

# Simply NUC OPS Module

## Modular Customization

Simply NUC OPS Module is a disruptive modular approach for the OPS industry. Intel NUC Compute Element options along with Simply NUC's standard OPS chassis will provide scalability and upgradability while leveraging existing "OPS ready" large-format display technologies to do more with your budget. Start with a Simply NUC OPS Module and select an Intel NUC Compute Element with the exact processor performance you need. The Simply NUC OPS module is designed to fit into a standard OPS slot on the back of your displays and interactive whiteboards. The module with compute element is designed to meet the standard Open Pluggable Specifications, simplifying installation, usage, maintenance, and future upgrades to your technology.

## Integrated Features

The perfect slot PC to bring your interactive 4K imagery to life in both classrooms and businesses alike. Simply NUC's OPS Module brings an immersive experience to your whiteboard enabled lesson, and

large-format display meetings and digital signage applications. A total of 6 USB ports will power all the mice, keyboards, cameras and other peripherals your collaboration space depends on. With upgradable Intel NUC Compute Elements, Simply NUC OPS systems are scalable from Celeron all the way up to Core i7 with vPro, while also providing future upgrade paths to future generations of Intel® processor technology.

## Deploy Custom Solutions

Intel® NUC Elements enable you to design systems for video collaboration, classroom learning, digital signage and other A/V based OPS deployments. Housed in a quiet actively cooled chassis that will fit into standard OPS enabled displays, The Simply NUC OPS Module can be easily integrated into a broad range of digital solutions. The modular chassis options provide flexibility in usage, are qualified for 24/7 operation, and provide value now and for future generations to come. All modules carry a 3-year warranty, for performance that's designed to last.

## Highlighted features

- Intel NUC Compute Element U-Series (Required)
- Actively-Cooled chassis
- M.2 slot for NVMe and SATA SSDs
- Intel® Optane™ Memory ready
- HDMI 1.4b with built-in CEC
- Intel® 10/100/1000 Mbps RJ45 Ethernet
- Support for Intel® Wireless-AC 9560
- 4x USB 3.0 gen 1 type A ports, 4x internal USB 3.0 headers
- 2x USB 2.0 gen 1 type A ports, 2x internal USB 2.0 headers
- 1x RS-232 serial port, 1x RS232 serial port header
- Audio: 1x line-out; 1x mic-in
- Digital Audio 7.1 Surround Sound
- Qualified for 24x7 operation
- Designed to Open Pluggable Specification
- External dipole antennas
- Internal Wi-Fi and Bluetooth antennas
- Chassis dimensions: 180 x 118 x 30 mm
- 3-yr Warranty
- Extended support service options (5-, 3-yr)

## Customization

- Intel NUC Compute Element U-Series
- M.2 SSDs 128GB-2TB Max, Select Processors 64GB eMMC Storage



## Simply NUC Services

You can order this NUC in your various configurations, as well as your corporate OS Image loaded and ready to deploy.

## Chassis Technical Specifications

|                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage Capabilities</b> <ul style="list-style-type: none"> <li>• One M.2 22x80 key M slot for PCIe x4 NVMe or SATA SSDs</li> <li>• Intel® Optane™ Memory H10 With Solid State Storage ready</li> </ul>                                                           | <b>Graphics</b> <ul style="list-style-type: none"> <li>• Intel® UHD Graphics 620 (Intel® Core™ processors) or Intel® UHD Graphics 610</li> </ul>                                                                                                                                           | <b>Audio</b> <ul style="list-style-type: none"> <li>• Up to 7.1 multichannel (or dual 8-channel) digital audio via HDMI</li> <li>• 3.5mm Audio In and Out jacks</li> </ul>                                                                                                                    |
| <b>Hardware Management Features</b> <ul style="list-style-type: none"> <li>• Trusted Platform Module (TPM) 2.0</li> <li>• AMT supported Ethernet Controller</li> <li>• Voltage and temperature sensing</li> <li>• ACPI-compliant power management control</li> </ul> | <b>Peripheral Connectivity</b> <ul style="list-style-type: none"> <li>• Intel® i219-LM 10/100/1000 Mbps RJ45 Ethernet</li> <li>• Four USB 3.0 gen 1 type A ports</li> <li>• Two USB 2.0 type A ports</li> <li>• One RS-232 serial port</li> <li>• Dual External Dipole Antennas</li> </ul> | <b>Mechanical Chassis Information</b> <ul style="list-style-type: none"> <li>• 180 x 118 x 30mm (7.0" x 4.6" x 1.1" )</li> <li>• .82 kg (1.8lbs) Fully-Assembled with Antennas</li> <li>• Qualified for 24x7 operation</li> <li>• Chassis designed to Open Pluggable Specification</li> </ul> |
|                                                                                                                                                                                                                                                                      | <b>Video Ports</b> <ul style="list-style-type: none"> <li>• One HDMI 1.4b with built-in CEC</li> </ul>                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                               |

## Certification and Regulations

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|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environment Operating Temp</b> <ul style="list-style-type: none"> <li>• 0° C to +40° C</li> <li>• Non-condensing Humidity</li> </ul> | <b>EMC/RF Regulations and Standards (Class B)</b> <ul style="list-style-type: none"> <li>• FCC CFR Title 47, Chapter I, Part 15, Subparts B, C</li> <li>• CE-EMI</li> <li>• CE-LVD</li> <li>• EN 301 893*</li> <li>• EN 300 440*</li> <li>• EN 301 489-1/3/17*</li> </ul> | <b>Environmental Regulations</b> <ul style="list-style-type: none"> <li>• RoHS 3 (EU Directive 2015/863)</li> <li>• WEEE Directive 2012/19/EU</li> </ul>                                                                                                                                          |
| <b>Storage Temperature</b> <ul style="list-style-type: none"> <li>• -20° C to +70° C</li> </ul>                                         | (* Certification currently pending)                                                                                                                                                                                                                                       | <b>Certified Operating Systems</b> <ul style="list-style-type: none"> <li>• Windows 10 64-bit (Pro &amp; Home)</li> <li>• Windows 10 IoT Enterprise - (64-bit only) CBB and LTSB</li> <li>• Windows Server 2016</li> <li>• Various Linux including: (Contact Simply NUC for specifics)</li> </ul> |

# CM8xCB - Intel® NUC8 Compute Element

## Modular Customization

Intel® NUC Elements are an entirely new way to design and build embedded solutions and Mini PCs. Compute element options along with a series of Intel-designed components, deliver the flexibility of modular computing letting you create the exact systems you want. Intel NUC Compute Elements include processor, graphics and memory, allowing you to develop innovative solutions. Start with a compute element with the exact processor you need and plug it into your choice of chassis module. By transforming how systems can be built and serviced, Intel is once again revolutionizing computing in order to help you succeed. From embedded deployments to rugged systems in unique environments, to full systems in a business or vertical environment, the Intel NUC Elements let you deliver custom solutions with minimal R&D time.

## Build Scalable Modular Solutions

Housed in a tiny encapsulated board, the compute element provides many options that allow you to scale up from entry to high performance solutions, all with the same chassis module design. The seven compute element options provide scalability in performance from Celeron up to Core i7 with vPro, and are qualified for 24/7 operation, making it the ideal modular solution to keep edge analytics, digital signage, or surveillance cameras up and running around the clock. From generation to generation, Intel is committed to preserve the form factor and pin-out of the compute element for upgradability in existing chassis modules. All elements carry a 3-year warranty, for performance that's designed to last.

## Highlighted features

- Intel® NUC Compute Element (U-Series)
- Intel® HD Graphics 610/620
- 4GB-8GB DDR4 (Soldered Down)
- Select SKUs with 64GB eMMC Storage (Pentium and Celeron SKUs only)
- Intel® Dual Band Wireless-AC
- Intel® Bluetooth 5.1
- Windows 10 & Linux operating Systems Supported
- Support for up to triple 4k@60Hz Displays (DDI plus eDP interfaces)
- Generation agnostic heat-spreader Thermal interface
- Supports integration into both stationary and mobile designs
- Qualified for 24x7 operation
- Three-year Product Life Cycle
- Extended warranty options (5-, 3-, 1-year)

## Customization

- Wide selection of 8th Gen Intel® Processors



## Simply NUC Services

You can order this NUC in your various configurations, as well as your corporate OS Image loaded and ready to deploy.

## Compute Element Specifications



### Intel® NUC 8 Compute Element (U-Series)

- 8th Generation Intel® Core™ i7-8665U (CM8v7CB)  
1.9 GHz – 4.8 GHz Turbo, 4 Core, 8 Thread, 8MB Cache, 15W  
Intel® vPro™ Technology, Intel® AMT, TPM 2.0, 8GB  
LPDDR3 Intel® UHD Graphics 620, 300 MHz - 1150 MHz
- 8th Generation Intel® Core™ i7-8565U (CM8i7CB)  
1.8 GHz – 4.6 GHz Turbo, 4 Core, 8 Thread, 8MB Cache,  
15W, 8GB LPDDR3, Intel® UHD Graphics 620, 300 MHz -  
1150 MHz
- 8th Generation Intel® Core™ i5-8365U (CM8v5CB)  
1.6 GHz – 4.1 GHz Turbo, 4 Core, 8 Thread, 6MB Cache, 15W  
Intel® vPro™ Technology, Intel® AMT, TPM 2.0, 8GB  
LPDDR3 Intel® UHD Graphics 620, 300 MHz - 1100 MHz
- 8th Generation Intel® Core™ i5-8265U (CM8i5CB)  
1.6 GHz – 3.9 GHz Turbo, 4 Core, 8 Thread, 6MB Cache,  
15W, 8GB LPDDR3, Intel® UHD Graphics 620, 300 MHz -  
1100 MHz
- 8th Generation Intel® Core™ i3-8145U (CM8i3CB)  
2.1 GHz – 3.9 GHz Turbo, 2 Core, 4 Thread, 4MB Cache,  
15W, 4GB LPDDR3, Intel® UHD Graphics 620, 300 MHz -  
1000 MHz
- Intel® Pentium® Gold 5405U (CM8PCB)  
2.3 GHz, 2 Core, 4 Thread, 2MB Cache, 15W, 4GB LPDDR3  
Intel® UHD Graphics 610, 300 MHz - 950 MHz, 64GB eMMC
- Intel® Celeron® 4305U (CM8CCB)  
2.2 GHz, 2 Core, 2 Thread, 2MB Cache, 15W, 4GB LPDDR3  
Intel® UHD Graphics 610, 300 MHz - 900 MHz, 64GB eMMC

### Family Features

- Intel® Wireless-AC 9560 soldered-down, 802.11ac 2x2  
1.73Mbps + Bluetooth® 5.1
- 4 to 8GB soldered-down, dual-channel Memory
  - Core i7 and Core i5 SKUs – 8GB LPDDR3
  - Core i3, Pentium, and Celeron SKUs – 4GB  
LPDDR3
- Pentium® and Celeron® with 64GB eMMC Storage
- Windows 10 & Linux operating systems supported
- Support for up to triple 4k@60Hz displays (dual DDI plus eDP  
interfaces)
- Generation agnostic heat-spreader thermal interface
- Supports integration in to both stationary and mobile system  
designs
- Element dimensions: 95 x 65 x 6 mm
- No moving parts
- Qualified for 24x7 operation
- Three Year Product Life Cycle
- Three Year Warranty

### I/O Support by Element

- 4 - USB 3.1
- 3 - USB 2.0
- 2 - DDI (configurable as DP/HDMI)
- 1 - eDP
- 1 - GbE PHY
- 1 - PCIe x4/SATA
- 1 - PCIe x4
- 1 - HD Audio
- 1 - eSPI (EC Interface)

### Dimensions

- 3.7" x 2.5" x .2"  
(95 x 65 x 6 mm)
- no moving parts

### System Bios

- Advanced configuration and power interface V3.0b, SMBIOS2.5
- Intel® Express BIOS update Support
- Intel® Visual BIOS
- Windows 10 & Linux operating systems supported

### Hardware Management Features

- Trusted Platform Module (TPM) 2.0
- AMT supported Ethernet Controller
- Voltage and temperature sensing
- ACPI-compliant power management control

## Certification and Regulations

### Product Safety Regulations and Standards

- IEC 60950-1
- UL 60950-1
- EN 60950-1
- CAN/CSA-C22.2 No. 60950-1

### Environment Operating Temp

- 0° C to +40° C
- Non-condensing Humidity
- Storage Temperature
- -20° C to +70° C

### EMC/RF Regulations and Standards (Class B)

- CISPR 52
- FCC CFR Title 47, Chapter I, Part 15, Subparts B, C, E
- ICES-005
- EN 55052
- EN 55024
- ETSI EN 500 528
- ETSI EN 501 489-1
- ETSI EN 501 489-17
- ETSI EN 501 895
- EN 62511
- AS/NZS 2772.2
- AS/NZS 4268
- VCCI V-2, V-5, V-4
- KN-52
- KN-24
- CNS 15458

### Environmental Regulations

- RoHS Directive 2011/65/EU
- WEEE Directive 2012/19/EU
- China RoHS

### Certified Operating Systems

- Windows 10 (Pro ,Home, IoT e)
- Windows Server 2016
- Ubuntu, Mint, openSUSE, etc  
(Contact Simply NUC for specifics)