

## SPC-5000/5100 HIGH-PERFORMANCE FANLESS COMPUTER

8th Gen Intel® Core™ i7/i5/i3 Processor (Whiskey Lake) Fanless Embedded Box PC



- 8th Generation Intel® Core™ i7/i5/i3 U-series processor (Whiskey Lake) supports up to 40% greater productivity than former generation solution
- Compact size, matches 1U one rack unit of height
- Fanless design, up to -40°C to 85°C operating temperature
- DDR4 2400MHz memory, up to 32GB
- DisplayPort and DVI-D dual display, up to 4K resolution
- 2 Independent GigE LAN, iAMT 12.0 supported
- 4 10G USB 3.1 Gen 2, 2 COM RS-232/422/485

- 9V to 48V wide range DC Power Input
- Ignition Power Control, TPM 2.0
- SIM Socket for WiFi/4G/3G/LTE/GPRS/UMTS
- Expansion : SATA III, mSATA and Mini PCIe
- Optional supports full function SUMIT A, B expansions for multiple 10GigE LAN, 10GigE SFP+, 5G Network, SIM Socket, PoE LAN, Serial Port, GigE LAN, GigE Fiber LAN, or Video Capture
- One-stop SUMIT Expansion Design and Manufacturing Services



Factory Automation



Machine Vision



In-Vehicle Computing



Intelligent Control



# Specifications

## System

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| Processor | Quad Core Intel® Core™ i7/i5/i3 U-series Processor (Whiskey Lake) |
| Chipset   | Intel® SoC (Cannon Lake)                                          |
| BIOS      | AMI                                                               |
| SIO       | IT8786E                                                           |
| Memory    | 1 DDR4 2400MHz SO-DIMM, up to 32GB                                |
| OS        | Windows 10, Linux                                                 |

## Graphics

|                    |                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------|
| Graphics Processor | Intel® UHD Graphics 620                                                                          |
| Interface          | Dual display :<br>- DVI-D : Up to 1920 x 1200 @60Hz<br>- 1 DisplayPort : Up to 4096 x 2304 @60Hz |

## Ethernet

|       |                                           |
|-------|-------------------------------------------|
| LAN 1 | Intel® I219LM GigE LAN supports iAMT 12.0 |
| LAN 2 | Intel® I210 GigE LAN                      |

## Audio

|                 |                                      |
|-----------------|--------------------------------------|
| Audio Codec     | Realtek ALC892, 5.1 Channel HD Audio |
| Audio Interface | 1 Mic-in, 1 Line-out                 |

## Storage

|       |                                    |
|-------|------------------------------------|
| SATA  | 1 SATA III (6Gbps)                 |
| mSATA | 1 SATA III (Mini PCIe Type, 6Gbps) |

## I/O Interface

|          |                                |
|----------|--------------------------------|
| Serial   | 2 COM RS-232/422/485 (ESD 8KV) |
| USB      | 4 USB 3.1 Gen2                 |
| LED      | Power, HDD                     |
| SIM Card | 1 SIM Card Socket (Internal)   |

## Expansion

|            |                                                                                                                   |
|------------|-------------------------------------------------------------------------------------------------------------------|
| Mini PCIe  | 2 Mini PCIe Socket :<br>- 1 Full-Size for PCIe/USB/Internal SIM Card<br>- 1 Full-Size for PCIe/USB/Optional mSATA |
| SUMIT A, B | 2 SUMIT Slot (Optional)                                                                                           |

## Power

|                  |                                             |
|------------------|---------------------------------------------|
| Power Input      | 9V to 48V DC-in                             |
| Power Interface  | 3-pin Terminal Block : V+, V-, Frame Ground |
| Ignition Control | 16 Mode (Internal)                          |
| Remote Switch    | 3-pin Terminal Block : On, Off, IGN         |

## Others

|                |                                                                               |
|----------------|-------------------------------------------------------------------------------|
| TPM            | Optional Infineon SLB9665 supports TPM 2.0, LPC Interface                     |
| Watchdog Timer | Reset : 1 to 255 sec./min. per step                                           |
| Smart Mgmt.    | Wake on LAN, PXE supported                                                    |
| HW Monitor     | Monitoring temperature, voltages. Auto throttling control when CPU overheats. |

## Mechanical

|            |                                                                                                                                |
|------------|--------------------------------------------------------------------------------------------------------------------------------|
| Dimensions | SPC-5000 : 150.4mm x 106.2mm x 44.0mm (5.92" x 4.18" x 1.73")<br>SPC-5100 : 150.4mm x 106.2mm x 62.1mm (5.92" x 4.18" x 2.44") |
| Weight     | SPC-5000 : 0.9 kg (1.98 lb)<br>SPC-5100 : 1.3 kg (2.87 lb)                                                                     |

## Environment

|                   |                                                                                        |
|-------------------|----------------------------------------------------------------------------------------|
| Operating Temp.   | SPC-5000 : -40°C to 70°C (-40°F to 158°F)<br>SPC-5100 : -40°C to 85°C (-40°F to 185°F) |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)                                                         |
| Humidity          | 5% to 95% Humidity, non-condensing                                                     |
| Relative Humidity | 95% @ 85°C                                                                             |
| Shock             | - IEC 60068-2-27<br>- SSD : 50G @ wallmount, Half-sine, 11ms                           |
| Vibration         | - IEC 60068-2-64<br>- SSD : 5Grms, 5Hz to 500Hz, 3 Axis                                |
| EMC               | CE, FCC, EN50155, EN50121-3-2                                                          |

# Order Information

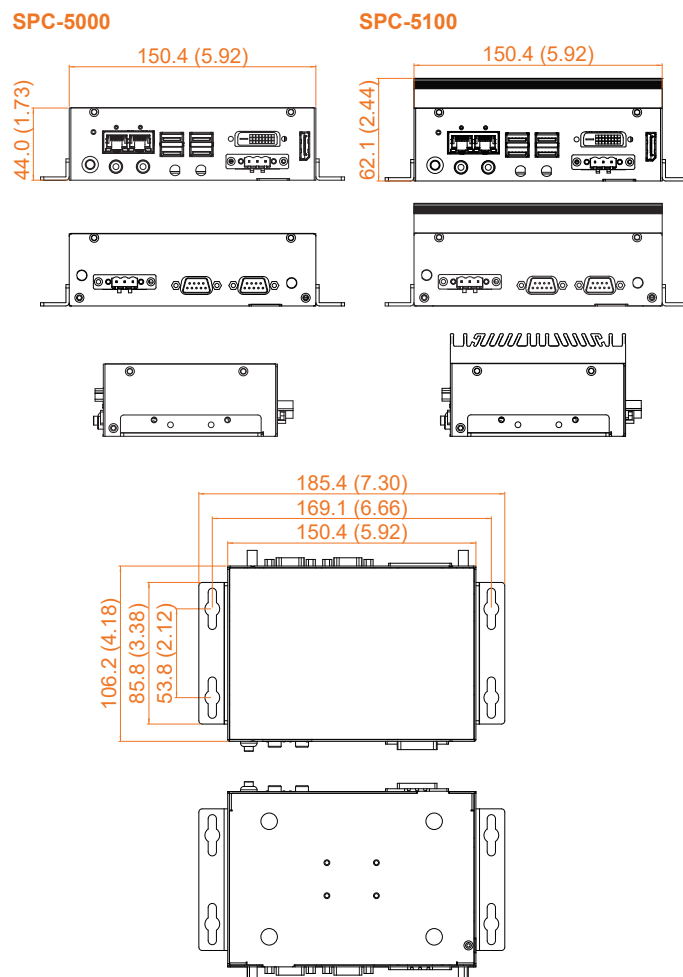
| Model          | CPU            | GigE LAN | 10G USB | COM | SIM Socket | SSD Bracket | Thermal Solution |
|----------------|----------------|----------|---------|-----|------------|-------------|------------------|
| SPC-5000-8665U | Core i7-8665UE | 2        | 4       | 2   | 1          | 1           | Heat Spreader    |
| SPC-5000-8365U | Core i5-8365UE |          |         |     |            |             |                  |
| SPC-5000-8145U | Core i3-8145UE |          |         |     |            |             |                  |
| SPC-5000-4305U | Celeron 4305UE |          |         |     |            |             |                  |
| SPC-5100-8665U | Core i7-8665UE | 2        | 4       | 2   | 1          | 1           | Heat Sink        |
| SPC-5100-8365U | Core i5-8365UE |          |         |     |            |             |                  |
| SPC-5100-8145U | Core i3-8145UE |          |         |     |            |             |                  |
| SPC-5100-4305U | Celeron 4305UE |          |         |     |            |             |                  |

## Accessories

|                  |                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------|
| DDR4 32G         | Certified DDR4 32GB 2666MHz RAM                                                                                |
| DDR4 16G         | Certified DDR4 16GB 2666/2400/2133 MHz RAM                                                                     |
| DDR4 8G          | Certified DDR4 8GB 2666/2400/2133 MHz RAM                                                                      |
| DDR4 4G          | Certified DDR4 4GB 2666/2400/2133 MHz RAM                                                                      |
| DIN-RAIL Kit     | DIN Rail Kit                                                                                                   |
| PWA-60WP3        | 60W, 24V/2.5A 90V AC to 264V AC Power Adapter with 3-Pin 3.5mm Terminal Block                                  |
| PWA-60WP3-WT     | 60W, 24V/2.5A 90V AC to 264V AC Power Adapter with 3-Pin 3.5mm Terminal Block, Wide Temperature -30°C to +70°C |
| PWA-120W         | 120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                           |
| PWA-160W-WT      | 160W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C          |
| 4G Module        | Mini PCIe 4G/GPS Module with Antenna                                                                           |
| WiFi & Bluetooth | WiFi & Bluetooth Module with Antenna                                                                           |

# Dimensions & Drawing

Unit : mm (inch)



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