ASUS NUC 13 Rugged

Make amazing experiences possible

NUC 13 Rugged kits and boards offer the perfect combination of performance, connectivity, and reliability all in a fanless, dust-resistant ruggedized chassis. Featuring the Intel® Processor N50 and Intel® Atom® processors, NUC 13 Rugged devices provide compute built for applications that expose the hardware to dust and offers superior protection against shocks and vibration. Additionally, select kits have been designed to withstand extended external ambient temperatures (0-50°C on select SKUs) to ensure uninterrupted performance in the most challenging conditions.

Key Selling Points

Distributors:

- High-quality and reliable, rugged design.
- Five-year availability commitment (Config B and C).
- Three-year limited warranty

ISVs:

- NUC Pro Software Suite to unlock more software robustness.
- Easier scalability via wide distribution.
- Processor options to support a range of customer needs.

Appliance or device developers:

- Board-only options.
- High-quality and reliable, rugged design.
- Hardware and firmware robustness.

Hardware and software solution providers:

- High-quality and reliable, rugged design.
- Five-year availability commitment (Config B and C).
- Three-year limited warranty.

Customization options (Configuration flexibility to fit partner and customer needs):

Partners can choose from three different processor options with varying levels of heat resistance and processing power:

- Intel® processor N50 (2-core, 6-watt) at 40°C
- Intel Atom® processor x7211E (2-core, 6-watt) at 50°C
- Intel Atom® processor x7425E (4-core, 12-watt) at 40°C max

*Additionally, a board-only option is available for partners looking to manufacture their own devices based on ASUS NUC.

Audience:

- Channel partners
- Edge-based business solution providers

Target Usages:

- NUC Pro Software Suite
- Intel TCC for real-time processing support and TSN for real-time communications support
- MIPI camera support (board SKU only)

ASUS NUC 13 Rugged

Kit NUC13BRK (Config A) Specifications

Image A - Configuration A

Marketing Name	ASUS NUC 13 Rugged Kit
Project Code	NUC13BRK (Config A)
Photo	Image A
ASUS Logo	N/A
ASUS NUC Logo	N/A
Color	N/A
OS Support	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit
CPU	Intel® Processor N50, cTDP 6W
Chipset	Integrated
Graphics	Intel® UHD Graphics Technology
Memory	1 x SO-DIMM, Up to DDR5-4800, 16GB*1
Storage	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2
Wireless Network	Intel® Wi-Fi 6E AX210 (Gig+), Bluetooth® v5.3
LAN	2 x Intel® Ethernet Controller I226-V, 2.5G[2,]
Audio	N/A
TPM	fTPM
Card Reader	N/A
HDMI CEC	Yes, 2 ports on back panel
Front I/O Ports	N/A
Back I/O Ports	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in
Side I/O Ports	1 x Kensington Lock
Power Supply	20VDC, 3.25A, 65W Power Adapter
Operating Temp	0 to 40C
Storage Temp	-40 to 60C
Humidity	0%-92% non-condensing
Dimension	174 x 108 x 25.9H mm (internal heatsink) [H: +3.4mm rubber feet]
Weight	0.7146kg
Accessories	AC Adapter+Power Cord (only for US, EU, CN, TW & JP) Safety/Caution/Regulatory Insert Warranty Card/Quick Start Guide/VESA Mount Insert

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Kit NUC13BRF (Config B & C) Specifications

Image B - Configuration B or C with WWAN

Marketing Name	ASUS NUC 13 Rugged Kit	ASUS NUC 13 Rugged Kit
Project Code	NUC13BRF (Config B)	NUC13BRF (Config C)
Photo	Image B	Image B
ASUS Logo	N/A	N/A
ASUS NUC Logo	N/A	N/A
Color	N/A	N/A
OS Support	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit
CPU	Intel® Atom® x7211E, cTDP 6W	Intel® Atom® x7425E, cTDP 12W
Chipset	Integrated	Integrated
Graphics	Intel® UHD Graphics Technology	Intel® UHD Graphics Technology
Memory	1 x SO-DIMM, Up to DDR5-4800, 16GB*1 w/optional "in-band" ECC support	1 x SO-DIMM, Up to DDR5-4800, 16GB*1 w/optional "in-band" ECC support
Storage	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2
Wireless Network	Intel® Wi-Fi 6E AX210 (Gig+) w/External Antenna, Bluetooth® v5.3	Intel® Wi-Fi 6E AX210 (Gig+) w/External Antenna, Bluetooth® v5.3
LAN	2 x Intel® Ethernet Controller I226-V, 2.5G[2,]	2 x Intel® Ethernet Controller I226-LM, 2.5G[2]
Audio	N/A	N/A
TPM	fTPM	fTPM
Card Reader	N/A	N/A
HDMI CEC	Yes, 2 ports on back panel	Yes, 2 ports on back panel
Front I/O Ports	N/A	N/A
Back I/O Ports	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in
Side I/O Ports	1 x Kensington Lock	1 x Kensington Lock
Power Supply	20VDC, 4.5A, 90W Power Adapter	20VDC, 4.5A, 90W Power Adapter
Operating Temp	0 to 40C	0 to 40C
Storage Temp	-40 to 60C	-40 to 60C
Humidity	0%-92% non-condensing	0%-92% non-condensing
Dimension	174 x 108 x 35.8H mm (external heatsink) [H: +3.4mm rubber feet]	174 x 108 x 35.8H mm (external heatsink) [H: +3.4mm rubber feet]
Weight	1.0369kg	1.0369kg
Accessories	AC Adapter+Power Cord (only for US, EU, CN, TW & JP) Safety/Caution/Regulatory Insert Warranty Card/Quick Start Guide/VESA Mount Insert	AC Adapter+Power Cord (only for US, EU, CN, TW & JP) Safety/Caution/Regulatory Insert Warranty Card/Quick Start Guide/VESA Mount Insert

ASUS NUC 13 Rugged

Kit NUC13BRFN (Config C) Specifications

Image C - Configuration C with Wi-Fi

Marketing Name	ASUS NUC 13 Rugged Kit
Project Code	NUC13BRFN (Config C)
Photo	Image C
ASUS Logo	N/A
ASUS NUC Logo	N/A
Color	N/A
OS Support	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit
CPU	Intel® Atom® X7425e, cTDP 12W
Chipset	Integrated
Graphics	Intel® UHD Graphics Technology
Memory	1 x SO-DIMM, Up to DDR5-4800, 16GB*1 w/optional "in-band" ECC support
Storage	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2
Wireless Network	N/A
WWAN(LTE/SIM)	Intel® Atom® x7425E: WWAN* + Bluetooth® v5.3 + (External Antenna)*
LAN	2 x Intel® Ethernet Controller I226-LM, 2.5G^2
Audio	N/A
TPM	fTPM
Card Reader	N/A
HDMI CEC	Yes, 2 ports on back panel
Front I/O Ports	N/A
Back I/O Ports	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in
Side I/O	1 x Kensington Lock
Power Supply	20VDC, 4.5A, 90W Power Adapter
Operating Temp	0 to 40C
Storage Temp	-40 to 60C
Humidity	0%-92% non-condensing
Dimension	174 x 108 x 35.8H mm (external heatsink) [H: +3.4mm rubber feet]
Weight	1.0458kg
Accessories	AC Adapter+Power Cord (only for US, EU, CN, TW & JP) Safety/Caution/Regulatory Insert Warranty Card/Quick Start Guide/VESA Mount Insert
Notes	Supports WWAN/LTE Connectivity. Customers must purchase both the moduel & SIM card separately. See below for module types detail info.

*WWAN QVL			
m.2 30x42	EM06-A\EM06-E		Quectal
m.2 30x42	FM101-GL		Fibocom

ASUS NUC 13 Rugged

Board Specifications

Marketing Name	NUC 13 Rugged Board	NUC 13 Rugged Board
Project Code	NUC13BRB (Config A)	NUC13BRB (Config C)
Photo	TBD	TBD
ASUS Logo	N/A	N/A
ASUS NUC Logo	N/A	N/A
Color	N/A	N/A
OS Support	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit	Windows 10 IOT-Enterprise LTSC 64-bit Windows 11 Pro 64-bit Ubuntu 22.04 LTS 64-bit RedHat Enterprise Linux 9 64-bit
CPU	Intel® Processor N50, cTDP 6W	Intel® Atom® x7425E, cTDP 12W
Chipset	Integrated	Integrated
Graphics	Intel® UHD Graphics Technology	Intel® UHD Graphics Technology
Memory	1 x SO-DIMM, Up to DDR5-4800, 16GB*1	1 x SO-DIMM, Up to DDR5-4800, 16GB*1 w/optional "in-band" ECC support
Storage	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2	64GB eMMC soldered-down 1x M.2 2280 PCIe x2 Gen4x4, supports 128GB~4TB NVMe SSD 1x M.2 3042 PCIe SATA, supports 128GB-2TB SSD, w/ 1 x USB3.2 Gen2
Wireless Network	N/A	N/A
WWAN(LTE/SIM)	N/A	Intel® Atom® x7425E: WWAN* + Bluetooth® v5.3 + (External Antenna)*
LAN	2 x Intel® Ethernet Controller I226-V, 2.5G[2,]	2 x Intel® Ethernet Controller I226-LM, 2.5G[2]
Audio	N/A	N/A
TPM	fTPM	fTPM
Card Reader	N/A	N/A
HDMI CEC	Yes, 2 ports on back panel	Yes, 2 ports on back panel
Front I/O Ports	N/A	N/A
Back I/O Ports	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in	2 x USB 3.2 Gen2 Type A 2 x USB 2.0 Type A 2 x HDMI 2.1 (TMDS) 2 x RJ45 LAN 1 x DC-in
Side I/O Ports	N/A	N/A
Power Supply	20VDC, 3.25A, 65W Power Adapter	20VDC, 4.5A, 90W Power Adapter
Operating Temp	0 to 40C	0 to 40C
Storage Temp	-40 to 60C	-40 to 60C
Humidity	0%-92% non-condensing	0%-92% non-condensing
Dimension	146 x 101.7 x 17.39H mm	146 x 101.7 x 17.39H mm
Weight	0.1780kg	0.1780kg
Accessories	Safety/Caution/Regulatory Insert Warranty Card	Safety/Caution/Regulatory Insert Warranty Card
Note		Supports WWAN/LTE Connectivity. Customers must purchase both the moduel & SIM card separately. See below for module types detail info.

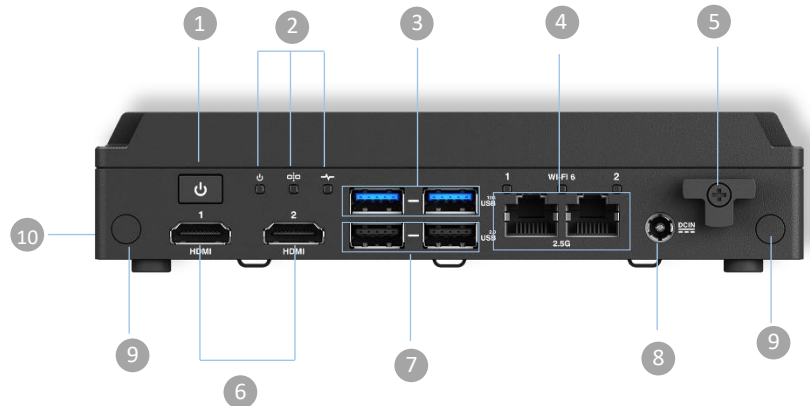| *WWAN QVL		
m.2 30x42	EM06-A\EM06-E	Quectal
m.2 30x42	FM101-GL	Fibocom

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Connections
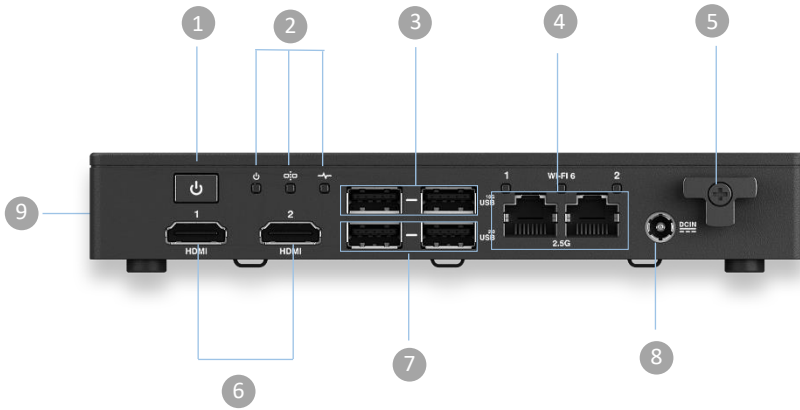
Configuration A

1 1 x Power Bottom

2 3 x LED Indicators

3 2 x USB 3.2 Gen 2, Type-A

4 1 x Intel® 2.5 Gb Ethernet Port

5 1 x Cable Locking Arm

6 2 x HDMI (4K@60Hz)

7 2 x USB 2.0, Type-A

8 1 x DC-in

9 1 x Kensington Lock (Side Port)
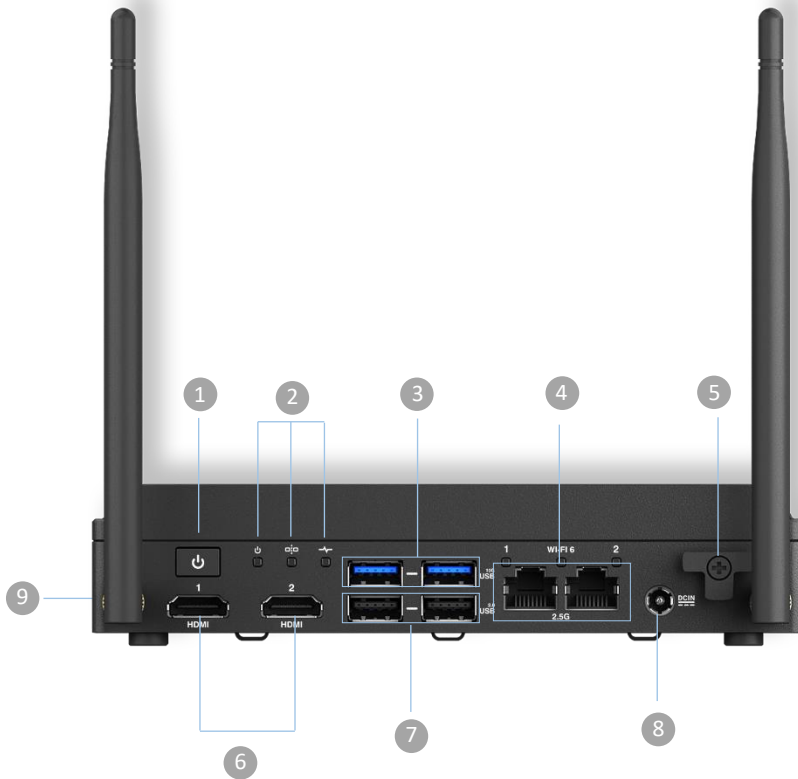
Configuration B or C with Wi-Fi

1 1 x Power Bottom

2 3 x LED Indicators

3 2 x USB 3.2 Gen 2, Type-A

4 1 x Intel® 2.5 Gb Ethernet Port

5 1 x Cable Locking Arm

6 2 x HDMI (4K@60Hz)

7 2 x USB 2.0, Type-A

8 1 x DC-in

9 2 x Antenna Port

10 1 x Kensington Lock (Side Port)

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Connections

Configuration C with WWAN

1. 1 x Power Bottom
2. 3 x LED Indicators
3. 2 x USB 3.2 Gen 2, Type-A
4. 1 x Intel® 2.5 Gb Ethernet Port
5. 1 x Cable Locking Arm
6. 2 x HDMI (4K@60Hz)
7. 2 x USB 2.0, Type-A
8. 1 x DC-in
9. 1 x Kensington Lock (Side Port)

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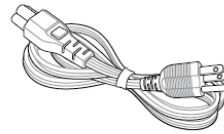**What's in the box**

Or

Or

Or

NUC 13 Rugged
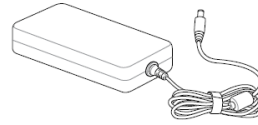
Power Adapter

65 / 90W power supply

Inserts

Power Cord*

VESA bracket (For DIN and VESA) and Screws

*DIN Rail not included. Please see below for purchase details.

Category	Type	Description		Purchase Details
Mounting Bracket	DIN Rail	Side brackets shall provide support for attaching chassis to DIN with bracket:		Digikey.com

NOTE:

• The most up-to-date and accurate product specifications are available on www.asus.com for download.
• Product and accessory images are for illustrative purposes only. The actual appearance and specifications may vary depending on the model.
• *The bundled power adapter may vary depending on the model and the country (or region) of sale.
• Some bundled accessories may vary depending on the model. For details on these accessories, refer to their respective user manuals.
• If the device or its components fail or malfunction during normal and proper use within the warranty period, bring the warranty card to the ASUS Service Center for replacement of the defective components.