# Robust Slim PC with Core i3 processor for various professional applications

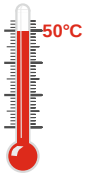
The Shuttle XPC slim D1100XA is a robust 1.3l PC equipped with a powerful Intel Core i3 processor ("Kaby Lake"), 120 GB SSD and 4 GB DDR4 memory, but without operating system. It allows for two digital displays to be operated at the same time: HDMI, DP or VGA. Its slim metal chassis provides versatile connectivity and reliable operation in environments with ambient temperatures of up to 50 °C. This Slim-PC is targeted at professional applications such as Digital Signage, POS, POI, gambling machines, office, healthcare and industry.

## XPC slim System D1100XA


Images for illustration only.
Processor, memory, storage and operating system not included.








## Feature Highlights

| | |
|---|---|
| *Slim Design* | • Slim 1.3 litre metal chassis, black<br>• 190 x 165 x 43 mm (LWH)<br>• Operating temperature: 0~50°C<br>• Including VESA mount (75/100 mm) |
| Operating System | • The operating system is not included<br>• Supports Windows 10, Linux 64 bit |
| Processor | • Intel Core i3-7100 CPU, 14nm "Kaby Lake" 3.9 GHz, Dual Core, TDP: 51W<br>• Heatpipe cooling system with two fans |
| Chipset | • Intel H110 Chipset |
| Memory | • 4 GB DDR3L-1600 (SO-DIMM, 1.35V) |
| Graphics | • Integrated Intel HD graphics 630 350~1100 MHz, 4K support [4]<br>• Supports two independent displays |
| Storage | • 120 GB SSD (SATA, 2.5") |
| M.2 slots | • 1x M.2 2260 BM slot (PCIe x4, SATA)<br>• 1x M.2 2230 AE for optional WLAN (WLN-M) |
| Connectors | • Graphics ports: HDMI, DisplayPort, VGA<br>• SD card reader, 2x audio (line out, mic)<br>• 4x USB 3.0, 2x USB 2.0, 1x eSATA/USB<br>• 2x Intel Gigabit LAN (RJ45), supports WOL<br>• 1x COM port (RS232/RS422/RS485)<br>• 1x PS/2-Combo (supports mouse/keyboard)<br>• Connector for external power button<br>• "Always on" Jumper, DC-input 12V+19V |
| Power Supply | • External 90W/19V fanless power adapter |
| Optional Accessories | • WLAN Module (WLN-M)<br>• Vertical Stand (PS02)<br>• D-Sub/VGA Port (PVG01) |



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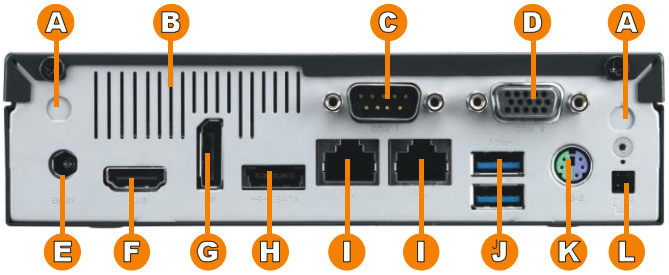
# Shuttle XPC slim System D1100XA – Front and Back Panel

## Front view


1 Microphone input
2 Headphone output
3 Power LED
4 Hard disk LED
5 Power Button
6 SD Card Reader
7 2x USB 3.0
8 2x USB 2.0

## Rear view

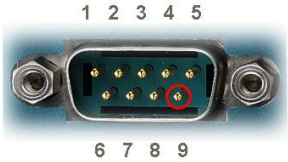



A 2x WLAN perforation
B Ventilation grille
C COM port supports RS232/RS422/RS485
D VGA video output (or optional second COM port possible [5])
E DC power input
F HDMI video output
G DisplayPort (DP) video outputs
H eSATA/USB 2.0 Combo
I 2x RJ45 Gigabit LAN
J 2x USB 3.0
K PS/2-Combo supports keyboard and mouse
L Connector for external power button, Clear CMOS and 5V DC voltage (4-pin, 2.54 mm pitch)
M 2x hole for Kensington Lock
N VESA mount (two parts)

## Right side


## Left side






**COM port Pin 9 Configuration**
Pin 9 is a multi-functional signal. Based on jumper JP1 configuration on the mainboard, it can be configured as Ring Indicator (RI) or external power supply with either 5V or 12V voltage level (each COM port separately).





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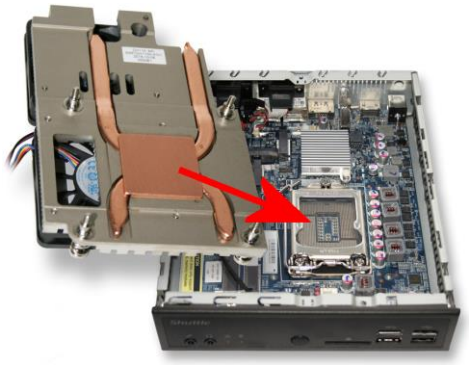
# Shuttle XPC slim System D1100XA – Product Features

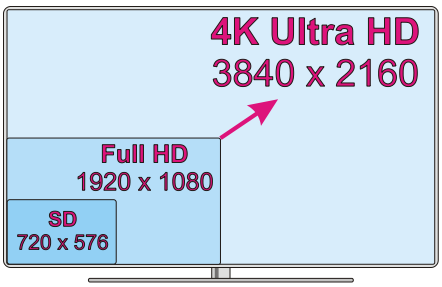

**Robust, stylish and particularly small**
You should have held it in your own hands to see how small it actually is. Barely measuring a volume of 1.35 litre, its steel chassis gives it the appropriate stability required for professional applications in digital signage. Despite its dimensions of 19 x 16.5 x 4.3 cm (LWH), the overall system performance is very high thanks to support of Intel Core desktop processors of the Skylake generation. The interior of the D1100XA is very tidy too so that it won't take long to set it up. Its sleek and stylish looks let it easily find a place in both home and office environments.



**Low noise thanks to heatpipe cooling system**
An active dual-fan heatpipe cooling system ensures whisper-quiet operation and system stability.


**Extended temperature range and reliability**
The D1100XA is outstandingly robust thanks to its rugged chassis. With an ambient temperature range from 0-50 °C it is suitable for use in the most demanding environments. Solely designed with all solid capacitors, the D1100XA is guaranteed to deliver maximum stability, reliability and longer system lifetime for long-term applications like digital signage.
**Caution:** for high ambient temperatures over 40°C we strongly recommend to use SSDs (supporting at least 70°C) and rugged SO-DIMM memory with a wider temperature tolerance (up to 95°C).

**Dual Display with HDMI, DisplayPort or VGA**
The D1100XA features three video outputs: HDMI, DisplayPort (DP) and VGA. It supports two displays at the same time. Dual View technology offers multiple display support on up to two separate monitors. This helps improve on productivity by allowing for spreading multiple windows across two monitors while working with them simultaneously.




**Supports 4K Ultra HD at 60Hz**
The D1100XA supports displays running at 4K (3840 x 2160 / 2160p) high resolution at 60Hz frames per second when connected to its DisplayPort video outputs. Being the successor to the Full HD standard, Ultra HD delivers a four times higher resolution with a wider colour space and colour depth.





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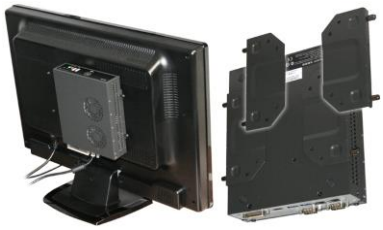
**M.2-2260-Slot for SSD cards**
The M.2-2260 BM slot supports M.2 SSD storage cards with SATA or with the more advanced PCIe interface.
Type 2260 means, it supports the usual M.2 cards with a width of 22mm and a length of 60mm, but also 2242 standard cards are supported. Cards with 80mm in length (2280) are not supported.

**M.2-2230-Slot for optional WLAN**
The M.2-2230 AE slot is intended for Wireless LAN (Wifi), Bluetooth, GSM/UMTS cards and others.
Shuttle offers the optional accessory „WLN-M“ (see picture), which provides WLAN 802.11ac and Bluetooth 4.0 functionality and can be installed into your Shuttle XPC slim System D1100XA.



**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 D1100XA provides an appropriate hole on both side 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 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 at the back panel of the D1100XA (pitch 2.54 mm). Furthermore, this connector provides a Clear CMOS function and +5V DC voltage supply for external devices.


- Front 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 D1100XA also comes with a hardware-based solution. By removing Jumper JP2 (see image) the system will start unconditionally once power is applied.





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# Shuttle XPC slim System D1100XA - Specifications

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|---|---|
| *Chassis* | Nettop PC with black chassis made of metal<br>Dimensions: 190 x 165 x 43 mm (LWH) = 1.35-litre<br>Weight: 1.3 kg net and 2.1 kg gross<br>Two holes for Kensington Locks and numerous<br>threaded holes (M3) at both sides of the chassis |
| *Operation System* | This system comes without operating system.<br>It is compatible with<br>- Windows 10 (64-bit) and<br>- Linux ( 64-bit)<br>Note: Windows 7 and 8.1 is only supported in combination with the 6th generation Intel Core processors "Skylake".<br>Additional note on Windows 7 see [6] |
| *Mainboard Chipset BIOS* | Chipset: Intel® H110 Chipset (Intel® DH82H110 PCH, code name "Sunrise Point")<br>Platform Controller Hub (PCH) as Single-Chip-Solution<br>AMI BIOS in 8 Mbit EEPROM with SPI interface<br>All capacitors are high quality solid capacitors<br>Supports hardware monitoring and watch dog functionality<br>Supports Unified Extensible Firmware Interface (UEFI)<br>Supports power on after power failure [8] |
| *Power Adapter* | External 90 W power adapter (fanless)<br>Input: 100~240 V AC, 50/60 Hz, Output: 19 V DC, 4.74 A, max. 90 W<br>DC Connector: 5.5/2.5mm (outer/inner diameter)<br>Remark: the DC-input of the computer supports an external power source with either 12V±5% or 19V±5%. |
| *Processor* | Intel Core i3-7100 processor with Socket LGA 1151 (H4)<br>7th generation, code name "Kaby Lake"<br>Maximum processor power consumption (TDP) = 51 W<br>14nm process technology, up to 3 MB of L3 cache<br>CPU clock frequency: 3.9 GHz<br>Number of CPU cores: 2<br>Number of threads: 4 (supports Hyper-Threading) |
| *Processor Cooling* | Heatpipe processor cooling with two 60 mm fans on the upper side of the chassis |
| *Memory* | 4 GB DDR3L-1600 (PC3-12800) SDRAM with 1.35V<br>SO-DIMM format with 204 pins<br>Supports max. 16 GB per DIMM, maximum total size of 32 GB |




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|---|---|
| *Integrated Graphics* | Intel HD Graphics 630<br>Graphics Base Frequency: 350 MHz<br>Graphics Max Dynamic Frequency: 1100 MHz<br>Supports DirectX 12, OpenGL 4.4, Intel Quick Sync Video<br>This PC comes with three graphics ports,<br>but two can be used at the same time.<br>Two digital video outputs: DisplayPort 1.2 and HDMI 1.4<br>- supports two independent Full HD displays simultaneously [3]<br>- supports Full HD resolution at 1920x1200 (1080p/60Hz)<br>- supports 4K UHD resolution at 3840 x 2160 (max. 2160p/60Hz on DP or max. 30Hz on HDMI) [4]<br>- supports Blu-ray (BD) playback with HDCP<br>- supports HD video plus multi-channel digital audio via a single cable.<br>One analog video output: D-Sub/VGA |
| *M.2-2260-Slot* | The M.2 2260 BM slot provides the following interfaces:<br>- PCI-Express v2.0 X4<br>- SATA v3.0 (6 Gbps)<br>It supports M.2 cards with a width of 22 mm and a length of 42 or 60 mm (type 2242, 2260). Cards with 80mm length (2280) are not supported.<br>Supports M.2 SSD cards with PCIe or SATA interface. |
| *M.2-2230-AE-Slot* | The M.2 2230 AE slot provides the following interfaces:<br>- PCI-Express v2.0 X1<br>- USB 2.0<br>It supports M.2 cards with a width of 22 mm and a length of 30 mm. This slot is intended for Wireless LAN (Wifi), Bluetooth, GSM/UMTS cards and others. A SATA interface for SSD cards is not available here. |
| *Audio* | Audio Realtek® ALC 662 5.1 channel High-Definition Audio<br>Two analog audio connectors (3.5mm) at the front panel:<br>1) 2-channel line out (headphones)<br>2) microphone input<br>Digital multi-channel audio output: by HDMI and DisplayPort |
| *Dual Gigabit LAN Controller* | Dual network with two RJ45 ports<br>Used network chips:<br>1) Intel i211 Ethernet Controller with MAC, PHY and PCIe interface<br>2) Intel i219LM PHY connected to the MAC of the processor<br>Supports 10 / 100 / 1.000 MBit/s operation<br>Supports WAKE ON LAN (WOL)<br>Supports network boot by Preboot eXecution Environment (PXE)<br>Supports Teaming mode [9] |
| *SSD Drive* | 120 GB SSD storage in 6.35 cm / 2.5" format<br>Serial-ATA III interface, max. 6 Gb/s (600 MB/s) data transfer rate |
| *Card Reader* | Integrated card reader supports SD, SDHC and SDXC memory flash cards<br>Supports boot up from SD card |




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|---|---|
| *Front Panel Connectors* | Microphone input, Audio Line-out (headphone)<br>2x USB 3.0, 2x USB 2.0<br>SD card reader<br>Power button, Power LED (blue), HDD LED (yellow) |
| *Back Panel Connectors* | 1x HDMI connector [1]<br>1x DisplayPort connector (DP) [2]<br>1x D-Sub VGA connector<br>2x USB 3.0<br>1x eSATA/USB 2.0 combo<br>2x Gigabit LAN (RJ45)<br>1x RS232 serial port, 9-pin D-Sub (5/12V, RS422/RS485) [3] [5]<br>DC-input connector for external power adapter (supports 12V±5% or 19V±5%)<br>4-pin connector (2.54 mm pitch) supports<br>- external power on button<br>- Clear CMOS function<br>- +5V DC voltage for external components<br>1x PS/2 Combo supports keyboard or mouse<br>2x Perforation for optional Wireless LAN antennas<br>2x hole for Kensington Locks |
| *Other Onboard Connectors* | 1x jumper for power on after power fail (hardware solution) [8]<br>2x serial interface (COM), 1x occupied<br>1x fan connector (4-pin) occupied by the cooling system<br>1x connector for CMOS battery (occupied) |
| *Supplied Accessories* | Multi-language user guide (EN, DE, FR, ES, JP, KR, SC, TC)<br>Driver DVD (Windows 64-bit)<br>COM port adapter [5]<br>VESA mount for 75/100mm standard (two metal brackets)<br>Four thumbscrews M3 x 5 mm (screws together VESA mount and PC)<br>Four screws M4 x 10 mm (to affix VESA mount on the PC)<br>Four screws M3 x 4 mm (to mount a 2.5" storage device into the bay)<br>External 90W power adapter with power cord |
| *Optional Accessory* | **WLN-M.** WLAN module in M.2-2230 format supports IEEE 802.11ac and Bluetooth 4.0<br>**PS02:** Stand for vertical operation |
| *Environmental Specifications* | Ambient temperature range: 0~50°C [7]<br>Relative humidity, non-condensing: 10~90% |
| *Geringer Strom-verbrauch* | Beispielhafte Messung der Verlustleistung:<br>- S3-Modus: 0,81W<br>- Leerlauf: 9,9W<br>- Vollast: 61,5W / 79,6W (ohne/mit Grafik)<br>Gemessen mit Core i5-6600, 2x 4GB DDR3L-1600, 500GB SSD, Windows 7 64 Bit |




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| *Conformity Certifications* | EMI: FCC, CE, BSMI, C-Tick<br>Safety: ETL, CB, BSMI<br>Other: RoHS, Energy Star 5.0, ErP<br>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:<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 ecodesign requirements for energy-related products (ErP) |

**Footnotes:**

**[1] HDMI** output supports DVI-D with optional adapter

**[2] How to convert DisplayPort into HDMI/DVI**
The DisplayPort outputs can be converted to HDMI or DVI by an additional, passive adapter cable. For example:
DELOCK 82590: 1m, DisplayPort (male, 20p) to HDMI-A (male, 19p)
DELOCK 82435: 5m, 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.

**[3] Serial Port -** Pin 9 of the D-Sub COM-Port is a multi-functional signal. Based on the Jumper JP1 configuration on the mainboard, it can be configured as Ring Indicator (RI) or external power supply with a voltage level of either 5V or 12V. Each COM port can be configured separately. The maximum current is 500 mA.

**[4] 4K Ultra-HD resolution -** A 4K-display with Ultra-HD resolution (3840 x 2160) should only be connected via DisplayPort, as only this port supports a higher refresh rate of 60Hz. Certain displays (e.g. Dell UP2414Q) however require MST mode (Multi-Stream Transport) to be enabled which sends two separate images at half resolution each to the display. These two images are then combined and put in correct order by the Intel graphics driver when in Collage mode. Please note that HBR2-mode (High Bit Rate 2) must be supported by each display to have more than one of them run at 4K resolution.

**[5] Second COM port possible**
An adapter cable for a second serial COM port (RS232) is provided in the scope of delivery. You can dismount the VGA port (in case you don't need it) and install a second COM port instead.

**[6] Why may PS/2 and eSATA ports help install Windows 7?**
The Intel® 100 chipset series has done away with support of the Enhanced Host Controller Interface (EHCI) which is the driver software for the USB 2.0 ports. This new chipset only supports the updated Extensible Host Controller Interface (xHCI for USB 3.0) which is not supported by the original Windows 7 installation disk. This means, that peripheral devices connected by USB (like a keyboard, a mouse or an external optical drive) will not work during Windows 7 Installation. There are two solutions: (1) use a PS/2 keyboard or a PS/2 mouse and connect an external DVD drive via eSATA or (2) add the required USB 3.0 drivers to the Windows 7 installation files - this procedure is explained in the Shuttle FAQ section at global.shuttle.com.

**[7] Notice - operating temperature -** For high ambient temperatures over 40°C we strongly recommend to use SSDs (supporting at least 70°C) and rugged SO-DIMM memory modules with a temperature range of up to 95°C.

**[8] 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




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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 D1100XA 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.

**[9] Teaming Mode -** The teaming function allows you to group both available network adapters together to function as a single adapter. The benefit of this approach is that it enables load balancing and failover.
Driver download: https://downloadcenter.intel.com/download/21642





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