

## BAREBONE XPC nano NE10N

Processor: Intel N100 (fanless)

### AFFORDABLE NANO-PC FOR EVERYDAY TASKS

The fanless Shuttle XPC nano Barebone NE10N comes with an energy-efficient 12th generation Intel N100 processor, codenamed "Alder Lake-N". Despite the nano format with only 600 ml volume, it offers enormous connection variety and expansion options. Thus, up to two UHD displays (4K/60Hz) and up to six USB devices can be connected, and one M.2-2280 NVMe SSD card and one DDR4 module can be installed. The NE10N is ideal for Digital Signage, POS, control, office or even multimedia.



INTEL N100  
SoC CPU



DUAL DISPLAY  
SUPPORT



HDMI 2.0



DISPLAY-  
PORT 1.4



NVMe M.2 SSD  
SUPPORT



DDR4 SO-DIMM  
SUPPORT



6x USB



1 Gbps  
LAN PORT



VESA MOUNT



FANLESS



24 / 7  
OPERATING



WIN11  
SUPPORT

### NANO DESIGN

- Slim plastic chassis, black ■ Dimensions: 135 x 115 x 39 mm (LWH), height: 41.3 mm incl. rubber feet, volume: 606 ml ■ Weight: 0.6 kg net, 1.5 kg gross ■ Including VESA mount (supports 75x75 / 100x100 mm)
- Operating temperature: 0~40 °C (non-condensing)

### OPERATING SYSTEM

- An operating system is not included
- Supports Windows 11 (64-bit)

Please download Windows drivers from <https://go.shuttle.eu/NE10N>

### PROCESSOR

- Intel N100, TDP: 6 W, Turbo Clock max. 3.4 GHz
- 12<sup>th</sup> generation Intel Core, code name "Alder Lake-N"
- Soldered SoC, Intel 7 process (10 nm)
- Passive fanless cooling system – virtually noiseless

### GRAPHICS

- Integrated Intel UHD graphics
- Supports two independent Ultra-HD displays at 60 Hz

### RAM MEMORY SUPPORT

- 1x 260-pin SO-DIMM slot ■ Supports up to 16 GB DDR4-3200

### M.2 STORAGE

- 1x M.2-2280M slot supports M.2 SSD card (PCIe Gen 3 NVMe or SATA)
- Attention: for thermal reasons, an M.2 SSD with SATA interface is recommended.

### CONNECTORS

- HDMI 2.0 ■ DisplayPort 1.4 ■ 4x USB 3.2 Gen2 (max. 10 Gbps)
- 2x USB 2.0 ■ 1x Gigabit LAN (Motorcomm YT6801) ■ 2x Audio (Microphone-in + Line-out) ■ DC input 19 V

### POWER SUPPLY

- External 65W / 19V power adapter

### OTHER

- Hardware TPM-Chip: Infineon SLB9670VQ2.0

### OPTIONAL WLAN

- M.2-2230E slot supports one optional WLAN module
- Two internal WLAN antennas pre-installed

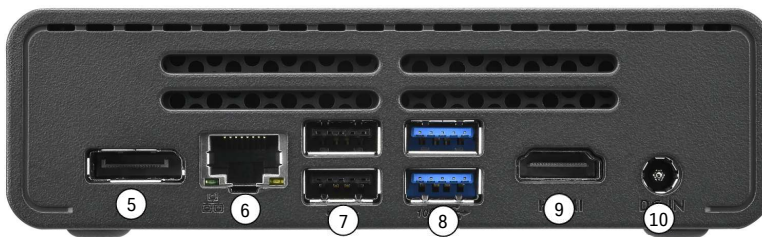


## Product Views

Front View



Rear View



Left Side



Right Side

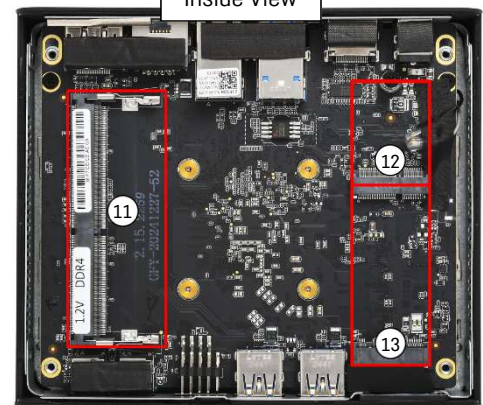


VESA-Mounting



1. Power Button with LED
2. 2x USB 3.2 Gen 2 Port (max. 10 Gbps)
3. Microphone input
4. Headphones output
5. DisplayPort 1.4 audio/video output
6. RJ45 Gigabit LAN port
7. 2x USB 2.0
8. 2x USB 3.2 Gen 2 Port (max. 10 Gbps)
9. HDMI 2.0 port audio/video output
10. DC-input for 19V power adapter

Inside View



11. SO-DIMM memory slot for DDR4 RAM
12. M.2-2230 slot for WLAN card
13. M.2-2280 slot for SSD card
14. Hole for the Kensington Lock (the lock with cable is not included)
15. VESA mount

## Product Comparison: Shuttle Nano Barebone Series (≤ 1 Litre)

Shuttle Product	<b>NE10N</b>	<b>NC40U Series</b>	<b>NT10H Series</b>	<b>NA10H7</b>
<b>Category</b>	<i>Entry Level, Fanless</i>	<i>Entry Level, with Fan</i>	<i>AI-PC with NPU (Intel)</i>	<i>AI-PC with NPU (AMD)</i>
<b>CPU Generation (Code Name)</b>	Intel Alder Lake-N (Gen. 12)	Intel Alder Lake-U (Gen. 12)	Intel Meteor Lake-H	AMD Hawk Point (Zen 4)
<b>Product Models (Processor)</b>	<b>NE10N:</b> N100	<b>NC40U:</b> Celeron 7305 <b>NC40U3:</b> Core i3-1215U <b>NC40U5:</b> Core i5-1235U <b>NC40U7:</b> Core i7-1255U	<b>NT10H5:</b> Core Ultra 5-125H <b>NT10H9:</b> Core Ultra 9-185H	<b>NA10H7:</b> Ryzen 7-8845HS
<b>Cooling System</b>	Fanless / Heat-pipe	With fan	With fan	With fan
<b>NPU and AI Performance</b>	—	—	NPU: 11.5 TOPS Overall: 34 TOPS	NPU: 16 TOPS Overall: 39 TOPS
<b>OS Support</b>	Windows 11	Windows 10/11 and Linux	Windows 11 and Linux	Windows 11 and Linux
<b>RAM Support</b>	max. 1x 16 GB DDR4-2400 SO-DIMM	max. 2x 32 GB DDR4-2400 SO-DIMM	max. 2x 48 GB DDR5-5600 SO-DIMM	max. 2x 48 GB DDR5-5600 SO-DIMM
<b>2.5" HDD Bay</b>	—	1x 2.5" bay (up to 15 mm)	—	—
<b>M.2 SSD Slots</b>	1x M.2-2280 Slot	2x M.2-2280 Slot (RAID-Support)	1x M.2-2280 Slot	1x M.2-2280 Slot
<b>Card Reader</b>	—	—	Yes	Yes
<b>Graphics Ports</b>	1x HDMI 2.0 1x DisplayPort 1.4 supports 2 UHD Displays	HDMI 2.0b DisplayPort 1.4a USB-C supports DP 1.4a supports 3 UHD Displays	2x HDMI 2.0 2x DisplayPort 1.4 (USB-C) supports 4 UHD Displays	2x HDMI 2.0 2x DisplayPort 1.4 (USB-C) supports 4 UHD Displays
<b>LAN Ports (Chip)</b>	1x 1.0 Gbit/s (Motorcomm YT6801)	1x 1.0 Gbit/s (Intel i219)	2x 2.5 Gbit/s (Intel 226V)	2x 2.5 Gbit/s (Realtek RTL8125B)
<b>USB Ports</b>	4x USB 3.2 Gen2 2x USB 2.0	2x USB 3.2 Gen2 5x USB 3.2 Gen1 (1x Type-C)	2x USB4 Type-C (DP 1.4, 3A) 5x USB 3.2 Gen2, 1x USB 2.0	2x USB4 Type-C (DP 1.4, 3A) 5x USB 3.2 Gen2, 1x USB 2.0
<b>WLAN</b>	— (pre-installed antennas)	— (pre-installed antennas)	— (pre-installed antennas)	— (pre-installed antennas)
<b>Power Adapter</b>	65 W	65 W	120 W	120 W
<b>Mounting</b>	VESA Mount	VESA Mount and Stand	VESA Mount	VESA Mount
<b>Dimensions (LWH)</b>	135 x 115 x 39 mm = 0.6 L	142 x 142 x 42 mm = 0.85 L	132 x 143 x 55 mm = 1.0 L	132 x 143 x 55 mm = 1.0 L
<b>Operating Temp.</b>	0 – 40 °C	0 – 40 °C	0 – 40 °C	0 – 40 °C
<b>Front View</b>				
<b>Rear View</b>				

## SHUTTLE XPC nano BAREBONE NE10N – SPECIFICATIONS

<b>FANLESS &amp; SILENT</b>	<p>Completely fanless, virtually noiseless</p> <p>Passive cooling through convective heat transfer</p> <p>Perfect to be used in noise-sensitive environments</p> <p>Fanless means less dust and thus virtually no maintenance required</p>
<b>24/7 NONSTOP OPERATION</b>	<p>24/7 Nonstop Operation</p> <p>This device is approved for 24/7 permanent operation.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>- Free air circulation around the PC must be guaranteed.</li> <li>- Ventilation holes must be kept clear.</li> </ul>
<b>CHASSIS</b>	<p>Slim PC with black chassis made of plastic</p> <p>Dimensions: 135 x 115 x 39 mm (WLH) = 0.6-litre</p> <p>Height including rubber feet: 41.3 mm</p> <p>Weight: 0.6 kg net and 1.5 kg gross</p> <p>One hole for Kensington Locks (right-hand side)</p> <p>VESA mount included (supports 75x75 mm and 100x100 mm Standard)</p>
<b>OPERATION SYSTEM</b>	<p>This system comes without operating system.</p> <p>It is compatible with Windows 11 (64-bit)</p> <p>Windows 11 driver download: <a href="https://go.shuttle.eu/NE10N">https://go.shuttle.eu/NE10N</a></p>
<b>PROCESSOR</b>	<p>Model: Intel® Processor N100</p> <p>Max. Turbo clock frequency: 3.4 GHz</p> <p>Code name: "Alder Lake-N"</p> <p>10 nm structure, FCBGA1338 package (soldered)</p> <p>CPU cores / Threads: 4 / 4</p> <p>L2 Cache: 6 MB</p> <p>Thermal Design Power (TDP): 6 W</p> <p>System-on-Chip processor (SoC) with integrated graphics processor, no chipset required</p> <p>Passive processor cooling without fan</p>
<b>INTEGRATED GRAPHICS</b>	<p>The Graphics Processing Unit (GPU) is integrated in the processor</p> <p>Intel® UHD Graphics, GPU frequency: max. 750 MHz</p> <p>Supports DirectX 12.1, OpenGL 4.6, OpenCL 3.0, Intel Quick Sync Video</p> <p>Execution Units (EU): 24</p> <p>Dual Display Support via two video outputs:</p> <ul style="list-style-type: none"> <li>- HDMI 2.0: max. 4096 x 2160 @ 60 Hz</li> <li>- DisplayPort 1.4: max. 4096 x 2160 @ 60 Hz</li> </ul> <p>Supports two digital UHD/4K displays simultaneously.</p>
<b>UEFI FIRMWARE</b>	<p>UEFI Firmware</p> <p>32 MB Flash ROM</p> <p>AMI UEFI BIOS Firmware</p> <p>Based on the Unified Extensible Firmware Interface (UEFI)</p> <p>Supports Power-fail-resume / AC power-on state / always-on</p> <p>Supports Wake-on-LAN (WOL) from S3, S4, S5 ACPI states</p> <p>Supports boot up from external flash memory cards</p> <p>CMOS battery (type CR2032 with connecting cable)</p>
<b>HARDWARE TPM</b>	<p>Supports DTPM 2.0 with Infineon SLB9670VQ2.0 (can be deactivated)</p>
<b>MEMORY SUPPORT</b>	<p>1x SO-DIMM slots with 260 pins</p> <p>Supports DDR4-3200 (PC4-25600U) SDRAM at 1.2V</p> <p>Supports one RAM module with max. 16 GB capacity</p> <p>Supports two unbuffered DIMM modules (no ECC)</p>
<b>M.2-2280M SSD SLOTS</b>	<p>M.2-2280 M-key slot</p> <p>Interfaces: PCI-Express Gen. 3.0 and SATA</p> <p>Supports M.2 cards with a width of 22 mm and a length of 80 mm (type 2280)</p> <p>Supports SATA SSDs (BM-Key) or NVMe PCIe SSDs (M-Key)</p> <p><b>Attention:</b> for thermal reasons, an M.2 SSD with SATA interface is recommended.</p>
<b>M.2-2230-SLOT FOR WLAN CARDS</b>	<p>Interface: PCI-Express and USB 2.0</p> <p>Supports M.2 cards with a width of 22 mm and a length of 30 mm (type 2230)</p> <p>The slot is located underneath the SSD card.</p> <p>This PC comes with two pre-installed internal WLAN antennas with I-PEX4/MHF-IV connectors.</p> <p>Use a standard WLAN module, e.g. Realtek AW-XB547NF or Intel AX200/210/211 (not included).</p>

<b>AUDIO</b>	<p>Senary SN6140-CNZR audio controller</p> <p>Two analog audio connectors (3.5 mm):</p> <ol style="list-style-type: none"> <li>1) Line out (head-phones)</li> <li>2) Microphone input</li> </ol> <p>Digital multi-channel audio output: via HDMI and DisplayPort</p>
<b>GIGABIT LAN</b>	<p>One RJ45 connector supports lokal network at 10/100/1000 Mbps.</p> <p>Motorcomm YT6801 Ethernet LAN controller</p> <p>Supports Wake-on-LAN</p>
<b>FRONT PANEL CONNECTORS</b>	<p>Power button</p> <p>Power LED (blue = power-on, orange = S3 mode)</p> <p>2x USB 3.2 Gen 2 Type A (blue, max. 10 Gbps)</p> <p>Audio Line-Out (headphones) 3.5 mm</p> <p>Microphone Input 3.5 mm</p>
<b>BACK PANEL CONNECTORS</b>	<p>HDMI 2.0 Video/Audio</p> <p>DisplayPort 1.4 Video/Audio</p> <p>2x USB 3.2 Gen 2 Type A (blue, max. 10 Gbps)</p> <p>2x USB 2.0 (black)</p> <p>1x Gigabit Ethernet LAN (1 Gbps, RJ45)</p> <p>DC input for the external power adapter (supports 19V)</p>
<b>POWER SUPPLY</b>	<p>External 65 W AC/DC power adapter (fanless)</p> <p>AC Input: 100 ~ 240 V AC, 50 ~ 60 Hz, max. 1.5 A</p> <p>Automatic AC voltage adjust</p> <p>DC Output: 19 V, max. 3.42 A, max. 65 W</p> <p>DC Connector: 5.5 / 2.5 mm (outer/inner diameter)</p> <p>AC cable with 3-pin Micky MM C6 and Schuko earthed safety plug</p>
<b>SUPPLIED ACCESSORIES</b>	<p>Multi-language user guide (EN, DE, FR, ES, JP, KR, SC, TC)</p> <p>VESA mount for 75 / 100 mm standard (black)</p> <p>Two flat-head screws, M3 x 3.5 mm with offset (connects VESA mount to PC)</p> <p>Four screws M4 x 6 mm (to affix VESA mount on the PC)</p> <p>External 65 W power adapter with power cord (with protective-earth contacts)</p> <p>A DVD driver disk is not supplied.</p> <p>Windows 11 driver download: <a href="https://go.shuttle.eu/NE10N">https://go.shuttle.eu/NE10N</a></p>
<b>ENVIRONMENTAL SPECIFICATIONS</b>	<p>Operating temperature range: 0 ~ 40 °C</p> <p>Relative humidity range: 10 ~ 90 % (non-condensing)</p>
<b>CERTIFICATIONS / COMPLIANCE</b>	<p>EMI: CE, UKCA, FCC, RCM, VCCI, BSMI</p> <p>Safety: CB IEC 60950-1/62368-1, cTUVus (UL 62368-1), BSMI</p> <p>Other: RoHS, Energy Star, ErP</p> <p>This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office.</p> <p>The CE-mark approves the conformity by the EU directives:</p> <ol style="list-style-type: none"> <li>(1) 2004/108/EC relating to electromagnetic compatibility (EMC),</li> <li>(2) 2006/95/EC relating to Electrical Equipment designed for use within certain voltage limits (LVD),</li> <li>(3) 2009/125/EC relating to ecodesign requirements for energy-related products (ErP)</li> </ol>