

Fanless slim PC with two digital video outputs

XS36VL with low-energy Intel Atom D2550 processor is the successor of Shuttle's XS36V. It is just 36 mm thin and completely passively cooled - that means: it is not only quiet, but also virtually maintenance free. Three different monitor ports (HDMI, DVI-D, VGA) allow a flexible choice of screen types. In addition to Gigabit-LAN and 5x USB 2.0, this model also offers two RS-232 interfaces for professional applications (e.g. device control). With the optional PV03 mount, the XS36VL can also be fitted to VESA-compatible screens.

Feature Highlights

Chassis	- Slim 1.15 litre chassis - Dimensions: 20 x 16 x 3.6 cm - Hole for the Kensington Lock - Optional VESA mount (PV03)
Operating system	Without operating system, compatible with Windows 7 / POSReady 7 (32 bit)
CPU	Intel Atom D2550 Dual Core (1.86 GHz)
Chipset	Intel NM10 Express Chipset
Graphics	- Integrated Intel GMA3650 Graphics - Shared Memory: max. 384MB DVMT
Memory	2x SO-DIMM socket (204 pins) - Supports max. 4GB DDR3-1066
Storage	- Supports one 2.5" SATA hard disk or SSD - Built in SD card reader
Connectors and WLAN	- HDMI v1.3 (supports digital audio) - DVI-D - D-Sub VGA 5x USB 2.0 (1x front, 4x rear) - Microphone input - Headphones output (Line-out) - Gigabit-LAN 2x RS232 COM-Ports - WLAN 802.11 b/g/n
Power supply	External 40W fanless power supply
Applications	Basic and Home-Media

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Shuttle Order Number: PEB-XS36VL11

Barebone **XS36VL** Slim PC



Fanless



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Shuttle Barebone XS36VL - Product Features



Point of sales with Shuttle XS36VL

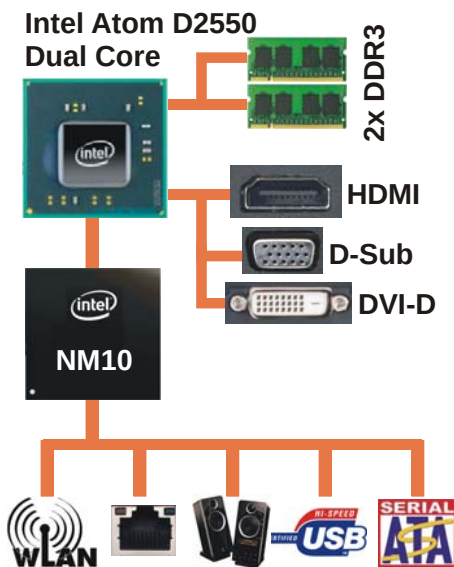


Ideal for professional applications

Designed as a space-saver, this sleek 1.15 litre nettop PC only measures 3.3 cm in width. It maximizes space whether it is placed upright using its stand or affixed to the back of a display with the optional VESA mounting kit. Due to its small size and flexible design, this practical nettop offers exceptional functionality. It is well-suited for professional applications like digital signage, POS system, POI terminals, control PC or office PC (e.g. thin client). Thanks to the serial ports you can connect appropriate POS displays, cash register drawer or digital sensors. It is also possible to add an internal USB stick as a low cost storage device.

Fanless and quiet

The Shuttle Barebone XS36VL comes totally fanless making it perfect to be used in noise-sensitive environments such as living rooms, hospitals, libraries etc. 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.



The Atom processor integrates the graphics controller

Shuttle XS36VL is equipped with Intel's Atom D2550 processor (1.86 GHz, codenamed Cedarview). It comes with both the memory controller and graphics core on-die which helps to keep heat dissipation and memory latency low. The CPU is connected to the Southbridge NM10, codenamed Tiger Point.

Dual Core. Do more.

Shuttle always uses the dual-core variant of Intel's Atom processors and thus integrates the Atom D2550. This boosts the system performance significantly with particular regards to multi-threaded applications.

Highly energy-saving

The XS36VL barely consumes, depending on system load, about 16~25 Watts. Running the device*) 5 days a week for eight hours a day, the annual consumption would amount to less than 40kWh which would mean just 8 Euros on the power bill (20 Euro ct/kWh) - way less than a conventional desktop PC draws.

*) Based on a configuration with 4GB of memory, 500GB hard disk and Windows 7 32 bit.



What does "Barebone" mean?

Shuttle's barebones line such as the XS36VL 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 in this case:

- One 6.35 cm/2.5" Serial ATA hard disk or Solid State Disk (SSD)
- One or two DDR3 SO-DIMM memory modules (204 pins), max. 4 GB
- USB keyboard and USB mouse
- Operating system: Windows 7, 32 bit



Supports two displays

The integrated graphics supports multiple display support on up to two separate monitors via HDMI, DVI-D and D-Sub/VGA. This improves the capabilities and productivity of the user by allowing them to spread multiple windows over two monitors and view them simultaneously.



SD card reader

The built-in SD card reader at the front side makes it easy to transfer files from your camera so you can share videos and photos on your XS36VL with ease.



Kensington Lock

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

(The lock-and-cable apparatus is not included.)



Tiny power adapter

The external 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



Two serial RS-232 ports (COM)

XS36VL features two serial RS232 COM ports in the front panel. Today, many consumer PCs do no longer have this legacy port, since that interface has been superseded by USB. Still, they are commonly used for applications of industrial automation systems, scientific analysis, and POS systems.



Optional VESA mount (Accessory PV03)

Its optional VESA75/100 wallmount 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.



24/7 nonstop operation

Shuttle XS36VL is officially approved for 24/7 permanent operation. Thanks to its low power consumption and completely passively cooling, this PC runs highly reliable 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)



Note on operating position

Please make sure the system is always placed upright using either its stand or the optional VESA mount (PV03). Ventilation holes must not be blocked to ensure sufficient cooling.

Shuttle Barebone XS36VL Specifications

<i>Fanless and silent</i>	Passive cooling, no fan noise at all Perfect to be used in noise-sensitive environments Fanless, dust-free and thus virtually maintenance-free
<i>Low current</i>	Power consumption: ca. 16W (idle mode) and ca. 25W (full load)
<i>Chassis</i>	Dimensions without Stand: 20 x 16 x 3.6 cm (DxHxW) = 1.15 litres Weight: 1.6 kg net, 2.3 kg gross Hole for the Kensington Lock at the back panel Optional accessory: 75mm and 100mm VESA mounting kit (PV03)
<i>Operation System</i>	This system comes without operating system. It is compatible with the 32 bit version of Windows 7 and Windows Embedded POSReady 7
<i>Processor</i>	Intel Dual Core Atom processor D2550 (Codename: Cedarview) Intel Hyper-Threading technology: 2-threads per core 32 nm manufacturing process, FCBGA559 package Intel 64 architecture, Core clock: 1.86 GHz L2 Cache: 1024kB , TDP: max. 10W Supports SSE2, SSE3, SSSE3, Execute Disable Bit Integrated North Bridge with controller for memory and graphics
<i>Cooling</i>	Passive, completely fanless cooling through convective heat transfer Warning: Please make sure the system is always placed upright using either its stand or the optional VESA mount. Ventilation holes must not be blocked to ensure sufficient cooling.
<i>Chipset</i>	Intel® NM10 Express Chipset (south bridge) Platform Controller Hub (PCH) Code name: Tiger Point
<i>BIOS</i>	AMI BIOS in a 8Mbit Flash ROM supports PnP, ACPI 2.0 Supports Power fail resume / AC power on state / always on / always off Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states Supports Unified Extensible Firmware Interface (UEFI)
<i>Memory</i>	2x SO-DIMM slots with 204 pins Supports two modules DDR3-1066 (PC3-8500) DDR3-1333 is supported at DDR3-1066 clock rate Supported maximum capacity: 4 GB

<i>Hard disk drive or SSD</i>	Supports one Serial ATA hard disk (max. 5400 rpm) or one SATA SSD drive in 6.35cm/2.5" format The SATA 2.0 interface supports up to 300MB/s data transfer speed Supports a drive with 9.5mm height (12.5mm is not supported) Supports Unified Extensible Firmware Interface (UEFI)
<i>Integrated Graphics</i>	The Graphics Processing Unit (GPU) is integrated into the processor Intel GMA 3650, Graphics Base Frequency: 640 MHz Supports DirectX 9 Maximum shared memory: 8MB pre-allocated plus 384MB Video Memory Technology (DVMT) Three video outputs: HDMI v1.3, DVI-D and D-Sub (VGA) Two outputs can be used at the same time. Supports dual display in clone or extended mode. HDMI and DVI support the Intel HDCP function (High bandwidth Digital Content Protection) HDMI/DVI display resolution up to 1920x1200.
<i>Integrated Audio</i>	Integrated Audio IDT92HD81 Audio Codec with Azalia support Two analog audio connectors (3.5mm): 1) Line out (head phone) 2) microphone input Supports digital 7.1 HD audio via the HDMI port.
<i>Card Reader</i>	Integrated card reader supports SD, SDHC and SDXC memory flash cards
<i>Wired Network</i>	RJ45 connector supports Gigabit LAN at 10/100/1000 Mbit/sec. Network controller Realtek RTL8411 Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states
<i>Wireless Network</i>	Supports IEEE 802.11b/g/n, max. 150Mbps up-/downstream Security: WPA/WPA2(-PSK), WEP 64/128bit, IEEE 802.11x/i Half size Mini-PCIe-Card
<i>Connectors</i>	HDMI v1.3 digital video and audio output DVI-D digital video output D-Sub/VGA analog video (15 pin) 5x USB 2.0 (1x front, 4x rear) Gigabit network (LAN, RJ45) Audio Line-out (head phone) Microphone input 2x RS232 COM ports (front panel) DC input for the external power adapter
<i>Internal USB connector</i>	The front USB connector can be converted to an internal port. This can e.g. be used for an internal USB memory stick as a cost-saving alternative to a hard disk as storage for the operation system.

<i>LEDs and buttons</i>	Power button Power LED (white), Hard disk LED (blue)
<i>Power supply</i>	External 40W AC/DC power adapter (fanless), 19V / 2.1A AC Input: 100~240V AC, 50~60Hz, automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH) DC Connector: 5.5/2.5mm (outer/inner diameter)
<i>24/7 nonstop operation</i>	This device is approved for 24/7 permanent operation. Requirements: - 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)
<i>Environmental spec.</i>	Operating temperature range: 0~35°C Relative humidity range: 10~90% (non-condensing)
<i>Certification and Compliance</i>	EMI: CE, FCC, BSMI, C-Tick, CCC Safety: CB, BSMI, ETL Other compliances: RoHS, Eup Lot6 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-guidelines: - EMV-guideline 89/336/EEG electromagnetic tolerance - LVD-guideline 73/23/EEG use of electric devices within certain voltage-limits

Comparison: Shuttle Slim-PC Barebone PC XS35/XS36 Series

Model	Graphics	HDMI	DVI	D-Sub	RS232	WOL	ODD [4]	Atom Processor	Memory	LAN
XS35	Intel GMA3150	-	-	Yes	-	-	Yes	D510 (1.66 GHz)	Max. 2GB DDR2-800 [6] 1x SO-DIMM	100
XS35GT	NVIDIA ION2	Yes	-	Yes	-	-	Yes			
XS35V2	Intel GMA3150	-	-	Yes	-	-	Yes	D525 (1.80 GHz)	Max. 4GB DDR3-800 [6] 1x SO-DIMM	Giga
XS35GT V2	NVIDIA ION2	Yes	-	Yes	-	-	Yes			
XS35GTA V2	ATI Mobility Rad. HD 5430	Yes	-	Yes	-	-	Yes			
XS35GS V2	ATI Radeon HD 7410M	Yes	-	Yes	-	-	Yes	Without "L": D2700 (2.13 GHz) "L"-version: [5] D2550 (1.86 GHz)	Max. 4GB DDR3-1066 [6] 2x SO-DIMM	Giga
XS35V3(L)	Intel GMA3650 [2]	Yes	-	Yes	-	Yes [3]	Yes			
XS35GTA V3 [1] XS35GS V3L	ATI Radeon HD 7410M	Yes	-	Yes	-	Yes [3]	Yes			
XS36V(L)	Intel GMA3650 [2]	Yes	Yes	Yes	2x	Yes [3]	-			

[1] XS35GTAV3 is also called XS35GS V3 outside EU.

[2] Intel offers sophisticated graphics driver for the integrated Intel GMA3650 graphics only for Windows 7 32 bit. Linux can be used in standard mode without video and 3D acceleration. (date Oct. 2012)

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

[4] "ODD" means 5.25" bay for an optical drive in slim-line format

[5] In 2012, Intel phased out the Atom D2700 processor and introduced the D2550 as its successor. This new model comes with a slightly reduced clock rate, while any other features are maintained.

[6] DDR3-1333 is supported at DDR3-1066 or DDR3-800 clock rate, respectively.

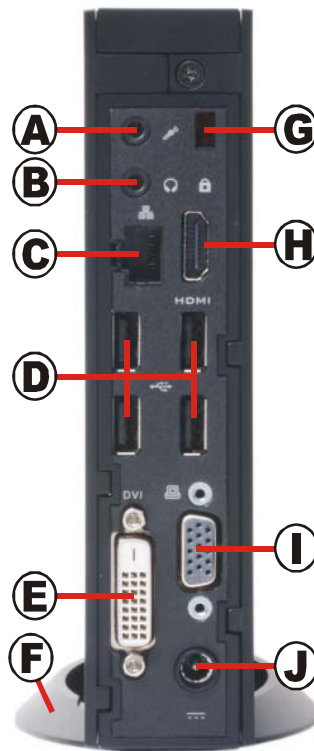
Shuttle Barebone XS36VL – Connectors

Front Panel



- 1 Power button
- 2 Power LED
- 3 Hard disk LED
- 4 2x RS232 COM ports
- 5 SD card reader
- 6 Vertical stand
- 7 USB 2.0 connector

Back Panel



- A Microphone input
- B Head phone output (Line out)
- C Gigabit LAN connector (RJ45)
- D 4x USB 2.0 connectors
- E DVI-D connector
- F Vertical stand
- G Hole for the Kensington-Lock
- H HDMI connector
- I D-Sub/VGA connector
- J Connector for the power adapter



Warning:

Please make sure the system is always placed upright using either its stand or the optional VESA mount (PV03). Ventilation holes must not be blocked to ensure sufficient cooling.