

Stylish 1-litre PC - fanless and reliable

The XS35V5 Pro represents the fifth generation of Shuttle's successful XS35 range and is the first XS35 model to sport an aluminium chassis while maintaining the proven key advantages such as high connectivity and a fanless cooling. The soldered Intel Celeron Dual Core processor, codenamed "Braswell", is manufactured in 14nm architecture and very energy efficient. Still, it clocks up to 2.16 GHz and brings Intel's powerful HD Graphics (8th Gen) that supports hardware acceleration for full HD video encoding/decoding on up to three displays. With appropriate SSDs or hard drives installed, the XS35V5 Pro is suitable for continuous 24/7 operation and the Mini PC of choice for office and media applications.

**Shuttle XPC slim Barebone
XS35V5 Pro**



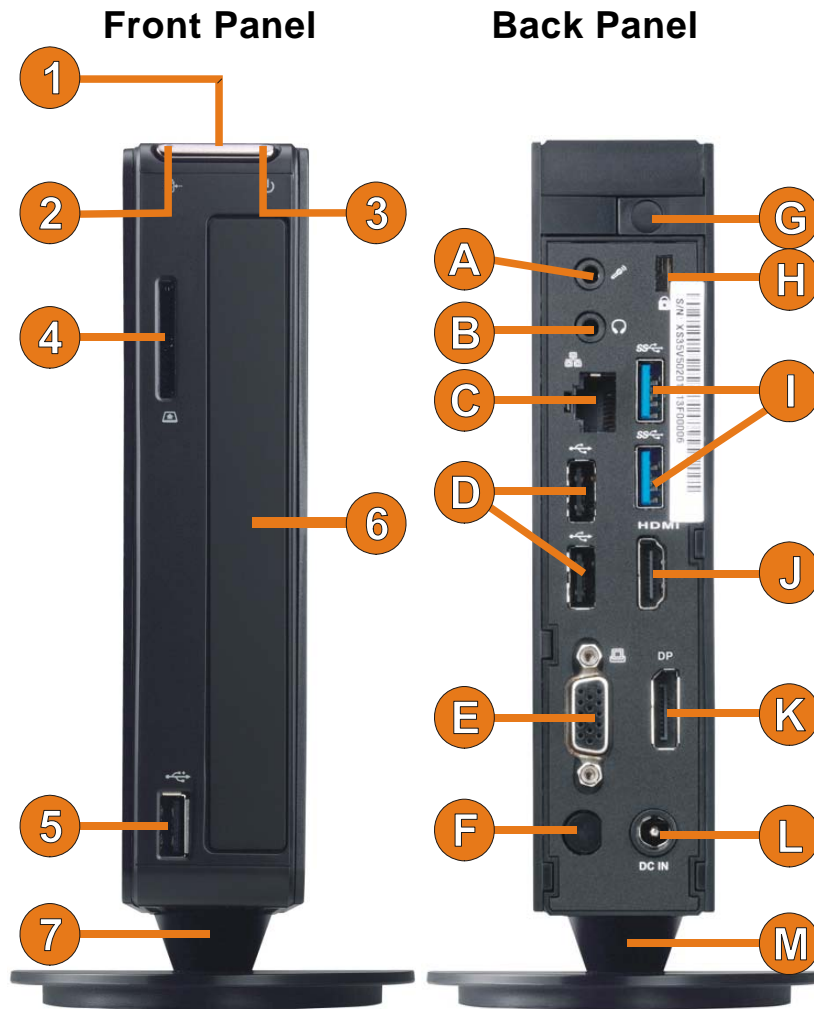
Feature Highlights

Chassis	<ul style="list-style-type: none"> • Slim 1.5 litre chassis • Dimensions: 25.2 x 16.2 x 3.85 cm • Hole for the Kensington Lock • Optional: VESA75/100 mounting kit PV01
Operating System	<ul style="list-style-type: none"> • Without operating system • Compatible with Windows 7 / 8.1 / 10 (64-bit) and Linux (64-bit)
CPU	<ul style="list-style-type: none"> • Intel Celeron N3050, 14nm Braswell Dual Core, up to 2.16 GHz
Graphics	<ul style="list-style-type: none"> • Integrated Intel HD Graphics (8th Gen) • Supports Triple Display and 1080p Video
Memory	<ul style="list-style-type: none"> • 1x SO-DIMM socket (204-pin) • Max. size: 8 GB DDR3L-1600 (1.35V)
Storage	<ul style="list-style-type: none"> • Supports one 2.5" SATA hard disk or SSD • Supports one optical slimline drive (or otherwise a second 2.5" drive that occupies the ODD bay, to be used with the optional accessory PHD2N) • With SD card reader (SD/SDHC/SDXC)
Connectors and WLAN	<ul style="list-style-type: none"> • 3 video ports: HDMI, DisplayPort, D-Sub • 2x USB 3.0, 3x USB 2.0, internal: USB 2.0 • 2x Audio (mic, headphones) • Gigabit LAN (Intel i211), WLAN 802.11g/n
Power Supply	<ul style="list-style-type: none"> • External 40 W fanless power adapter • Energy saving: 8.4~19.6W under Windows
Applications	<ul style="list-style-type: none"> • Office, Home Media, Digital Signage

Images are for illustration purposes only. The optical drive is not included.



Shuttle XPC slim Barebone XS35V5 Pro – Connectors



- | | | |
|-----------------------------------------|--------------------------------------|----------------------------------|
| 1 Power button | A Microphone input | I 2x USB 3.0 connector |
| 2 Hard disk LED | B Headphones output (Line out) | J HDMI connector |
| 3 Power LED | C Gigabit LAN connector (RJ45) | K DisplayPort connector |
| 4 SD card reader | D 2x USB 2.0 connectors | L DC input for the power adapter |
| 5 USB 2.0 connector | E D-Sub/VGA connector | M Vertical stand |
| 6 Bay for the optical slimline drive *) | F Perforation for optional connector | |
| 7 Vertical stand | G One screw to open the chassis | |
| | H Hole for the Kensington-Lock | |

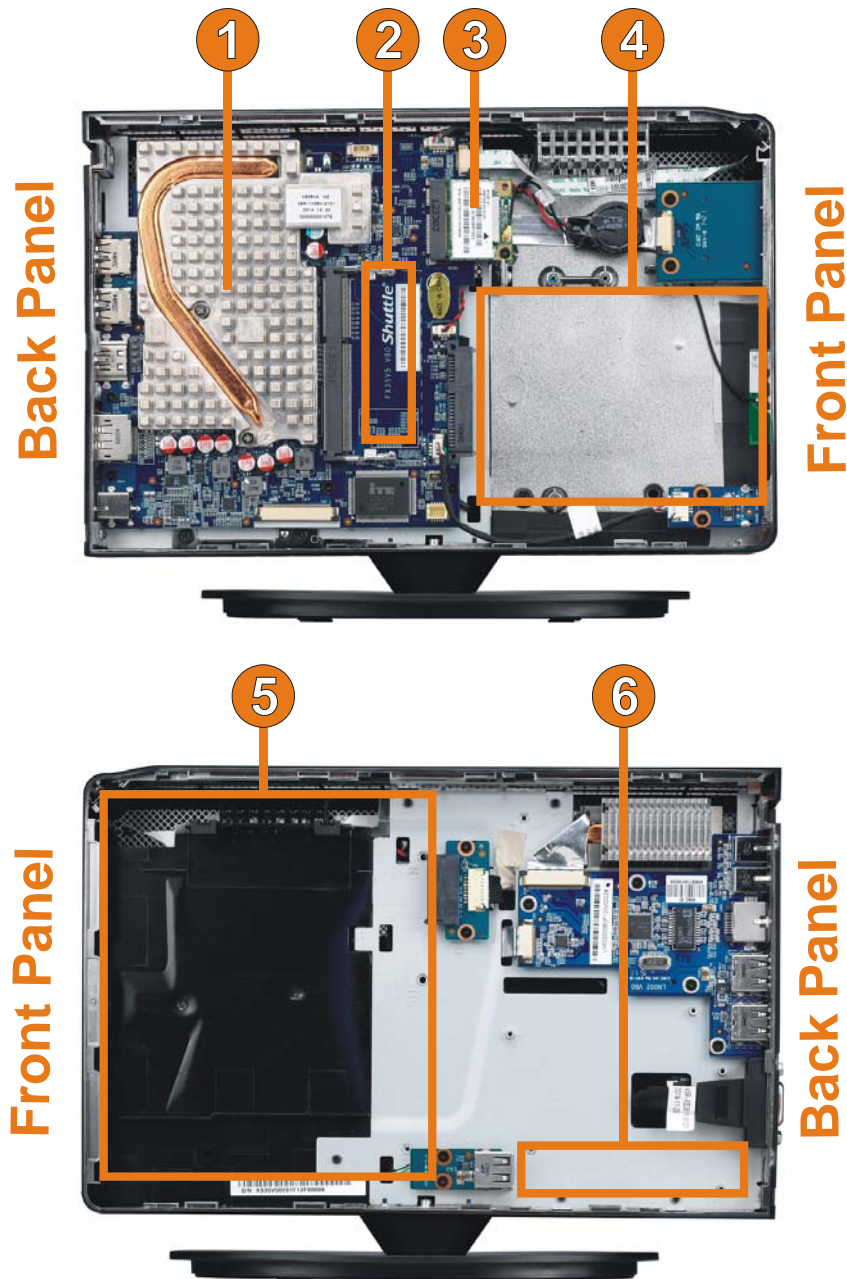
*) Note: The optical drive is not included.



Notice:

Please make sure the system is always operated in upright position using either its stand or the optional VESA mount. Ventilation holes must not be blocked to ensure sufficient cooling.

Shuttle XPC slim Barebone XS35V5 Pro – Side View



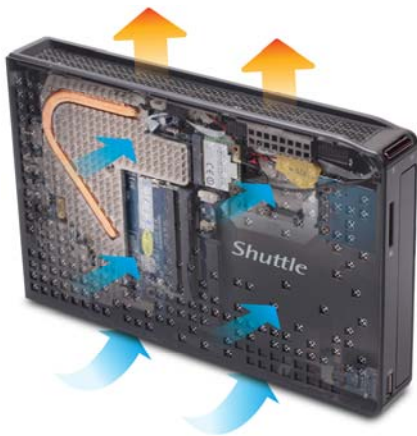
- 1 Heatpipe cooling system
- 2 SO-DIMM slot for one DDR3L module
- 3 Half-Size WLAN module
- 4 2.5" drive bay with SATA connector
- 5 5.25" slimline drive bay for an optical drive with SATA connector (also supports a second 2.5" storage drive if the optional accessory PHD2N is used)
- 6 Slot for an internal USB stick

Shuttle XPC slim Barebone XS35V5 Pro - Product Features



Slim and stylish

Designed as a space-saver, this sleek 1.5 litre nettop PC only measures 3.8cm in width. It maximizes space whether it is placed upright using its stylish stand or affixed to the back of a monitor with the optional VESA mounting kit (PV01). Due to its small size and flexible design, this practical nettop offers exceptional functionality and is well-suited for home users, small offices, reception areas, classrooms, libraries, showrooms, call centres, public institutions and more.



Fanless and quiet

The Shuttle XPC slim Barebone XS35V5 Pro uses a passive thermal module with heatpipes to transmit heat throughout the system quickly and evenly. As an additional benefit, fanless cases rarely gather dust on the inside and stay cleaner than others. So it's not only quiet and low in energy use, but also dust-free and virtually maintenance free.

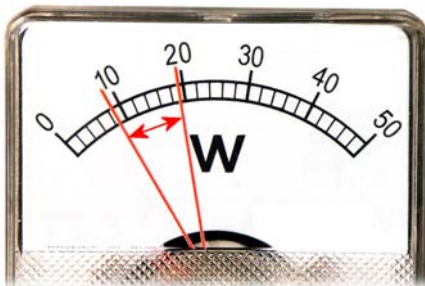


24/7 nonstop operation

The Shuttle XPC slim Barebone XS35V5 Pro is officially approved for 24/7 permanent operation. Thanks to its low power consumption and completely passive cooling, this PC runs highly reliably making it perfectly suitable for digital signage and POI/POS applications.

Conditions for permanent use:

- Ambient temperature while under load: 5-35°C
- Air humidity while under load: 10-90% (not condensing)
- Free circulation of air amongst the PC must be guaranteed
- Ventilation holes must be clear
- If a hard disk is installed, this must also be approved for permanent operation by its manufacturer (max. one hard disk)



Highly energy-saving

The Shuttle XPC slim Barebone XS35V5 Pro barely consumes, depending on system load, about 8.4~19.6 Watt. Running the device*) 5 days a week for eight hours a day, the annual consumption would amount to approx. 18~41 kWh which would mean just 4.5~10.2 Euros on the power bill (25 Euro ct/kWh) - way less than a conventional desktop PC draws.

*) Based on a configuration with 4 GB of memory, 64 GB SSD and Windows 8.1 64-bit.



What does "Barebone" mean?

Shuttle's barebones line such as the Shuttle XPC slim Barebone XS35V5 Pro is targeted at experienced users seeking to build a complete system to meet their individual requirements. The bulk of components is yet built in, simply the following hardware is to be installed upon purchase which is in this case:

- One 6.35 cm/2.5" Serial ATA hard disk or Solid State Disk (SSD)
- One DDR3L SO-DIMM memory module (204pin), max. 8 GB
- USB keyboard and USB mouse
- Optional: DVD or Blu-ray drive in slimline format
- Operating system: Windows 7 / 8.1 / 10 (64-bit) or Linux (64-bit)



Optional VESA mount (Accessory PV01)

Its optional VESA75/100 mount allows it to be installed on to walls or just affixed on the rear side of a monitor which is particularly interesting for the industry segment, company buildings and public institutions.



Celeron N3050 - energy efficient Dual Core CPU

The Shuttle XPC slim Barebone XS35V5 Pro is equipped with Intel's Celeron N3050 processor which is a power-efficient System-on-a-Chip (SoC) from the Braswell family. Thanks to the optimized 14 nanometer process, four x86-64 CPU cores and a clock speed of 1.60 to 2.16 GHz (Burst), energy efficiency and performance per clock have been significantly improved compared to its predecessors.



Supports Blu-ray playback

The integrated graphics chip is based on the Intel HD Graphics (8th Gen) architecture which supports DirectX 11.2 and features twelve execution units. It offers generous performance for most home, office and digital signage applications. It features a wide variety of multimedia features such as H.264 hardware decoding, support for 1080p full HD video, Blu-ray playback and 8-channel HD audio through HDMI and DisplayPort (DP).



Triple monitor support with HDMI, DisplayPort and VGA

The 8th generation of „Intel HD Graphics“ supports DirectX 11.2 and features 12 execution units for 3D. It supports multiple displays connected through HDMI (DVI through optional adapter), DisplayPort (DP) and D-Sub/VGA. This improves user capability and productivity by allowing for spreading multiple windows across three monitors and view them simultaneously.



Two USB 3.0 SuperSpeed connectors

The Shuttle XPC slim Barebone XS35V5 Pro has two built-in USB 3.0 ports at the rear panel. USB 3.0 "SuperSpeed" provides a significant performance increase over previous USB generations making it the ideal interface solution for demanding, external peripherals. USB 3.0 supports up to 5Gb/s full duplex which means up to 10 times greater performance over USB 2.0. It is also backward compatible with USB 2.0.



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 Barebone XS35V5 Pro with ease.



Internal USB connector

The Shuttle XPC slim Barebone XS35V5 Pro features an internal USB 2.0 Type-A connector supporting a variety of USB sticks such as flash memory, 3G function, DVB-T TV tuner and others.

The chassis also provides a perforation (9mm hole) for an external antenna or additional connector.

In the picture you can see a conventional USB stick as an internal boot device.



Kensington Lock

This is a small, metal-reinforced hole as part of an anti-theft system. As known from notebooks, this Slim PC can also be safely locked by tying it to a solid object.

(Lock-and-cable not included.)



Optional second disk (Accessory PHD2N)

The optional accessory PHD2N makes for support of a second 2.5" hard disk or SSD. Please note that the bay for the optical drive will be occupied then and cannot be used.



Tiny power adapter

The external fanless 40W power adapter is virtually noiseless and can easily be hidden behind the desk thanks to its tiny dimensions.

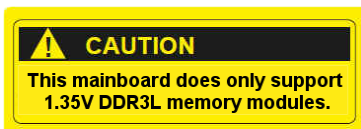
Dimensions: 89.5 x 37 x 26.5 mm (LWH) = 88ml



Watchdog – protecting system security

The built-in Watchdog Timer provides excellent security protection for systems that need to operate continuously for a long period of time.

Use Shuttle's Watch Dog utility to maintain normal operation and stability of the system at all times. If, due to a hardware failure or program error, this utility fails to restart the watchdog, the timer will elapse and generate a hardware reset and reboot the system.



Supports Energy-Efficient DDR3L memory only

Please note that this PC does only support 1.35V DDR3L memory modules. DDR3L has a lower operation voltage compared to DDR3 and draws less power without compromising on performance or reliability.

Shuttle XPC slim Barebone XS35V5 Pro Specifications

<i>Fanless and silent</i>	<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>
<i>Energy Efficient</i>	<p>Power consumption: ca. 8.4 W (idle mode) and ca. 19.6 W (full load) (Configuration: 4 GB RAM, 64 GB SSD and Windows 8.1)</p>
<i>Operation Position</i>	<p>Please make sure the system is always operated in upright position using either its stand or the optional VESA mount.</p> <p>Ventilation holes must not be blocked to ensure sufficient cooling.</p>
<i>Chassis</i>	<p>Dimensions without stand: 25.2 x 16.2 x 3.85 cm (DxHxW) = 1.57 L</p> <p>Hole for Kensington Lock at the back panel</p> <p>Optional accessory: 75mm and 100mm VESA mounting kit (PV01)</p>
<i>Operation System</i>	<p>This system comes without operating system.</p> <p>It is compatible with Windows 7 / 8.1 / 10 (64-bit) und Linux (64-bit) [3]</p> <p>Caution: Windows 8 is not supported</p>
<i>Processor</i>	<p>Intel Celeron N3050, Dual Core</p> <p>CPU clock frequency: 1.6 GHz, max. Turbo frequency: 2.16 GHz</p> <p>Braswell platform, Airmont architecture, 14 nm structure</p> <p>CPU cores / Threads: 2 / 2</p> <p>Cache: 2 MB</p> <p>Thermal Design Power (TDP): 6 W</p> <p>Scenario Design Power (SDP): 4 W</p> <p>Supports AES-NI and VT-x</p> <p>SOC design with integrated graphics processor, no chipset required</p>
<i>Integrated Graphics</i>	<p>Integrated Graphics</p> <p>The Graphics Processing Unit (GPU) is integrated into the processor</p> <p>Intel HD Graphics (8th Gen), graphics frequency: 320~600 MHz</p> <p>Supports DirectX 11.2, OpenGL, Quick Sync</p> <p>Execution Units (EU): 12</p> <p>Three video outputs:</p> <ul style="list-style-type: none"> - HDMI 1.4b: max. 1920 x 1200 resolution @ 60Hz - Display Port 1.1a: max. 2560 x 1600 resolution @ 60Hz [2] - D-Sub (VGA): max. 1920 x 1200 resolution @ 60Hz <p>Triple display: supports max. three independent displays simultaneously</p>
<i>UEFI Firmware</i>	<p>8Mbit Flash ROM with AMI's Aptio UEFI BIOS Firmware</p> <p>Based on the Unified Extensible Firmware Interface (UEFI) [1]</p> <p>Supports Power fail resume / AC power on state / always on / always off</p> <p>Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states</p> <p>Supports boot up from external flash memory cards</p>

© 2015 by Shuttle Computer Handels GmbH (Germany). All information subject to change without notice. Pictures for illustration purposes only.

Memory	<p>1x SO-DIMM slot with 204 pins</p> <p>Supports one module DDR3L-1333 (PC3-10600) at 1.35V</p> <p>Maximum capacity: 8 GB</p> <p>DDR3L-1600 is supported at DDR3L-1333 clock rate</p> <p>Caution: This mainboard does only support 1.35V DDR3L memory modules. DDR3L has a lower operation voltage compared to DDR3</p>
Optical Drive (opt.)	<p>Supports one optical DVD or Blu-ray slimline drive</p> <p>Serial ATA interface, 12.7 mm height, slimline SATA connector</p>
2.5" Bay	<p>Supports one Serial ATA hard disk (5400 / 7200 rpm) or one SATA SSD drive in 6.35cm/2.5" format</p> <p>Serial ATA III Interface with up to 600 MB/s transfer speed</p> <p>Supports a drive with a max. height of 9.5 mm</p> <p>Supports Unified Extensible Firmware Interface (UEFI)</p>
Integrated Audio	<p>Realtek ALC269 Audio Codec with Azalia and D3 mode support</p> <p>Two analog audio connectors (3.5mm):</p> <ol style="list-style-type: none"> 1) Line out (head phone) 2) Microphone input
Card Reader	<p>Integrated card reader</p> <p>supports standard SD, SDHC and SDXC memory flash cards</p>
Wired Network	<p>RJ45 connector supports Gigabit LAN at 10/100/1000 Mbit/sec.</p> <p>Intel i211 Ethernet Controller with MAC, PHY and PCIe interface</p> <p>Supports Wake-on-LAN</p>
Wireless Network	<p>Half-size Mini PCIe WLAN card</p> <p>WLAN chip: Realtek RTL8188EE</p> <p>Supports IEEE 802.11b/g/n, max. 150Mbps up-/downstream (1T1R)</p>
LEDs and Buttons	<p>Power button</p> <p>Power LED (blue)</p>
Front Panel Connectors	<p>1x USB 2.0</p> <p>SD card reader</p>
Back Panel Connectors	<p>HDMI 1.4b digital video and audio output</p> <p>DisplayPort 1.1a digital video and audio output</p> <p>D-Sub/ VGA analog video output (15-pin)</p> <p>2x USB 3.0</p> <p>2x USB 2.0</p> <p>Gigabit network (LAN, RJ45)</p> <p>Audio Line-out (headphones)</p> <p>Microphone input</p> <p>DC input for the external power adapter</p> <p>Perforation for TV antenna (diameter: 9 mm)</p>

<p><i>Internal USB Connector</i></p>	<p>Internal USB 2.0 Type-A connector for USB dongle (for e.g. memory stick, 3G stick, DVB-T stick, etc.) Boot function supported</p>
<p><i>Power Supply</i></p>	<p>External 40W AC/DC power adapter (fanless) AC Input: 100~240V AC, 50~60 Hz DC Output: 19V DC / 2.1 A Automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH) DC Connector: 5.5/2.5mm (outer/inner diameter)</p>
<p><i>Optional Accessories</i></p>	<p>1) VESA mount made of metal (PV01) 2) Adapter for second 2.5" drive instead of optical drive (PHD2N)</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 hard disk must also be approved for permanent operation by its manufacturer (max. one hard disk)</p>
<p><i>Environmental spec.</i></p>	<p>Operating temperature range: 0~35°C Relative humidity range: 10~90% (non-condensing)</p>
<p><i>Certification and Compliance</i></p>	<p>EMI: FCC, CE, BSMI, C-Tick Safety: ETL, CB, BSMI 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)</p>

[1] UEFI-Firmware (versus BIOS)

Just as with many modern PCs, the XS35V5 Pro 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.

[2] 4K resolution

Playback of videos in 4K resolution (3840x2160) at 30Hz is technically possible through both HDMI and DisplayPort. However Shuttle does not recommend it, as the refresh rate appears to be too low for cursor moves and the processor performance is considered to be not sufficient for fluent playback of 4K content.

[3] Selection of the Operation System

Prior to the installation of the operation system, please enter BIOS (press "Delete" key while booting), switch to "Boot" menu and then change the setting "OS Select" according to the operation system used.

Shuttle XPC slim Barebone XS35/XS36 Series – A History

XS35 Series

Supports Slimline-DVD drive



XS36 Series

Supports two serial ports



Model	Graphics	Graphics output	USB 3.0	COM	WOL [3]	ODD [4]	Processor	Memory	LAN
XS35	Intel GMA3150	D-Sub	-	-	-	Yes	Atom D510 1.66 GHz 45nm Pineview	Max. 2 GB DDR2-800 1x SO-DIMM	100
XS35GT	NVIDIA ION2	D-Sub, HDMI	-	-	-	Yes			
XS35V2	Intel GMA3150	D-Sub	-	-	-	Yes	Atom D525 1.80 GHz 45nm Pineview	Max. 4 GB DDR3-800 1x SO-DIMM	Giga
XS35GT V2	NVIDIA ION2	D-Sub, HDMI	-	-	-	Yes			
XS35GTA V2	ATI Mobility Rad. HD 5430	D-Sub, HDMI	-	-	-	Yes			
XS35GS V2	ATI Radeon HD 7410M	D-Sub, HDMI	-	-	-	Yes			
XS35V3(L)	Intel GMA3650 [2]	D-Sub, HDMI	-	-	Yes	Yes	Atom D2700 2.13 GHz 32nm Cedarview	Max. 4 GB DDR3-1066 2x SO-DIMM	Giga
XS35GTA V3	ATI Radeon HD 7410M	D-Sub, HDMI	-	-	Yes	Yes			
XS35GS V3 [1]	ATI Radeon HD 7410M/7450 [6]	D-Sub, HDMI	-	-	Yes	Yes			
XS36V	Intel GMA3650 [2]	D-Sub, HDMI, DVI	-	2x	Yes	-	Atom D2550 1.86 GHz [5] 32nm Cedarview	Max. 4 GB DDR3-1066 2x SO-DIMM	Giga
XS35GS V3L	ATI Radeon HD 7410M/7450 [6]	D-Sub, HDMI	-	-	Yes	Yes			
XS36VL	Intel GMA3650 [2]	D-Sub, HDMI, DVI	-	2x	Yes	-	Celeron J1900 2.00~2.42 GHz) 22nm Bay Trail	Max. 8 GB DDR3L-1333 1x SO-DIMM	Giga
XS35V4	Intel HD Graphics (7 th Gen) [8]	D-Sub, HDMI, DisplayPort	1x	-	Yes	Yes			
XS36V4	Intel HD Graphics (7 th Gen) [8]	D-Sub, HDMI, DisplayPort	1x	2x [7]	Yes	-	Celeron N3050 1.6~2.16 GHz 14nm Braswell	Max. 8 GB DDR3L-1600 1x SO-DIMM	Giga
XS35V5 Pro	Intel HD Graphics (8 th Gen) [8]	D-Sub, HDMI, DisplayPort	2x	-	Yes	Yes			
XS36V5	Intel HD Graphics (8 th Gen) [8]	D-Sub, HDMI, DisplayPort	2x	2x [7]	Yes	-			

[1] XS35GTA V3 is called XS35GS V3 outside EU.

[2] Intel offers sophisticated graphics drivers for the integrated Intel GMA3650 graphics for Windows 7 32-bit only.

[3] Supports Wake-on-LAN (WOL), Power fail resume (always on/off) and Resume by RTC Alarm

[4] "ODD" means a 5.25" bay for an optical drive in slimline format

[5] In 2012, Intel phased out the Atom D2700 processor and introduced the D2550 as its successor.

[6] XS35GS V3L: In the beginning of 2014, the GPU was updated from HD 7410M to HD 7450.

[7] XS36V4/V5 provides two serial RS232 ports which both support 0V/5V/12V. The upper port is switchable to RS422 / RS485.

[8] Supports Windows 7 / 8.1 / 10 and Linux – 64-bit only