.2 Bracket

Optional Items

Part Number	Description
1700035775-01	DB9 Cable for COM3/COM4
1700030518-01	DB9 Cable for CAN-FD
1700035814-01	DB9 Cable for DIO
XARK-ADP-90MDH	90W Power Adaptor (19V DC in)
1700001524	Power Cable 3-pin 180cm, USA type
170203183C	Power Cable 3-pin 180cm, Europe type
170203180A	Power Cable 3-pin 180cm, UK type
1700008921	Power Cable 3-pin PSE Mark 183cm

Embedded OS

Part Number	Description
20706WLE1S0075	Windows 11 IoT Ent. LTSC 2024 64bit for ATOM x7433RE & N97
20706WLV1S0075	Windows 11 IoT Ent. LTSC 2024 64bit for Core i3
20706U24DS0013	Ubuntu Desktop 24.04 LTS 64bit

Inference Kit | Production-Ready AI Inference on Edge Devices

Provides a unified and hardware-aligned runtime for deploying and validating AI inference on edge devices

It simplifies integration across CPUs, GPUs, and AI accelerators while enabling performance benchmarking and compatibility verification on target hardware.Designed for production use, Inference Kit helps hardware partners ensure stable, scalable, and repeatable AI deployment across product lines.

Benefits and Features

Unified Inference Runtime

- Consistent inference across CPUs, GPUs, and accelerators
- Vendor-optimized runtime integration
- Built-in UnieInfra acceleration framework
- Optimized inference pipelines and runtime efficiency

Hardware Validation

- Benchmarking on target devices
- OS and accelerator compatibility validation
- Performance and stability verification

Production-Ready Deployment

- Stable, long-running inference operation
- System monitoring and observability support
- Designed for scalable edge deployment

Global Customer Support

- System reliability certification
- Inference computing enablement
- Edge-to-cloud scalability collaboration