

# NC10U3

## NANO PC



|                                |  |  |
|--------------------------------|--|--|
| <b>PROCESSOR</b>               | Intel® Core™ i3-5005U 2.0 GHz processor  |  |
| <b>MEMORY</b>                  | 2 x 204 pin DDR3L SODIMM 1333/1600 MHz slots, Supports dual channel up to 16GB (8GB x 2)   |  |
| <b>VIDEO GRAPHICS</b>          | Intel HD Graphics 5500, DirectX 11.2   |  |
| <b>VIDEO OUTPUT</b>            | HDMI 1.4a + Mini DisplayPort 1.2 [1]*, Supports dual independent displays  |  |
| <b>AUDIO</b>                   | Realtek ALC269Q-VC3 HD audio   |  |
| <b>ETHERNET</b>                | Intel i218LM Gigabit LAN<br>10/100/1000 MB/s operation   | Supports Wake on LAN function  |
| <b>STORAGE INTERFACE</b>       | SATA 6 GB/s  |  |
| <b>LEFT SIDE CONNECTOR</b>     | (1) RS232 COM port   |  |
| <b>FRONT PANEL</b>             | (1) Power Button<br>(1) Power LED<br>(1) HDD LED   | (2) USB 3.0 (supports 2.0A charging)<br>(1) SD Card Reader (SD, SDHC, SDXC)      |
| <b>BACK PANEL</b>              | (1) HDMI 1.4a<br>(1) Mini DisplayPort 1.2 [1]*<br>(2) USB 2.0  | (1) Audio combo port (MIC/headphone) [2]*<br>(1) Gigabit LAN (RJ45)<br>(1) DC-in |
| <b>DRIVE BAYS</b>              | (1) 2.5" HDD/SSD bay (7mm max height)  |  |
| <b>DIMENSIONS</b>              | 5.5(L) x 5.5(W) x 1.7(H) inches  |  |
| <b>POWER</b>                   | Input: 100 - 240V AC<br>Output: 19V 3.42A  | 65W 19V power supply   |
| <b>OPERATING TEMPERATURE</b>   | 0 - 50°C [3]*, Relative humidity range: 10 - 90% (non-condensing)  |  |
| <b>ACCESSORIES</b>             | Quick Guide<br>Vertical stand<br>65W power adapter<br>Power cord   | VESA mount<br>VESA mount screws<br>Driver DVD<br>2.5" drive bracket with screws  |
| <b>OPTIONAL EXPANSION KITS</b> | Graphics: AMD R7 M370 "Litho XT"<br>I/O box: Gigabit LAN x 1, USB 2.0 x 2, 2.5" drive bay x 1<br>I/O box: RS232 COM port x 3, 2.5" drive bay x 1 |  |
| <b>OS SUPPORT</b>              | Windows 7 (32 & 64 bit), Windows 8.1 (32 & 64 bit), Windows 10 (32 & 64 bit), Linux (32 & 64 bit)  |  |

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| <b>CHASSIS</b>             | Black plastic chassis<br>Kensington lock slot on one side of chassis<br>Dimensions: 5.6 (L) x 5.6 (W) x 1.14 (H) inches<br>Weight: 0.79 LBS (net) / 2.8 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, DC connector: 5.5 mm/2.5 mm (outer/inner diameter)  |
| <b>OPERATING SYSTEM</b>    | The system comes without an operating system installed.<br>Compatibility: Windows 7 (32/64bit), Windows 8.1 (32/64 bit), Windows 10 (32/64 bit)[4]*, Linux (32/64 bit)  |
| <b>PROCESSOR SUPPORT</b>   | Intel® Core® i3-5005U (ULV)<br>14 nm structure, Broadwell platform (5th generation Intel Core)<br>CPU cores/threads: 2/4, L1/L2/L3 cache: 128 kb/512 kb/3072kb<br>CPU clock frequency: 2.0 GHz<br>Max supported processor power consumption (TDP): 15W<br>Supports 64 bit, VT-x, VT-d, AVX, AVX2, AES-NI, Enhanced SpeedStep, NX bit, SSE 4.1/4.2<br>System-on-a-chip processor (SoC), no chipset required  |
| <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 204 pin SODIMM slots, Supports Dual Channel mode<br>Supports DDR3L 1333(PC3-10600/12800) SDRAM at 1.35V<br>Supports a max. of 8GB per DIMM, up to 16GB max<br>Supports two unbuffered DIMM module (no ECC)<br>DDR3L has a lower operation voltage as compared to DDR3<br>Mainboard only supports 1.35V DDR3L memory modules   |
| <b>M.2 SSD SLOT</b>        | M.2 slot: NGFF Type 2242, M key<br>Supports M.2 SSD card, B+M key, 22x 42 mm max size, Serial ATA interface<br>Caution: SSDs with PCIe interface (M key only) are not supported   |
| <b>AUDIO</b>               | Realtek® ALC 269Q-VC3 HD audio codec<br>3.5mm / 4-pole audio combo connector for headphones and microphone [2]*<br>Digital multi-channel audio output: via HDMI and Mini DisplayPort  |
| <b>WIRED NETWORK</b>       | Intel i218LM PHY connected to the MAC of the processor<br>Supports 10/100/1000 MB/s operation (Gigabit), Supports Wake on LAN<br>Supports network boot by Preboot eXecution Environment (PXE)   |
| <b>WIRELESS NETWORK</b>    | WLAN expansion card (M.2 2230 AE) with two internal antennas<br>Realtek RTL8821AE, Supports Bluetooth 4.0<br>Supports wireless LAN IEEE 802.11 b/g/n/ac 1T1R, 2.4 GHz or 5 GHz<br>Max speed: 150 MB/s (2.4 GHz) or 433 MB/s (5 GHz)   |
| <b>LOW POWER</b>           | Power consumption in idle mode: 7W<br>Power consumption under full load: 13.6W / 23.7W (CPU/CPU + graphics)<br>Consumption measured with 2 x 4 GB DDR3L 1600 SODIMM, 64 GB 2.5" SSD, under Windows 7 64 bit   |
| <b>INTEGRATED GRAPHICS</b> | Intel HD 5500 graphics, GPU clock rate: 300 - 850 MHz<br>Supports DirectX 11.2, OpenCL 1.3/2.0, OpenGL 4.3<br>Two digital audio/video ports: Mini DisplayPort 1.2 [1]* and HDMI 1.4a<br><br>Supports one Ultra HD/4K display running at 3840 x 2160 (2160p) resolution<br>Max frame rate with Ultra HD resolution: 60 Hz via DisplayPort, 30 Hz via HDMI<br>Supports two independent screens at 2560 x 1600 resolution<br>Supports full AVC/VC1/MPEG2 hardware decoding<br>Supports HD video plus multi-channel digital audio via a single cable<br>Dynamic shared memory up to 1632 MB |

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| <b>CARD READER</b>            | Integrated card reader supports SD, SDHC, SDXC memory flash cards<br>Supports boot up from SD card  |  |
| <b>STORAGE</b>                | Supports one serial ATA hard disk or one SATA SSD drive in 2.5" format, 7mm max height<br>Supports SATA III, 6 GB/s bandwidth<br>No serial ATA cable is required  |  |
| <b>FRONT PANEL CONNECTORS</b> | SD Card Reader<br>USB 3.0 x 2 (supports 2.0A charging)<br>Power Button  | Power indicator (Blue LED)<br>Hard disk drive indicator (Orange LED)   |
| <b>BACK PANEL CONNECTORS</b>  | HDMI v1.4a<br>Mini DisplayPort v1.2 [1]*<br>USB 2.0 x 2<br>Gigabit LAN (RJ45)   | RS232 COM port (9 pin)<br>Audio combo port (MIC/headphone) [2]*<br>DC-input connector for external power adapter |
| <b>INCLUDED ACCESSORIES</b>   | XPC installation guide<br>Driver DVD<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 - 50°C [3]*  | Humidity: 10 - 90% (non-condensing)  |
| <b>CERTIFICATIONS</b>         | EMI: FCC, CE, BSMI, C-Tick<br>Safety: ETL, CB, BSMI<br><br>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)<br>(4) 1999/5/EC related to Radio and Telecommunications Terminal Equipment (R&TTE) |  |

### [1] MINI DISPLAYPORT

A monitor with a standard DisplayPort can ideally be connected using an adapter cable that converts Mini DisplayPort to DisplayPort

### [2] AUDIO CONNECTOR

The 3.5 mm audio jack at the back panel of this device supports both a 4 pole connector for headphones and MIC/headphones with a 3 pole connector. Headsets with separate connectors for headphones and microphone require an appropriate adapter if the microphone is also used.

### [3] HIGH AMBIENT TEMPERATURES

For high ambient temperatures over 40°C, it's recommended to use SSDs (supporting at least 70°C) instead of hard disks and rugged SODIMM memory with a wide temperature range of up to 95°C.

### [4] REGARDING SUPPORTED WINDOWS EMBEDDED VERSION

Supports Embedded versions based on Windows 7/8:

- Windows 7 Ultimate for Embedded Systems
- Windows 7 Professional for Embedded Systems
- Windows Embedded Standard 7
- Windows Embedded POSReady 7
- Windows Embedded 8.1
- Windows Embedded 8/8.1 Industry

Does not support Embedded versions based on Windows XP:

- Windows XP Embedded
- Windows XP Professional for Embedded Systems
- Windows Embedded Standard 2009
- Windows Embedded POSReady 2009
- Windows Embedded for Point of Service (WEPOS)

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

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### Front View



- 1 SD Card Reader
- 2 USB 3.0 x 2 (2A charging)
- 3 Power Button

### Back View



- |                    |                      |
|--------------------|----------------------|
| A DC power input   | D Gigabit LAN (RJ45) |
| B Mini DisplayPort | E USB 2.0 x 2        |
| C HDMI port        | F Audio combo port   |



RS232 COM port on the right side

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## NANO PC



### SUPPORTS INTEL® BROADWELL-U PLATFORM

The NC01U3 series supports Intel® Broadwell-U platform technology with a Intel® Core® i3-5005U processor. It supports DDR3L 1333/1600 MHz memory (up to 16GB) with Intel® HD graphics for 4K video playback.



### SPACE SAVING SIZE

The small size of the NC01U3 makes it suitable to mount or fit in limited spaces with a thickness of only 1.14 inches.



### HIGH SPEED STORAGE

The NC01U3 has one built-in M.2 slot for high speed SSD for the best data transfer efficiency. Support for one 2.5" HDD/SSD (7mm ultra slim) and SD memory card allows for expansion of space.



### SMART FAN DESIGN

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



### GREAT CONNECTIVITY WITH MULTIPLE I/O

The NC01U3 provides multiple I/O to connect with peripherals via HDMI, Mini DisplayPort, RS232, USB 2.0, USB 3.0, and SD Card Reader. With the USB 3.0 ports, the 2A current allows for the fast charging of devices.

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|              |   |
|--------------|---|
| ACCESSORY    | <b>XCB01</b>  |
| DESCRIPTION  | Installs three additional RS232 COM ports and two USB 2.0. The XCB01 also supports one 2.5" 12.5 mm SATA 6 GB/s HDD/SSD (NC01U5/U7 only). |
| OS SUPPORTED | Windows 7 and Windows 10  |



|              |   |
|--------------|---|
| ACCESSORY    | <b>XLB01</b>  |
| DESCRIPTION  | Provides additional Intel® Gigabit LAN and two USB 2.0. The XLB01 also supports one 2.5" 12.5 mm SATA 6 GB/s HDD/SSD (NC01U5/U7 only) |
| OS SUPPORTED | Windows 7 and Windows 10  |



|              |   |
|--------------|---|
| ACCESSORY    | <b>XVB01</b>  |
| DESCRIPTION  | Optional expansion VGA box equipped with an AMD Radeon R7 M370 GPU and a memory capacity of 2GB. Supports DirectX 12 and 4K/Ultra HD content playback with 3D graphics performance for multimedia and gaming. |
| INTERFACE    | PCIe X4   |
| OS SUPPORTED | Windows 7 and Windows 10  |

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