CMCR1ABA - NUC Rugged Chassis 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 Elements include compute element and chassis element options, 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 element. 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.

Rugged Features

Intel® NUC 8 Rugged is a modular PC kit that's small in size but not on toughness or reliability. It features a fanless, ventless design to minimize particle intrusion, so it's built to survive environments most PCs can't - from a busy factory floor to a dusty warehouse. Even without a fan, it can operate in temperatures from 0-40˚C to thrive in severe in-the-field conditions. The compute elements, systems are scalable from Celeron all the way up to Core i7 with vPro.

Build embedded Solutions

Housed in a small, quiet, fanless chassis that's slim enough to fit almost anywhere, the NUC 8 Rugged chassis can be easily integrated into digital solutions. The chassis options provide flexibility in usage, and are qualified for 24/7 operation, making it the ideal PC solution to keep edge analytics, digital signage, or surveillance cameras up and running around the clock. All elements carry a 3-year warranty, for performance that's designed to last.

Highlighted features

- Intel® NUC Compute Module U-Series (Required)
- Fanless, dust-proof chassis with I/O Board installed; preliminary IP50 rating
- Expandable design implementation
- Dual M.2 22x80 key M slots for 2x PCIe x4 NVMe, or 1x NVMe and 1x SATA SSD
- Intel® Optane™ Memory ready
- Dual HDMI 2.0a with built-in CEC
- Intel® Gigabit LAN w/ AMT Supp.
- Three USB 3.1 gen 2 ports
- Two RS232 Serial port headers
- Qualified for 24x7 operation
- Delayed AC start; DC overvoltage Protection
- EDID emulation
- RP-SMA Dual-Band Antennas
- 19V DC Jack (12-24V operation)

Customization

- Intel® NUC Compute Element
- Dual M.2 SSDs 128GB-10TB Max

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

Storage Capabilities
• 128GB M.2 SATA pre-installed.
• Primary M.2 M Key socket supporting 22x80 M.2 NVMe or SATA III SSD (8TB, Max)
• Secondary M.2 M Key socket supporting 22x80/42 M.2 NVMe (2TB SATA or NVMe SSD Max.)
• Intel® Optane™ Memory H10 With Solid State Storage ready

Audio
• Up to 7.1 multichannel (or dual 8- channel) digital audio via HDMI

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

Peripheral Connectivity
• Intel® i219-LM Gigabit LAN w/ AMT support
• Three Super-Speed USB 3.1 Gen 2 ports (one on front panel and two on back panel)
• One Super-Speed USB 3.0 via internal header
• One USB 2.0 port
• Two internal USB 2.0 via internal header
• Two RS232 serial port headers
• Front panel header (with Vcc5/1A, 5Vsby2A, 3.3Vsby/1A)

Video Ports
• Two HDMI 2.0a ports with CEC

Front Panel Header
• Power LEDs, power on/off

Expansion Capabilities
• One Internal USB 3.0 port via a 1x10 header (for optional IO)
• Two reusable USB 2.0 ports on two 1x4 internal headers
• One AUX_PWR connector
• One Consumer Electronics Control (CEC) header
• Internal expansion bay via back panel (2x DB9 punched bracket pre-installed)

Baseboard Power Requirements
• 19V, 90W AC-DC power adapter with detachable power cord.
• US Cord included, others available

Mechanical Chassis Information
• 10" x 6" x 1.4" (254 x 152.4 x 36 mm, plus additional 4.8mm of rubber feet height)
• VESA Mount Kit (Plate and Screws) mechanical support for power supply adapter
• 1.9kg (4.2lbs) Fully-Assembled with Antennas (no power adapter)

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 64-bit (Pro & \ Home)
• Windows 10 IoT Enterprise
• Various Linux including: Ubuntu, Mint, openSUSE, etc (Contact Simply NUC for specifics)

CM11EBx - Intel® NUC11 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 Elements include compute element and chassis element options, 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 element. 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 element design. The six 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 elements. All elements carry a 3-year warranty, for performance that's designed to last.

Highlighted features

- Intel® NUC Compute Element (U-Series)
- Intel® Xe® Graphics (i7 and i5)
- Intel® UHD Graphics (i3 and Celeron)
- Intel vPro SKUs available with TPM2.0
- 16GB DDR4 on i7 Element
- 8GB DDR4 on i5 and i3 Elements
- 4GB DDR4 on Celeron Element
- Intel® Wi-Fi 6 w Bluetooth 5.2
- Support for up to quad 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
- Windows 10 & Linux operating systems supported
- Three-year Product Life Cycle
- Extended warranty options (5-, 3-, 1-year)

Customization

- Wide selection of 11th Gen Intel® Processors
- Wide selection of chassis elements

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 11 Compute Element (U-Series)

- 11th Gen Intel® Core™ i7-1185G7 (CMEBv7)
  3.0GHz, 4.8GHz Turbo, 4 Core, 8 Thread, 12MB Cache, 15W
  Intel® vPro™ Technology, Intel® AMT, TPM 2.0, 16GB DDR4,
  Intel® Xe® Graphics

- 11th Gen Intel® Core™ i7-1165G7 (CMEBi7)
  2.8GHz, 4.7GHz Turbo, 4 Core, 8 Thread, 12MB Cache, 15W
  16GB DDR4, Intel® Xe® Graphics

- 11th Gen Intel® Core™ i5-1145G7 (CMEBv5)
  2.6GHz, 4.4GHz Turbo, 4 Core, 8 Thread, 8MB Cache, 15W
  Intel® vPro™ Technology, Intel® AMT, TPM 2.0, 8GB DDR4,
  Intel® Xe® Graphics

- 11th Gen Intel® Core™ i5-1135G7 (CMEBi5)
  2.4GHz, 4.2GHz Turbo, 4 Core, 8 Thread, 8MB Cache, 15W
  8GB DDR4, Intel® Xe® Graphics

- 11th Gen Intel® Core™ i3-1115G4 (CMEBi3)
  3.0GHz, 4.1GHz Turbo, 2 Core, 4 Thread, 6MB Cache, 15W
  8GB DDR4, Intel® UHD Graphics

- 11th Gen Intel® Celeron® 6305 (CMEBC)
  1.8GHz, 2 Core, 2 Thread, 4MB Cache, 15W
  4GB DDR4, Intel® UHD Graphics

Family Features

- Intel® Wi-Fi 6 AX201 soldered-down, 802.11ax 2x2
  2.4Gbps + Bluetooth® 5.2
- 4 to 16GB soldered-down, dual-channel Memory
  - Core i7 SKUs – 16GB LPDDR4X
  - Core i5 and Core i3 SKUs – 8GB LPDDR4X
  - Celeron SKU – 4GB LPDDR4X
- Windows 10 & Linux operating systems supported
- Support for up to quad 4k@60Hz displays (triple DDI plus
  eDP interfaces)
- Generation agnostic heat-spreader thermal interface
- Supports integration in to both stationary and mobile
  system designs
- Module 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 3.2 Gen 2
- 3 - USB 2.0
- 2 - DDI (configurable as DP1.4a
  or HDMI 2.0b)
- 1 – Type-C (DDI/TBT/USB4)
- 1 – eDP 1.4b
- 1 - GbE PHY
- 1 - PCIe x4/SATA
- 1 - PCIe x4 (Gen4)
- 1 - PCIe x1
- 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® Visual BIOS
- Intel® Express BIOS update
  Support
- Windows 10 & Linux
  operating systems supported

Hardware Management Features

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

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  Subparts B, C, E
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Certified Operating Systems

- Windows 10 (Pro ,Home, IoTe)
- Ubuntu, Mint, openSUSE, etc
  (Contact Simply NUC for specifics)