

Fanless 1-litre PC suitable for 24/7 operation

The Shuttle XPC slim PC-System DX3000EP is a fanless and virtually noiseless PC which is suitable for continuous 24/7 operation. It is equipped with an energy-efficient Intel Celeron J3355 "Apollo Lake" processor, 32 GB SSD, 4 GB RAM and Windows operating system. DX3000EP can be easily upgraded with another 2.5" storage drive. The powerful integrated graphics supports triple monitoring on DisplayPort, HDMI and VGA outputs. This slim nettop PC is versatilely applicable in noise-sensitive environments and also for professional applications.

Shuttle XPC slim PC System **DX3000EP**



Feature Highlights

Chassis	<ul style="list-style-type: none"> • Black 1.35-litre chassis • Dimensions (LWH): 19 x 16.5 x 4.3 cm • Hole for the Kensington Lock • Including VESA75/100 mounting kit • Operating temperature max. 40 °C • Approved for 24/7 non-stop operation
Operating System	<ul style="list-style-type: none"> • Windows 10 Pro – 64 bit
CPU	<ul style="list-style-type: none"> • Intel Celeron J3355 "Apollo Lake" 2.0~2.5 GHz Dual Core 10 W SoC • Noiseless, fanless cooling system
Graphics	<ul style="list-style-type: none"> • Integrated Intel HD Graphics (Gen 9)
Memory & Storage	<ul style="list-style-type: none"> • 4 GB DDR3L-1600 SO-DIMM • 32 GB SSD M.2 card (SATA) • Free 2.5" bay supports one SATA SSD or hard disk • SD card reader (SD/SDHC/SDXC)
Connectors and WLAN	<ul style="list-style-type: none"> • HDMI 1.4b, DisplayPort 1.2, D-Sub VGA *) • 2x USB 3.0, 4x USB 2.0, 1x COM (serial) *) • 2x Audio (mic, headphones), PS/2 combo • Intel Gigabit-LAN • WLAN 802.11n with external Antenna • Connector for external power button
Power Supply	<ul style="list-style-type: none"> • External 40 W fanless power adapter



Images for illustration purposes only.

*) Note: The scope of delivery includes an adapter which can be used to replace the VGA port into a second COM port.



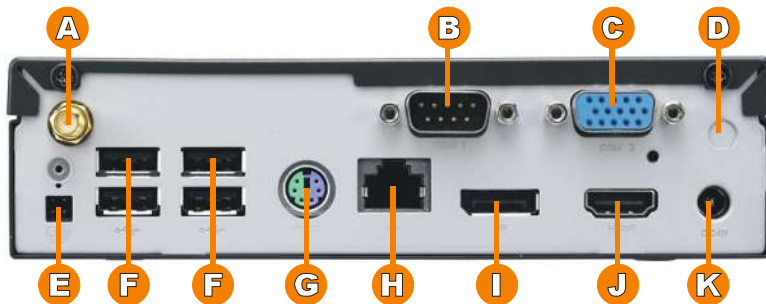
Shuttle XPC slim PC System DX3000EP – Front and Back Panel

Front Panel



- 1 Microphone input
- 2 Headphones output
- 3 Power LED
- 4 Hard disk / SSD LED
- 5 Power Button
- 6 SD Card Reader
- 7 2x USB 3.0

Back Panel



- A Connector for the included WLAN antenna
- B COM port (supports RS232/RS422/RS485)
- C D-Sub VGA port for analog Video
- D Perforation for antenna
- E Connector for external power button, Clear CMOS and 5 V DC voltage (four pins, 2.54 mm pitch)
- F 4x USB 2.0
- G PS/2 Combo port for mouse or/and keyboard
- H RJ45 Gigabit LAN port
- I DisplayPort (DP) video output
- J HDMI video output
- K DC power input
- L 2x hole for Kensington Lock
- M VESA mount (two parts)

Right View



Left View



COM port Pin 9 Configuration
 Pin 9 is a multi-functional signal. Based on jumper JP2 configuration on the mainboard, it can be configured as Ring Indicator (RI) or external power supply with either 5 V or 12 V voltage level (each COM port separately).



© 2017 by Shuttle Computer Handels GmbH (Germany). All information subject to change without notice. Pictures for illustration purposes only.

Shuttle XPC slim PC System DX3000EP – Product Features



Slim, stylish and robust chassis

The Shuttle XPC slim PC System DX3000EP features a slim 1.3-litre steel chassis, giving it the appropriate stability required for professional applications. The decorative silver stripe lets it also easily find a place in both home and office environments.

Fanless, quiet and 24/7 approved

The Shuttle XPC slim PC System DX3000EP is officially approved for 24/7 permanent operation. It uses a passive thermal module which makes the system not only quiet, but also dust-free and virtually maintenance free. Thanks to its low power consumption and completely fanless cooling, this PC runs highly reliably making it perfectly suitable for digital signage and POI/POS applications.



Conditions for permanent use:

- Free circulation of air amongst the PC must be guaranteed
- Ventilation holes must be clear
- If a hard disk will be installed, this must also be approved for permanent operation by its manufacturer.



Highly energy-saving

The Shuttle XPC slim PC System DX3000EP barely consumes, depending on system load, about 7~20 Watt. Running the device 5 days a week for eight hours a day, the annual consumption would amount to approx. 15~42 kWh which would mean just 3.7~10.4 Euros on the power bill (25 Euro ct/kWh) - way less than a conventional desktop PC draws.



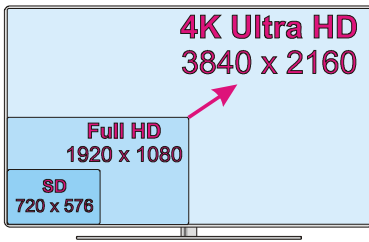
Celeron® J3355 – energy efficient Dual Core CPU

The Shuttle XPC slim PC System DX3000EP is equipped with an Intel® Celeron® Processor J3355 which is a power-efficient System-on-a-Chip (SoC) from the Apollo-Lake family. Thanks to the optimized 14 nanometer process, two x86-64 CPU cores and a clock speed of 2.0 to 2.5 GHz (Burst), energy efficiency and performance have been significantly improved compared to the Bay Trail predecessor in 22 nm architecture. In addition, the processor integrates a powerful 9th Gen Intel® HD graphics engine, which is also known from the Skylake and Kaby Lake desktop processors.



Triple Display with HDMI, DisplayPort and VGA

The Shuttle XPC slim PC System DX3000EP features three video outputs: HDMI, DisplayPort and VGA. Triple View technology offers multiple display support on up to three separate monitors. This helps improve on productivity by allowing for multiple windows to be spread across two monitors while working with them simultaneously.



Supports 4K Ultra HD at 60 Hz

The Shuttle XPC slim PC System DX3000EP supports displays running at 4K (3840 x 2160 / 2160p) high resolution at 60 Hz per second when connected to its DisplayPort video output. Being the successor to the Full HD standard, Ultra HD delivers a four times higher resolution with a wider colour space and colour depth.



Wireless LAN with external antenna

The Shuttle XPC slim PC System DX3000EP comes with a built-in Wireless-LAN card in M.2-2230 format and one external antenna for better signal reception. The antenna should be aligned vertically or horizontally for best possible range. It supports the wireless network standards IEEE 802.11n at 2.4 GHz.



Serial RS-232 port (COM)

The Shuttle XPC slim PC System DX3000EP features one serial RS232 COM ports on the back panel which supports 5 V / 12 V auxiliary voltage. It is also switchable to RS422 or RS485 mode. Today, many consumer PCs do no longer have this legacy ports, since this interface has been superseded by USB. Still, they are commonly used for applications in the industrial automation field, scientific analysis and POS systems.

Note: The scope of delivery includes an adapter which can be used to replace the VGA port into a second COM port.



SD card reader

The built-in SD card reader at the front makes it easy to transfer files from your camera so you can share videos and photos on your Shuttle XPC slim PC System DX3000EP with ease.



VESA mount

The supplied 75/100mm VESA mount allows for installation on to walls or monitors which is particularly interesting for the industry segment, company buildings and public institutions. Other than this, the chassis bears numerous threaded holes (M3) enabling it to be fitted almost anywhere.



Kensington Lock

This is a small, metal-reinforced hole as part of an anti-theft system. The Shuttle XPC slim PC System DX3000EP provides an appropriate hole on both sides of its chassis. The lock and cable are not included.



External power button by separate remote line

If, because of space constraints (e.g. in case of a fixed installation), the machine cannot be switched on by pressing the front power button, it can be powered on by a separate remote line. You will find an appropriate four-pin-connector on the backpanel of the Shuttle XPC slim PC System DX3000EP (pitch 2.54 mm). Furthermore, this connector provides a Clear CMOS function and +5V DC voltage supply for external devices.



- Back Panel -



Power on after Power fail

The BIOS setup provides a "Power-On after Power Fail" function that can be found under "Power Management Configuration". As the name indicates, this function determines the PC's behaviour after power failure: (1) unconditional power on, (2) restore former status (3) keep system turned off (4) Power-On by LAN or (5) Power-On by Real-Time-Clock. As a matter of the nature of this function, it may fail after short power failures. This is why the Shuttle XPC slim PC System DX3000EP also comes with a hardware-based solution. By removing Jumper JP5 (see image) the system will start unconditionally once power is applied.



Tiny power adapter

The external fanless 40 W power adapter is virtually noiseless and can easily be hidden behind the desk thanks to its diminutive size. You can use the supplied 19V power adapter (max. 2.1A), but the DX3000EP is also compatible with a 12V (max. 3.33A) power adapter.

Product Comparison

	DX30	DX3000XA	DX3000EP
Type	Barebone	System without OS	System with Windows
Shuttle XPC	DX30	DX30	DX30
Processor	Celeron J3355	Celeron J3355	Celeron J3355
SSD (M.2 card)	---	128 GB SSD	32 GB SSD
Memory	---	4 GB DDR4-2133	4 GB DDR4-2133
Operation System	---	---	Windows 10 Pro
Bar code	887993001005	4046047103201	4046047103195

Shuttle XPC slim PC System DX3000EP - Specifications

<p><i>Fanless and silent</i></p>	<p>Completely fanless, virtually noiseless Passive cooling through convective heat transfer Perfect to be used in noise-sensitive environments Fanless means less dust and thus virtually no maintenance required</p>
<p><i>Energy Efficient</i></p>	<p>Power consumption in idle mode: 7.0 W Power consumption under full load: 11.8 W / 19.7 W (CPU / CPU+graphics)</p>
<p><i>Chassis</i></p>	<p>Nettop PC with black chassis made of steel Dimensions: 190 x 165 x 43 mm (LWH) = 1.35-litre Weight: 1.3 kg net and 2.1 kg gross Two holes for Kensington Locks and numerous threaded holes (M3) at both sides of the chassis</p>
<p><i>Operation Position</i></p>	<p>1) Horizontal 2) Vertical (e.g. VESA-mounted behind an appropriate monitor) In vertical position, the front USB ports should show upwards. Ventilation holes must not be blocked to ensure sufficient cooling.</p>
<p><i>Operation System</i></p>	<p>Windows 10 Pro - 64 bit</p>
<p><i>Processor</i></p>	<p>Intel® Celeron® Processor J3355, Dual Core CPU clock frequency: 2.0 GHz, max. Turbo frequency: 2.5 GHz Apollo Lake platform, Goldmont architecture, 14 nm structure CPU cores / Threads: 2 / 2 L2 Cache: 2 MB Thermal Design Power (TDP): 10 W Supports AES-NI, VT-x (EPT), VT-d, Secure Boot SOC design with integrated graphics processor, no chipset required</p>
<p><i>Integrated Graphics</i></p>	<p>The Graphics Processing Unit (GPU) is integrated in the processor Intel® HD Graphics 500 (9th Gen), graphics frequency: 250~700 MHz Supports DirectX 12, OpenGL 4.3, OpenCL 1.2, OpenGL ES 3.0, Intel Quick Sync Video, Intel Clear Video (HD) Execution Units (EU): 12 Video outputs (Resolution): - HDMI 1.4b: max. 1920 x 1200 @ 60 Hz oder 3840 x 2160 @ 30 Hz - DisplayPort 1.2: max. 4096 x 2160 @ 60 Hz - D-Sub (VGA): max. 1920 x 1200 resolution @ 60 Hz Supports three displays simultaneously via HDMI, DisplayPort and VGA.</p>

UEFI Firmware	<p>16 MB Flash ROM with AMI's Aptio UEFI BIOS Firmware Based on the Unified Extensible Firmware Interface (UEFI) [1] Supports Power fail resume / AC power on state / always on / always off [3] Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states Supports boot up from external flash memory cards With embedded Firmware TPM v2.0 (fTPM)</p>
Memory	<p>4 GB DDR3L-1600 SO-DIMM memory at 1.35V Maximum total size: 8 GB (either 1x 8 GB or 2x 4 GB)</p>
SSD Storage	<p>32 GB SSD memory card in M.2 format (SATA)</p>
2.5" Bay	<p>Supports one Serial ATA hard disk (5400 / 7200 rpm) or one SATA SSD drive in 6.35 cm / 2.5" format Serial ATA III Interface with up to 600 MB/s transfer speed Supports a drive with a max. height 12.5 mm Pre-installed SATA cable (data / power) Supports Unified Extensible Firmware Interface (UEFI)</p>
Integrated Audio	<p>Realtek ALC662 Audio Codec Two analog audio connectors (3.5 mm): 1) Line out (headphones) 2) Microphone input</p>
Card Reader	<p>Integrated card reader supports standard SD, SDHC and SDXC memory flash cards</p>
Wired Network	<p>RJ45 connector supports Gigabit LAN at 10/100/1000 Mbit/s Intel i211 Ethernet Controller with MAC, PHY and PCIe interface Supports Wake-on-LAN</p>
Wireless Network	<p>M.2-2230 WLAN card with Realtek RTL8188EE Controller Supports IEEE 802.11b/g/n Max. 150Mbps up-/downstream (1T1R) in the 2.4 GHz band One external antenna supplied</p>
LEDs and Buttons	<p>Power button Power LED (blue) HDD LED (yellow)</p>
Front Panel Connectors	<p>2x USB 3.0 SD card reader</p>

<p><i>Back Panel Connectors</i></p>	<p>HDMI 1.4b digital video and audio output DisplayPort 1.2 digital video and audio output D-Sub/ VGA analog video output (15-pin) 4x USB 2.0 Gigabit network (LAN, RJ45) Audio Line-out (headphones) Microphone input RS232/RS422/RS485 serial port, 9-pin D-Sub (support of an auxiliary voltage of 5//12V) [6] PS/2 Combo supports keyboard or mouse DC input for the external power adapter 4-pin connector (2.54 mm pitch) supports - external power on button - Clear CMOS function - +5V DC voltage for external components External WLAN antenna (perforation for second antenna available)</p>
<p><i>Power-on Jumper</i></p>	<p>Jumper JP5 for power on after power fail (hardware solution) [3]</p>
<p><i>Power Supply</i></p>	<p>External 40 W AC/DC power adapter (fanless) AC Input: 100~240 V AC, 50~60 Hz DC Output: 19 V / 2.1 A Automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH) DC Connector: 5.5 /2.5 mm (outer/inner diameter) Remark: the DC-input of the computer supports an external power source with either 12 V ±5% (max. 3.33 A) or 19 V ±5% (max. 2.1 A).</p>
<p><i>Supplied Accessories</i></p>	<p>Multi-language user guide (EN, DE, FR, ES, JP, KR, SC, TC) VESA mount for 75 / 100 mm standard (two metal brackets) Four thumbscrews M3 x 5 mm (screws together VESA mount and PC) Four screws M4 x 10 mm (to affix VESA mount on the PC) Four screws M3 x 4 mm (to mount a 2.5" storage into the bay) Driver DVD (Windows 64-bit) External 40 W power adapter with power cord COM port adapter (can replace VGA into second COM port)</p>
<p><i>Optional Accessories</i></p>	<p>PS02: Optional stand for vertical operation position</p>
<p><i>24/7 Nonstop Operation</i></p>	<p>This device is approved for 24/7 permanent operation. Requirements: - Free air circulation around the PC must be guaranteed. - Ventilation holes must be kept clear. - Any installed disk must also be approved for permanent operation by its manufacturer</p>
<p><i>Environmental spec.</i></p>	<p>Operating temperature range: 0~40 °C Relative humidity range: 10 ~ 90 % (non-condensing)</p>

© 2017 by Shuttle Computer Handels GmbH (Germany). All information subject to change without notice. Pictures for illustration purposes only.

Certification and Compliance

EMI: FCC, CE, BSMI, RCM, VCCI, R&TTE

Safety: CB, BSMI, ETL, CCC

Other: RoHS, Energy Star, ErP

This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office. The CE-mark approves the conformity by the EU directives:

- (1) 2004/108/EC relating to electromagnetic compatibility (EMC),
- (2) 2006/95/EC relating to Electrical Equipment designed for use within certain voltage limits (LVD),
- (3) 2009/125/EC relating to ecodesign requirements for energy-related products (ErP),
- (4) 1999/5/EC related to Radio and Telecommunications Terminal Equipment (R&TTE)

[1] UEFI-Firmware (versus BIOS)

Just as with many modern PCs, the Shuttle XPC slim PC System DX3000EP does away completely with a BIOS, but uses a pure UEFI firmware instead. The terms UEFI firmware and BIOS are widely used synonymously, but hardware initialising is now performed by the UEFI. Users might not even notice, but the operating system must be installed and executed in UEFI mode. UEFI creates a GUID Partition Table (GPT) on the system partition instead of a Master Boot Record (MBR). A PC running pure UEFI firmware alone must have a 64-bit operating system installed.

[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". As the name indicates, this function determines the PC's behaviour after power failure: (1) unconditional power on, (2) restore former status or (3) keep system turned off. As a matter of the nature of this function, it may fail after short power failures. This is why the Shuttle XPC slim PC System DX3000EP also comes with a hardware-based solution. By removing Jumper JP2 (on the mainboard behind the power button) the system will start unconditionally once power is supplied.

[4] HDMI output supports DVI-D with optional adapter

[5] How to convert DisplayPort into HDMI/DVI

The DisplayPort output can be converted to HDMI or DVI by an additional, passive adapter cable. For example:

DELOCK 82590: 1 m, DisplayPort (male, 20p) to HDMI-A (male, 19p)

DELOCK 82435: 5 m, DisplayPort (male, 20p) to DVI-D (male, 24p)

The integrated graphics automatically detects the connected display and puts out the appropriate electric signal - either through DisplayPort (without an adapter) or HDMI/DVI (with an adapter).

However, a monitor with a DisplayPort connector cannot be connected to the HDMI port with a simple, passive adapter.

[6] Serial Ports

This PC features two serial RS232 ports with 9-pin D-Sub connectors on the back panel. The left COM port (COM1) can also be configured as RS422 and RS485 in the BIOS setup.

Pin 9 of the D-Sub COM-Port is a multi-functional signal. Based on the Jumper JP2 configuration on the mainboard, it can be configured as Ring Indicator (RI) or external power supply with a voltage level of either 5 V or 12 V. Each COM port can be configured separately. The maximum current is 500 mA per connector.

Note: The scope of delivery includes an adapter which can be used to replace the VGA port into a second COM port.