

# SPC-3020

Ultra-compact Fanless Embedded System with Intel® Core™ i7/i5/i3 Processor (Kaby Lake-U/Skylake-U), -40°C to 70°C, 4 GigE LAN, 1 SIM, 4 USB 3.0, 5 COM, Isolated DIO, Rugged, Extended Temperature



## Features

- Intel® Core™ i7/i5/i3 U-series SoC (Kaby Lake-U/Skylake-U)
- Fanless design, -40°C to 70°C Operating Temperature
- 9V to 36V DC Power Input, 16 Isolated DIO
- DDR4 2400/2133 MHz memory, up to 32GB
- Onboard DVI-D and DisplayPort display interfaces support up to 4K resolution
- Up to 5 Independent GigE LAN, iAMT 11.0 supported
- SIM socket for WiFi/4G/3G/LTE/GPRS/UMTS
- 4 USB 3.0, 5 COM RS-232/422/485
- Optional supports full function SUMIT A, B expansions
- One-stop SUMIT Expansion Design and Manufacturing Services



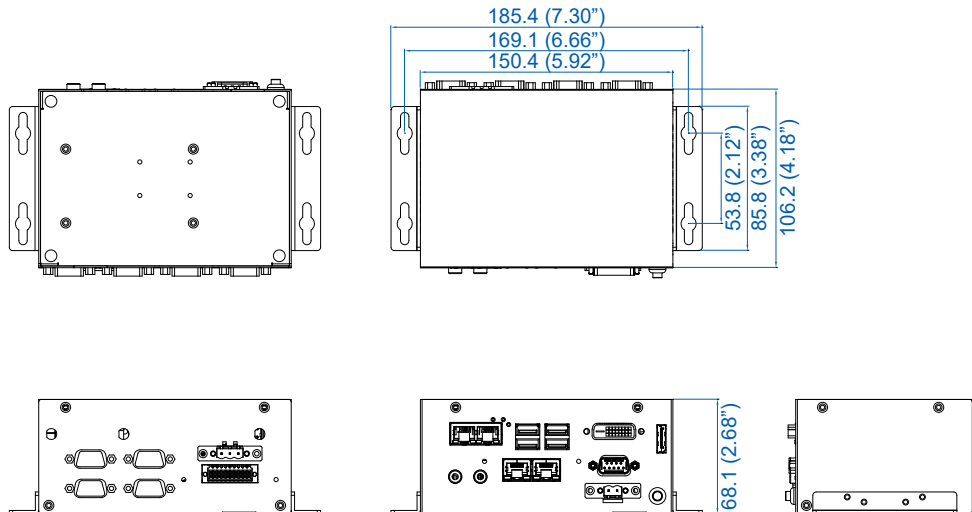
## Specifications

System	
<b>Processor</b>	Intel® Core™ i7-7600U/i7-6600U/i5-6300U/Celeron® 3955U Processor (Kaby Lake-U/Skylake-U)
<b>Chipset</b>	Intel® SoC (Kaby Lake-U/Skylake-U)
<b>BIOS</b>	AMI
<b>SIO</b>	IT8786E
<b>Memory</b>	1 DDR4 2400/2133 MHz SO-DIMM, up to 32GB
I/O Interface	
<b>Serial</b>	5 COM RS-232/422/485
<b>USB 3.0</b>	4 USB 3.0 (External)
<b>USB 2.0</b>	SPC-3020-7600U, SPC-3020-600U, SPC-3020-300U : 4 USB 2.0 (Internal) SPC-3020-955U : 2 USB 2.0 (Internal)
<b>Isolated DIO</b>	16 Isolated DIO : 8 DI, 8 DO
<b>LED</b>	Power, HDD
<b>SIM Card</b>	1 SIM Card Socket (Internal)
Expansion	
<b>Mini PCIe</b>	2 Mini PCIe Socket : ▪ 1 Full-size for PCIe/USB/Internal SIM Card ▪ 1 Full-size for PCIe/USB/mSATA
<b>SUMIT A, B</b>	2 SUMIT Slot (Optional)
Graphics	
<b>Graphics Processor</b>	Intel® HD Graphics 620/520
<b>Interface</b>	▪ DVI-D : Up to 1920 x 1200 @ 60Hz ▪ DisplayPort : Up to 4096 x 2304 @ 60Hz
Storage	
<b>SATA</b>	2 SATA III (6Gbps)
<b>mSATA</b>	1 SATA III (Mini PCIe Type, 6Gbps)
<b>Storage Device</b>	1 2.5" SSD/HDD Bracket (Internal)
Audio	
<b>Audio Codec</b>	Realtek ALC888S-VD, 7.1 Channel HD Audio
<b>Audio Interface</b>	1 Mic-in, 1 Line-out
Ethernet	
<b>LAN 1</b>	Intel® I219LM GigE LAN supports iAMT 11.0
<b>LAN 2</b>	Intel® I210 GigE LAN
<b>LAN 3</b>	Intel® I210 GigE LAN
<b>LAN 4</b>	Intel® I210 GigE LAN

Power	
<b>Power Input</b>	9V to 36V, DC-in
<b>Power Interface</b>	3-pin Terminal Block : V+, V-, Frame Ground
<b>Remote Switch</b>	2-pin Terminal Block : On, Off
Others	
<b>Watchdog Timer</b>	Reset : 1 to 255 sec./min. per step
<b>Smart Management</b>	Wake on LAN, PXE supported
<b>HW Monitor</b>	Monitoring temperature, voltages. Auto throttling control when CPU overheats.
Software Support	
<b>OS</b>	Windows 10, Windows 8.1, Windows 7, Linux
Mechanical	
<b>Dimensions (W x L x H)</b>	150mm x 106mm x 68mm (5.92" x 4.18" x 2.68")
<b>Weight</b>	1.3 kg (2.9 lb)
<b>Mounting</b>	▪ Wallmount by mounting bracket ▪ DIN Rail Mount (Optional) ▪ 2U Rackmount (Optional)
Environment	
<b>Operating Temperature</b>	-40°C to 70°C (-40°F to 158°F)
<b>Storage Temperature</b>	-40°C to 85°C (-40°F to 185°F)
<b>Humidity</b>	5% to 95% Humidity, non-condensing
<b>Relative Humidity</b>	95% @ 70°C
<b>Shock</b>	▪ IEC 60068-2-27 ▪ SSD : 50G @ wallmount, Half-sine, 11ms
<b>Vibration</b>	▪ IEC 60068-2-64 ▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis
<b>Certification</b>	CE, FCC, EN50155, EN50121-3-2

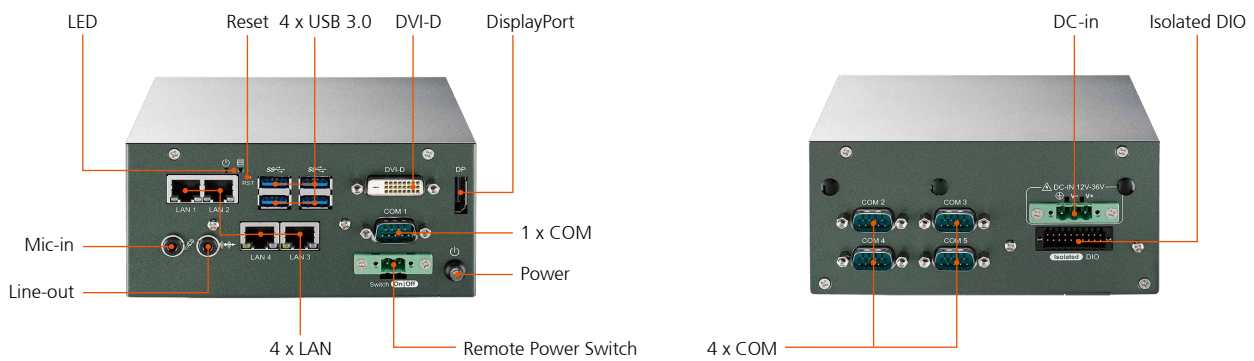
## Dimensions

Unit : mm/ inch



## Front I/O

## Rear I/O



## Order Information

<b>SPC-3020-7600U</b>	SPC-3000, Intel® Core™ i7-7600U, 4 GigE LAN, 4 USB 3.0, 5 COM, 1 SIM, Isolated DIO
<b>SPC-3020-6000U</b>	SPC-3000, Intel® Core™ i7-6600U, 4 GigE LAN, 4 USB 3.0, 5 COM, 1 SIM, Isolated DIO
<b>SPC-3020-300U</b>	SPC-3000, Intel® Core™ i5-6300U, 4 GigE LAN, 4 USB 3.0, 5 COM, 1 SIM, Isolated DIO
<b>SPC-3020-100U</b>	SPC-3000, Intel® Core™ i3-6100U, 4 GigE LAN, 4 USB 3.0, 5 COM, 1 SIM, Isolated DIO
<b>SPC-3020-955U</b>	SPC-3000, Intel® Celeron® 3955U, 4 GigE LAN, 4 USB 3.0, 5 COM, 1 SIM, Isolated DIO
<b>DDR4 32G</b>	Certified DDR4 32GB 2666MHz RAM
<b>DDR4 16G</b>	Certified DDR4 16GB 2133MHz RAM
<b>DDR4 8G</b>	Certified DDR4 8GB 2133MHz RAM
<b>DDR4 4G</b>	Certified DDR4 4GB 2133MHz RAM
<b>PWA-160W-WT</b>	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-120W</b>	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
<b>PWA-60WP3</b>	60W, 24V/2.5A 90V AC to 264V AC Power Adapter with 3-pin 3.5mm Terminal Block
<b>PWA-60WP3-WT</b>	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
<b>VESA Mount</b>	VESA Mounting Kit
<b>DIN-RAIL</b>	DIN Rail Kit
<b>Rack Mount</b>	2U Rackmount Kit
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth</b>	WiFi & Bluetooth Module with Antenna