

## NC40U Series

NANO PC



|                          |   |   |
|--------------------------|---|---|
| <b>PROCESSOR</b>         | Intel® Alder Lake-U Celeron 7305U 15W CPU<br>i3-1215U/i5-1235U/i7-1255U (optional)                                |   |
| <b>MEMORY</b>            | 2 x 260 pin DDR4 SODIMM slots, 32GB per DIMM (Max 64GB)<br>Dual channel DDR4 3200 MHz                             |   |
| <b>VIDEO GRAPHICS</b>    | Intel Ultra HD Graphics   |   |
| <b>VIDEO OUTPUT</b>      | HDMI + DisplayPort x 2 (USB-C x 1 supports DP 1.4a), Supports three displays                                      |   |
| <b>AUDIO</b>             | C-Media CM6542 HD Audio   |   |
| <b>ETHERNET</b>          | Intel i219 Gigabit LAN  | 10/100/1000 MB/s operation  |
| <b>WI-FI</b>             | Realtek RTL8188EE 802.11 b/g/n  |   |
| <b>STORAGE INTERFACE</b> | SATA 6 GB/s   |   |
| <b>FRONT PANEL</b>       | (1) Power Button<br>(1) Power LED<br>(1) HDD LED  | (1) USB 3.1 Gen 1 Type A<br>(1) USB 3.1 Gen 1 Type C<br>(1) SD Card Reader              |
| <b>BACK PANEL</b>        | (1) HDMI 2.0a<br>(1) DisplayPort 1.4a<br>(2) USB 2.0<br>(1) RJ45  | (1) DC-in jack<br>(1) Headphone + MIC in combo jack<br>(1) Kensington Lock<br>(1) RS232 |
| <b>DRIVE BAYS</b>        | (1) 2.5" 15mm SATA HDD/SSD  |   |
| <b>DIMENSIONS</b>        | 5.6(L) x 5.6(W) x 1.7(H) inches   |   |
| <b>POWER</b>             | Input: 100 - 240V AC (50/60Hz)<br>Output: 19V 3.42A, 2 pin  | 65W power supply  |
| <b>ACCESSORIES</b>       | Quick Guide<br>Vertical stand<br>Power adapter<br>Power cord  | VESA mount<br>VESA mount screws<br>Driver DVD   |
| <b>EXPANSION SLOT</b>    | M.2 2230 E key<br>M.2 2280 M key (supports PCIe Gen 3 X4, SATA 6 GB/s)<br>M.2 2280 M key (supports PCIe Gen 4 X4) | 2.5" 15mm SATA  |
| <b>OS SUPPORT</b>        | Windows 10, Linux   |   |

For more information on all products, please contact us at [sales@us.shuttle.com](mailto:sales@us.shuttle.com) or **626.820.9000**

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| <b>CHASSIS</b>             | Black slim type metal chassis<br>Kensington lock slot on both sides of chassis<br>Dimensions: 5.6 (L) x 5.6 (W) x 1.7 (H) inches<br>Weight: 0.88 LBS (net) / 2.65 LBS (gross)  |
| <b>POWER SUPPLY</b>        | External 65W power adapter (fanless)<br>AC input voltage: 100 - 240V, 50 - 60 Hz, max 1.6A<br>Output: 19V DC 3.42A   |
| <b>OPERATING SYSTEM</b>    | The system comes without an operating system installed.<br>Compatibility: Windows 10, Windows 11, Linux 64 bit   |
| <b>PROCESSOR SUPPORT</b>   | Intel® Celeron® 7305U (ULV), Intel® Core™ i3-1215U/i5-1235U/i7-1255U (optional)<br>10 nm structure, Alder Lake-U platform<br>CPU cores/threads: 5/5, Smart Cache: 8 MB<br>CPU clock frequency: 1.1 GHz<br>Max supported processor power consumption (TDP): 15W<br>System on chip processor (SoC) with integrated graphics processor    |
| <b>COOLING</b>             | Built-in CPU cooling fan with 4 pin connector<br>Supports temperature controlled RPM fan speed   |
| <b>MEMORY SUPPORT</b>      | 2 x 260 pin SODIMM slots, Supports Dual Channel mode<br>Supports DDR4 3200 MHz, SDRAM at 1.2V<br>Supports a max. of 32GB per DIMM, up to 64GB max<br>Supports two unbuffered DIMM module (no ECC)  |
| <b>M.2 SLOT</b>            | M.2 2280 BM slot provides the following interfaces:<br>PCI-Express Gen 4.0 X4 (from the top)<br>PCI-Express Gen 3.0 X4 (from the bottom)<br><br>Two thermal pads for M.2 SSDs are included<br>Supports M.2 cards with a width of 22 mm and a length of 80 mm.<br>Supports M.2 SATA SSDs (with BM key) and M.2 PCI-E SSDs (with M key). |
| <b>AUDIO</b>               | C-Media CM6542 audio codec<br>Audio connector (3.5 mm) on the back panel:<br>1) Line-out (headphones)<br>2) Microphone input<br>Digital multi-channel audio output: via HDMI and DisplayPort   |
| <b>WIRED NETWORK</b>       | RJ45 connector supports Gigabit LAN at 10/100/1000 MB/s, Supports Wake on LAN<br>Intel i219 ethernet controller with MAC, PHY, PCIe interface<br>Supports network boot by Preboot eXecution Environment (PXE)  |
| <b>WIRELESS NETWORK</b>    | M.2 2230 slot, Internal antenna x 1<br>Supports 802.11n (1T1R)<br>Realtek RTL8188EE  |
| <b>INTEGRATED GRAPHICS</b> | Intel UHD graphics, Graphics Max Dynamic Frequency: 0.9 GHz<br><br>This model supports up to three independent screens up to 2160 at 60 Hz (Ultra HD/4K):<br>-HDMI (supports up to HDMI 2.0b)<br>-DisplayPort (supports up to DP 1.4a)<br>-USB-C port (support DP 1.4a and USB Gen 1)  |
| <b>STORAGE</b>             | Supports one 2.5" SATA hard disk or SSD drive<br>Max height 15 mm<br>Supports SATA III, 6 GB/s bandwidth (max 600 MB/s)<br>Pre-installed SATA/power cable  |

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|-------------------------------|--|---|
| <b>FRONT PANEL CONNECTORS</b> | USB 3.2 Gen 1 type A x 2<br>USB 3.2 Gen 1 type C (supports DP 1.4a)<br>Audio line-out<br>MIC input   | Power Button<br>Power indicator (Blue LED)<br>Hard disk drive indicator (Yellow LED)  |
| <b>BACK PANEL CONNECTORS</b>  | HDMI 2.0b<br>DisplayPort 1.4a [1]*<br>USB 3.2 Gen 1 x 2<br>USB 3.2 Gen 2 x 2   | Gigabit LAN (RJ45)<br>Audio combo port (MIC/headphone)<br>DC-input connector for external power adapter<br>External WLAN antenna x 2 (optional) |
| <b>INCLUDED ACCESSORIES</b>   | XPC installation guide<br>Driver DVD for Windows 10/11<br>Vertical stand with screws   | External 65W power adapter<br>VESA mount (75/100mm standard w/ screws)<br>2.5" drive bracket with screws  |
| <b>ENVIRONMENTAL CRITERIA</b> | Operating temperature: 0 - 40°C [2]*   | Humidity: 10 - 90% (non-condensing)   |
| <b>CERTIFICATIONS</b>         | EMI: BSMI, CE, FCC, RCM, UKCA, VCCI<br>Safety: CB IEC60950/62368, cTUVus, BSMI   | Other: RoHS, Energy Star, ErP   |
|                               | This model is classed as a technical information equipment (ITE) in class B and is intended for use in living rooms and offices. The CE mark approves conformity by the EU directives:<br>(1) 2004/108/EC relating to electromagnetic compatibility (EMC)<br>(2) 2006/95/EC relating to Electrical Equipment designed for use within certain voltage limits (LVD)<br>(3) 2009/125/EC relating to eco-design requirements for energy related products (ErP) |   |

### [1] HOW TO CONVERT DISPLAYPORT INTO HDMI/DVI

The DisplayPort output can be converted into a HDMI or DVI output using an additional passive adapter cable. The integrated graphics automatically detects the connected display and outputs the appropriate electric signal - either DisplayPort (without an adapter) or HDMI/DVI (with an adapter).

### [2] CAUTION

For high ambient temperatures over 35°C, it's recommended to use SSDs (supporting at least 70°C) instead of hard disks. Ensure free circulation of air amongst the PC and ventilation holes is clear.

### [3] POWER ON AFTER POWER FAIL

The BIOS setup provides a "Power-On after Power Fail" function that can be found under "Power Management Configuration". This function may fail after short power failures, but the NC02U comes with a hardware based solution in these cases. By removing the Jumper JP1 on the mainboard (refer to the quick guide), the system will start unconditionally once power is supplied.

### [4] OPTIONAL WIRELESS LAN MODULE

This PC has the option to be upgraded with WLAN/Bluetooth functionality. Shuttle offers WLN-M/WLN-M1 kits that consist of a WLAN card in M.2 2230 format and two external antennas w/ appropriate cables (Note: two internal antennas are already pre-installed and can also be used instead).

**BIOS DOWNLOADS:** <https://global.shuttle.com/products/productsDownload?pn=NC40U%20SERIES>

**SUPPORT LIST:** <https://global.shuttle.com/products/productsSupportList?pn=NC40U%20SERIES>

**FAQ LIST:** <http://global.shuttle.com/support/faq>

**PRODUCT WARRANTY:** <https://www.shuttlecomputers.com/warrantypolicies>

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## Front View



- |                        |                 |
|------------------------|-----------------|
| 1 USB 3.2 Gen 1 Type A | 5 Hard Disk LED |
| 2 USB 3.2 Gen 1 Type C | 6 Power Button  |
| 3 MIC input            | 7 Power LED     |
| 4 Headphones output    |                 |

## Back View



- |                   |                     |
|-------------------|---------------------|
| A DC power input  | D USB 3.2 Gen 1 x 2 |
| B DisplayPort 1.4 | E USB 3.2 Gen 2 x 2 |
| C HDMI 2.0b       | F RJ45 LAN          |



Kensington lock hole on both sides

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## INTEL® 12TH GENERATION PROCESSORS

The NC40U supports Intel® 12th Generation Alder Lake-U platform technology with a Celeron® 7305U processor\*. It supports DDR4 3200 MHz memory (up to 64GB) with Intel® HD graphics for 4K video playback.

\*Core i3-1215U/i5-1235U/i7-1255U processor options available



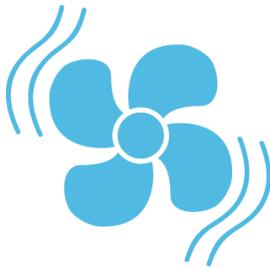
## SPACE SAVING SIZE

The small size of the NC40U makes it suitable to mount or fit in limited spaces with a thickness of only 1.7 inches.



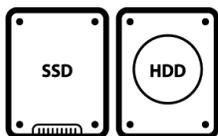
## EASY INSTALLATION

Simply open both upper and lower covers to easily install a memory module, HDD, or other hardware components. The case can install a 2.5" HDD up to 15 mm\* for flexible storage capacity without volume restriction.



## SMART FAN DESIGN

A heatpipe cooling system with smart fan design can be set for faster fan speed automatically when CPU temperature increases for high stability and low noise during long term operation.



## 2.5" SSD/HDD

## EXPANDABLE STORAGE SPACE

Despite its small size, the NC10U series allows installation of up to 1 x 15 mm 2.5" HDD/SSD and 1 x M.2 SSD.\*

\*M.2 supports both SATA and PCI-E storage interfaces

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| ACCESSORY   | WLN-M   |
|-------------|---|
| DESCRIPTION | The WLN-M wireless LAN kit can be used to equip XPC cube and slim series models with the wireless LAN standard 802.11 n/ac at 2.4/5 GHz. The combo device supports Bluetooth 4.0. |
| REMARKS     | M.2 2230 (NGFF) WLAN card, Antenna cable (XPC slim) x 2, Antenna  |
| OS SUPPORT  | Windows 7, Windows 8.1, Windows 10, Windows 11, Linux (32/64 bit)   |



| ACCESSORY   | WLN-M1  |
|-------------|---|
| DESCRIPTION | The WLN-M1 wireless LAN kit can be used to equip XPC cube and slim series models with the wireless LAN standard 802.11 b/g/n/ac/ax at 2.4/5 GHz. The combo device supports Bluetooth 5.2. |
| REMARKS     | M.2 2230 (NGFF) WLAN card, Antenna cable (XPC slim) x 2,  |
| OS SUPPORT  | Windows 10, Windows 11, Linux (64 bit)  |

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# NC40U vs NC10U

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| MODEL             | NC40U   | NC10U   |
|-------------------|---|---|
| CHIPSET           | Intel Celeron 7305  | Intel Celeron 4205U   |
| PROCESSOR SUPPORT | max TDP 15W, 1.1 GHz<br>10nm Alder Lake-U<br>Core i3-1215U/i5-1235U/i7-1255U (optional)                           | max TDP 15W, 1.8 GHz<br>14nm++ Whiskey Lake-U<br>Core i3-8145U/i5-8265U/i7-8565U (optional) |
| MEMORY            | 2 x 32 GB DDR4 3200 MHz max   | 2 x 16 GB DDR3L 2133/2400 MHz max   |
| VIDEO OUTPUT      | HDMI 2.0b + DisplayPort 1.4a + USB C<br>Supports triple displays<br>Supports 4K Ultra HD                          | HDMI 2.0a + DisplayPort 1.2<br>Supports dual displays<br>Supports 4K Ultra HD               |
| GRAPHICS          | Intel HD Graphics 610 (620 with Core i3/i5/i7 options)  | Intel HD Graphics 610 (620 with Core i3/i5/i7 options)                                      |
| AUDIO             | Realtek AL662, HD audio   | Realtek AL662, HD audio   |
| ETHERNET          | Intel i219 Gigabit LAN<br>10/100/1000 MB/s operation<br>Supports Wake on LAN function                             | Intel i211 Gigabit LAN<br>10/100/1000 MB/s operation<br>Supports Wake on LAN function       |
| FRONT PANEL       | Power button with LED, HDD LED, USB 3.2 Gen 1 type A x 2, USB 3.2 Gen 1 type C                                    | Power button with LED, HDD LED, SD Card Reader, USB 3.2 Gen 1 type A, USB 3.2 Gen 1 type C  |
| BACK PANEL        | HDMI 2.0b, DisplayPort 1.4a, USB-C<br>USB 3.2 Gen 1 x 2, USB 3.2 Gen 2 x 2<br>Gigabit LAN (Intel i219)            | HDMI 2.0a, DisplayPort 1.2<br>USB 2.0 x 2<br>Gigabit LAN (Intel i211)<br>COM port (RS232)   |
| DRIVE BAYS        | (1) 2.5" HDD/SSD bay  | (1) 2.5" HDD/SSD bay  |
| ACCESSORIES       | Vertical Stand (PS02)<br>VESA mount<br>2.5" drive bracket   | Vertical Stand (PS02)<br>VESA mount<br>2.5" drive bracket                                   |
| EXPANSION SLOT    | M.2 2230 E key<br>M.2 2280 M key (supports PCIe Gen 3 X4, SATA 6 GB/s)<br>M.2 2280 M key (supports PCIe Gen 4 X4) | M.2 2280 M slot<br>M.2 2230 E slot (supports PCIe Gen 3* X4, SATA 6 GB/s)                   |
| OS SUPPORT        | Windows 10, Windows 11, Linux (64 bit)  | Windows 10, Windows 11, Linux (64 bit)  |

\*PCIe Gen 2 for Celeron CPU

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