

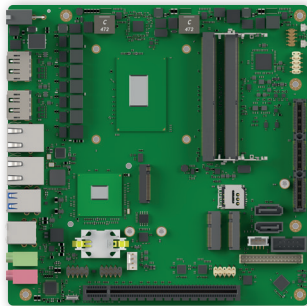
# Single Board Computer



## SBC-C66-mITX

SBC with the Intel® 8th generation Core™/Xeon® (formerly Coffee Lake H) and 9th generation Core™ / Xeon® / Pentium® / Celeron® (formerly Coffee Lake Refresh) CPUs

High-performing, flexible solution for intelligence at the edge



### HIGHLIGHTS



**CPU**  
Intel® 8th gen. Core™ / Xeon® and 9th gen. Core™ / Xeon® / Pentium® / Celeron® CPUs



**CONNECTIVITY**  
2x USB 3.1; 4x USB 2.0; NVMe SSD Slot; PCI-e x8 port (PCI-e x16 mechanical slot); VPU High Speed Connector with 4xUSB3.1 + 2x PCI-ex4



**GRAPHICS**  
Intel® UHD Graphics 630/P630 architecture, supports up to 3 independent displays



**MEMORY**  
up to 128GB DDR4 memory on 4x SO-DIMM Slots (ECC supported)



DEVELOPMENT    SAMPLING    PRODUCTION

### MAIN FIELDS OF APPLICATION



Biomedical/  
Medical devices



Gaming



Industrial  
Automation and  
Control



Industrial  
Internet of  
Things



Surveillance

### FEATURES

#### Processor

- Intel® 8th generation Core™/Xeon® (formerly Coffee Lake H) CPUs:
- Intel® Core™ **i7-8850H**, Six Core @ 2.6GHz (4.3GHz Max 1 Core Turbo), 9MB Cache, 45W TDP (35W cTDP), with HyperThreading
  - Intel® Core™ **i5-8400H**, Quad Core @ 2.5GHz (4.2GHz Max 1 Core Turbo), 8MB Cache, 45W TDP (35W cTDP), with HyperThreading
  - Intel® Core™ **i3-8100H**, Quad Core @ 3.0GHz, 6MB Cache, 45W TDP (35W cTDP)
  - Intel® Xeon® **E-2176M**, Six Core @ 2.7GHz (4.4GHz Max 1 Core Turbo), 12MB Cache, 45W TDP (35W cTDP), with HyperThreading
- Intel® 9th generation Core™ / Xeon® / Pentium® / Celeron® (formerly Coffee Lake Refresh) CPUs:
- Intel® Xeon® **E-2276ME** Six Core @2.8GHz (4.5GHz Max 1 Core Turbo), 12MB Cache, 45W TDP (35W cTDP), with Hyperthreading
  - Intel® Xeon® **E-2276ML** Six Core @2.0GHz (4.2GHz Max 1 Core Turbo), 12MB Cache, 25W TDP, with Hyperthreading
  - Intel® Xeon® **E-2254ME** Quad Core @2.6GHz (3.8GHz Max 1 Core Turbo), 8MB Cache, 45W TDP (35W cTDP), with Hyperthreading
  - Intel® Xeon® **E-2254ML** Quad Core @1.7GHz (3.5GHz Max 1 Core Turbo), 8MB Cache, 25W TDP, with Hyperthreading
  - Intel® Core™ **i7-9850HE**, Six Core @2.7GHz (4.4GHz Max 1 Core Turbo), 9MB Cache, 45W TDP (35W cTDP), with Hyperthreading
  - Intel® Core™ **i7-9850HL**, Six Core @1.9GHz (4.1GHz Max 1 Core Turbo), 9MB Cache, 25W TDP, with Hyperthreading
  - Intel® Core™ **i3-9100HL**, Quad Core @1.6GHz (2.9GHz Max 1 Core Turbo), 6MB Cache, 25W TDP
  - Intel® Pentium® **G5600E**, Dual Core @2.6GHz (3.1GHz Max 1 Core Turbo), 4MB Cache, 35W TDP
  - Intel® Celeron® **G4930E**, Dual Core @2.4GHz, 2MB Cache, 35W TDP
  - Intel® Celeron® **G4932E**, Dual Core @1.9GHz, 2MB Cache, 25W TDP

	Max Cores	6
	Max Thread	12
	Chipset	Intel® QM370, HM370 or CM246 Platform Controller Hub (PCH)
	Memory	2x DDR4-2666 or 4x DDR4-2444 ECC SODIMM Slots, up to 128GB total (only with 4 SODIMM modules). ECC DDR4 memory modules supported only with Xeon® Core™ i3, Pentium® and Celeron® CPUs combined with CM246 PCH
	Graphics	Intel® UHD Graphics 630/P630 architecture, up to 48 Execution Units Up to 3 independent displays supported DirectX 12, OpenGL 4.5, and OpenCL 2.1 support HW accelerated video decode MPEG2, VC1/WMV9, AVC/H.264, VP8, JPEG/MJPEG, HEVC/H.265 (8-/10-bit), VP9 HW accelerated video encode MPEG2, AVC/H.264, VP8, JPEGHEVC/H.265, VP9
	Video Interfaces	2x DP++ connector eDP 40-poles connector (interface switched with LVDS) LVDS Single/Dual Channel connector (interface switched with eDP)
	Video Resolution	DP++, eDP up to 4096x2304 @ 60Hz, 24bpp LVDS up to 1920x1200 @ 60Hz
	Mass Storage	Up to 2x S-ATA M 7p standard connectors M.2 Socket 3 Key M 2280 Slot for NVMe SSD modules with PCI-ex4 or SATA interface M.2 Socket 2 Key B Slot for SATA SSD modules (interface shared with PCI-e x2) microSD card slot
	Networking	Up to 2x Gigabit Ethernet interface (Intel® I219-LM GbE PHY + optional Intel® I210/211 GbE controller) M.2 Socket1 Key E 2242 Slot for optional WLAN modules M.2 WWAN Slot (PCI-e x2 interface shared with SATA SSD module)



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## FEATURES

<p><b>USB</b></p>	<p>2x USB 3.1 ports on standard Type-A sockets, placed on the front side of the board. 4x USB 3.1 (Superspeed + USB 2.0) ports on a PCIe/104 Connector for Expansion 1x USB 3.1 (Superspeed + USB 2.0) port on M.2 SSD/WWAN Key B Slot 2x USB 2.0 ports on standard Type-A sockets, placed on the front side of the board. 2x USB 2.0 ports on internal pin header 1x USB2.0 port on M.2 Socket 1 Key E for WiFi modules</p>	<p><b>Serial Ports</b></p>	<p>2x multistandard RS-232/RS-422/RS-485 serial ports on internal pin header</p>
<p><b>Audio</b></p>	<p>HD Audio codec on-board Mic In, Line out audio jacks Front Panel Audio Header</p>	<p><b>Other Interfaces</b></p>	<p>LPC pin Header Front Panel Header 3-pin or 4-pin tachometric FAN Connector Optional TPM 2.0 device on-board</p>
<p><b>PCI-e</b></p>	<p>PCI-e x4 interface on M.2 Socket 3 Key M slot for NVMe modules PCI-e x2 port on M.2 SSD/WWAN Key B Slot PCI-e x1 port on M.2 Socket 1 Key E for WiFi modules 4x PCI-e x1 ports on PCIe/104 Connector for Expansion PCI-e x8 port (PCI-e x16 mechanical slot) 2x PCI-e x4 ports on PCI-e/104 Connector for Expansion</p>	<p><b>Power Supply</b></p>	<p>2-pin Mega-Fit connector V<sub>IN</sub> Range: +12V/+24V</p>
		<p><b>Operating System</b></p>	<p>Windows 10 64-bit Linux OS 64-bit</p>
		<p><b>Operating Temperature*</b></p>	<p>0°C ÷ +60°C (Commercial version)</p>
		<p><b>Dimensions</b></p>	<p>170x170 mm (mini-ITX form factor)</p>

\*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.

## BLOCK DIAGRAM

