

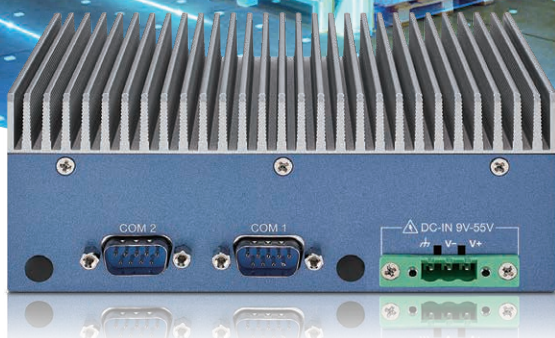
SPC 9000

Intel® Core Ultra Processor
Ultra-compact Fanless AI PC

2.5GigE 5G



▲ Robotic Slam



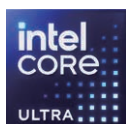
- Intel® Core™ Ultra processors feature a hybrid CPU/GPU/NPU architecture, improving CPU productivity by up to 14%.
- Intel® AI Boost NPU delivers 11 TOPS AI-focused performance
- Compact Design, fanless -40°C to 75°C Operation
- DC 9V to 55V Power Input, Software Ignition Power Control
- 2 USB 3.2 Gen 2, 1 USB 3.2 Gen 2x2 Type-C with DP, HDMI 2.1 and DisplayPort 1.4 support up to 4K resolution
- 2 2.5G LAN, 3 M.2 Socket for storage and expansion
- Optional SUMIT B expansions for 10GigE LAN, 10G SFP+, 4G Networks or SIM Sockets
- Supports Intel® vPro, TSN, TCC, and TPM 2.0
- Optional VHub One-Stop AIoT Solution Service supports OpenVINO™ toolkit for AI Computing



▼ Intelligent Vending



▲ Factory Automation



OpenVINO™



VHub

Vecow

Specifications

System

Processor	Intel® Core™ Ultra 7 165U Processor (12 Cores) Intel® Core™ Ultra 5 135U Processor (12 Cores)
NPU	Intel® AI Boost
Chipset	Intel® SoC
BIOS	AMI
GPU	Intel® Graphics
SIO	IT8786E
Memory	1 DDR5 5600MHz SO-DIMM, up to 32GB
OS	Windows 11, Windows 10, Linux

I/O Interface

Display	Supports Triple Display - 1 HDMI 2.1 : Up to 4096x2304 @60Hz - 1 DisplayPort 1.4 : Up to 4096 x 2304 @60Hz - 1 DisplayPort 1.4 : Up to 3840 x 2160 @60Hz by USB Type-C
Serial	2 COM RS-232/422/485 (ESD 8KV)
USB	- 1 USB 3.2 Gen 2x2 Type-C support max 20Gbps and DP 1.4 (5V/3A) - 2 USB 3.2 Gen 2 Type-A
LED	Power, HDD, WWAN, WLAN
SIM	1 External Nano SIM Card Socket

Expansion

M.2	- 1 M.2 Key B Socket (3042/3052, PCIe x2/USB 3, default/USB 2) - 1 M.2 Key E Socket (2230, PCIe x1/USB 2)
SUMIT	1 SUMIT B (Optional, with customized chassis)

Storage

SATA	1 SATA III (6Gbps) with internal 2.5" HDD/SSD bracket
M.2	- 1 M.2 Key M Socket (2280, PCIe 4.0 x4) - 1 M.2 Key B Socket (2280, PCIe x2, share with expansion)

Audio

Audio Codec	Realtek® ALC888S-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

Ethernet

LAN 1	Intel® I226 2.5GigE LAN supports TSN
LAN 2	Intel® I226 2.5GigE LAN supports TSN

Power

Power Input	DC 9V to 55V
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16-mode Software Ignition Control
Remote Switch	3-pin Terminal Block

Others

TPM	Infineon SLB9672 supports TPM 2.0, SPI Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions	SPC-9000 : 150.4mm x 106.2mm x 44.2mm (5.92" x 4.18" x 1.74") SPC-9100 : 150.4mm x 106.2mm x 57.0mm (5.92" x 4.18" x 2.24") SPC-9200 : 150.4mm x 106.2mm x 61.2mm (5.92" x 4.18" x 2.41")
Weight	SPC-9000 : 0.9 kg (1.98 lb) SPC-9100 : 1.3 kg (2.87 lb) SPC-9200 : 1.4 kg (3.09 lb)
Mounting	- Wallmount by mounting bracket - VESA Mount (Optional) - DIN Rail Mount (Optional)

Environment

Operating Temperature	SPC-9000 : -40°C to 60°C (-40°F to 140°F) with air flow SPC-9100 : -40°C to 75°C (-40°F to 167°F) with air flow SPC-9200 : -40°C to 70°C (-40°F to 158°F) with fan sink
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @75°C
Vibration	- IEC 60068-2-27 - SSD : 50G @ wallmount, Half-sine, 11ms
Shock	- IEC 60068-2-64 - SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, ICES, EN50155, EN50121-3-2

Order Information

Model	CPU	2.5G	COM	USB 3		Thermal Solution
				Type-A	Type-C	
SPC-9000-165U	Core Ultra 7 165U	2	2	2	1	Heat Spreader
SPC-9000-135U	Core Ultra 5 135U					Heat Sink
SPC-9100-165U	Core Ultra 7 165U					
SPC-9100-135U	Core Ultra 5 135U					Fan Sink
SPC-9200-165U	Core Ultra 7 165U					
SPC-9200-135U	Core Ultra 5 135U					

Optional Software

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

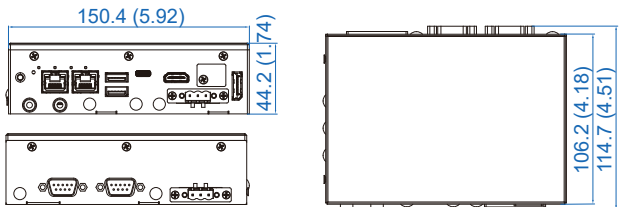
Accessories

DDR5 32G	Certified DDR5 32GB 5600MHz RAM
DDR5 16G	Certified DDR5 16GB 5600MHz RAM
DDR5 8G	Certified DDR5 8GB 5600MHz RAM
PWA-120W1	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
VESA Mount	VESA Mounting Kit
DIN-RAIL	DIN-RAIL Kit
M.2 Storage Module	M.2 Key M/Key B Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

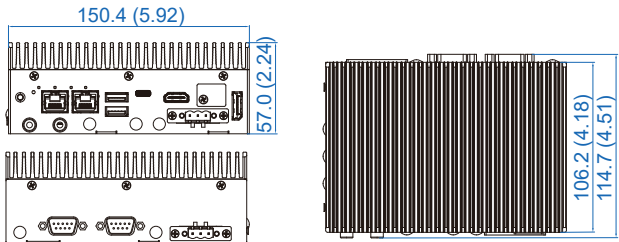
Dimensions & Drawing

Unit : mm (inch)

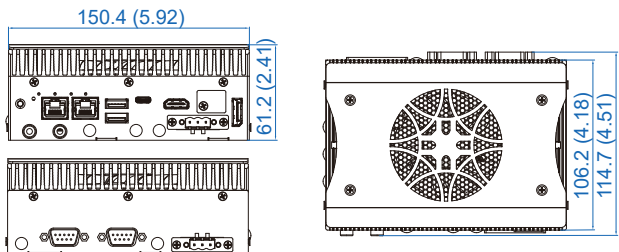
SPC-9000



SPC-9100



SPC-9200



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