

SPC

9000

Intel® Core Ultra Processor
Ultra-compact Fanless AI PC



- 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

Workstation-grade AI Platform | Compact Integration
Industrial-grade Reliability | Flexible Expansions

The SPC-9000 is an ultra-compact fanless embedded system powered by the latest Intel® Core Ultra Processor, offering an optimal balance of performance and power efficiency. The SPC-9000 delivers enhanced performance and I/O interfaces, including 2 USB 3.2 Gen 2 ports, 1 USB Type-C port, 2 2.5G LAN ports, and 3 M.2 sockets for storage and expansion. The optional SUMIT socket supports 10GigE LAN, 10G SFP+, and 4G networks accessible via the SIM socket. Designed for industrial environments, the SPC-9000 supports a wide power input range from 9V to 55V and operates within a temperature range from -40°C to 75°C, making it a perfect solution for factory automation, service robots, V2X, smart retail, and other edge AI applications.



OpenVINO™



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

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|-------|--|
| M.2 | - 1 M.2 Key B Socket (3042/3052, PCIe x2/USB 3, default/USB2) with internal SIM - 1 M.2 Key E Socket (2230, PCIe x1/USB2) |
| SUMIT | 1 SUMIT B (Optional, with customized chassis) |

Storage

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|------|--|
| 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 59.9mm (5.92" x 4.18" x 2.36") |
| 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 |

*Environmental ratings for base system only.

Order Information

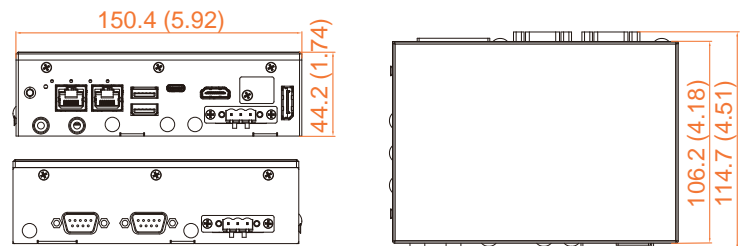
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| Model | CPU | 2.5G | COM | USB3 | | Thermal Solution |
|---------------|-------------------|------|-----|--------|--------|------------------|
| | | | | Type-A | Type-C | |
| SPC-9000-165U | Core Ultra 7 165U | 2 | 2 | 2 | 1 | Heat Spreader |
| SPC-9000-135U | Core Ultra 5 135U | | | | | Heat Sink |
| SPC-9100-165U | Core Ultra 7 165U | | | | | Fan Sink |
| SPC-9100-135U | Core Ultra 5 135U | | | | | |
| SPC-9200-165U | Core Ultra 7 165U | | | | | |
| SPC-9200-135U | Core Ultra 5 135U | | | | | |

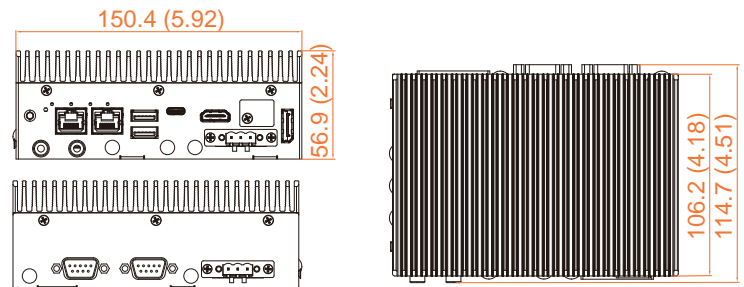
Dimensions & Drawing

Unit : mm (inch)

SPC-9000



SPC-9100



SPC-9200

