

All-in-one Touchscreen Barebone PC

The Shuttle X50V2 Plus Barebone is an all-in-one PC boasting a 39.6cm (15.6-inch) touchscreen LCD powered by Intel's dual core Atom processor D525. Intended for use in the home environment, the Shuttle X50V2 Plus Barebone is targeted at hardware experts seeking to build a complete system according to their individual requirements. The bulk of components is yet built in, just three components need to be installed: memory, hard disk and operating system. Equipped with Intel's integrated graphics, it provides generous performance for daily computing with internet and office applications. A 2.0 MP webcam, built-in speakers, card reader, WLAN and other features leave nothing you could ask for. Have any applications start up quickly by just touching the screen for working most swiftly and conveniently.

Shuttle All-in-One PC **X50v2 Plus Black Barebone**



Feature Highlight

All-in-one design	<ul style="list-style-type: none"> • Full featured stylish PC platform • Small: 391 x 327 x 36 mm (WHL) • Stand can also be used as a handle • External, fanless power supply (40W)
Display & Graphics	<ul style="list-style-type: none"> • 39.6cm (15.6") touchscreen (1366x768) • Integrated graphics (GMA3150, DX9) • VGA Video output (Extended Mode)
CPU & Chipset	<ul style="list-style-type: none"> • CPU: Intel ATOM D525 Dual Core , 1.8GHz • Chipset: NM10 (Platform Controller Hub)
Storage (not included)	<ul style="list-style-type: none"> • Supports DDR3-667/800 (or higher) 2x 204 pin SO-DIMM slots, max. 2x 2GB • Supports one 6,35cm/2,5" SATA hard disk
Operating system	<ul style="list-style-type: none"> • Operating system not included • Compatible with Windows XP / Vista / 7
Connectivity	<ul style="list-style-type: none"> • 4x USB, Audio: Mic, Line-out • LAN connector, Wireless LAN (draft-n) • Optional: 2x RS232, 1x LPT (PCL68)
Built-in	<ul style="list-style-type: none"> • 4-in-1 card reader • 2.0 Megapixel webcam • 2x 2W speakers • Electret Condenser Microphone • 100mm VESA mount capable • Light bar at the bottom
Power Supply	<ul style="list-style-type: none"> • 40W, fanless, Energy Star 5 compliant
Warranty	<ul style="list-style-type: none"> • 24 months Bring-in Service

Images for illustration purposes only.
Product name: **X50V2 Plus Black**
Order no.: **PAB-X50V2P02**



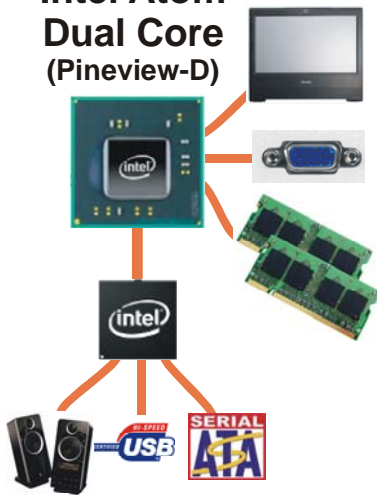
Shuttle X50V2 PLUS Barebone - Special Product Features



All applications at your fingertips

The innovative touchscreen technology delivers the simplest operation possible and makes the screen the centre of action. Its high-quality design lets you control the whole range of multimedia - music, movies, video playback and web browsers start by just touching the screen.

Intel Atom Dual Core (Pineview-D)

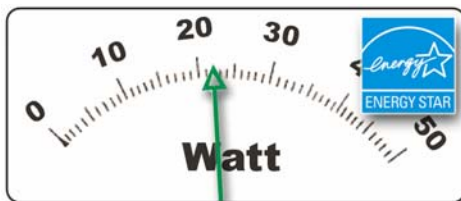


New Atom processor integrates the graphics core

Shuttle X50V2 PLUS is equipped with Intels Atom processor D525, codenamed Pineview. It brings both the memory controller and graphics core on-die which helps to reduce the thermal output and memory latency. The CPU is connected to the Southbridge NM10, codenamed Tiger Point.

Dual Core. Do more.

The vast majority of the existing netbooks and all-in-one PCs with an Intel Atom CPU use the Single Core version. In contrast to this, Shuttle's all-in-one PC stands out from the crowd with its embedded Intel Atom D510 Dual Core processor, which is boosting the productivity of the PC system, particularly with regards to multithreaded applications.



Power saving

The new X50V2 Plus version equipped with Intel Atom D525 Dual-Core processor and eco-friendly ENERGY STAR 5.0 qualified power adapter consumes about 22 Watt in full load mode, which is approximately half as much as with the first X50 version with Atom 330 processor and 945GC chipset.



What does "Barebone" mean?

The Shuttle X50V2 PLUS Barebone is targeted at hardware experts seeking to build a complete system according to their individual requirements. The bulk of components is yet built in, just the following hardware is required to be installed by the purchaser in this case:

- One 6.35cm/2.5" Serial ATA hard disk
- One or two DDR3-667/800 SO-DIMM memory modules (204 pins)
- Optional: USB keyboard and USB mouse
- Operating system: Windows XP / Vista / 7 or Linux



All-in-one PC

Your complete PC system with many components already built in comes in just one single device! This includes the webcam, microphone, mainboard, display, touchscreen input interface, Wireless LAN module and speakers. Saves you more space, looks simply stylish, less wiring.



VGA Port

This VGA port can be used to connect a secondary external LCD display or beamer to the PC.



Built-In Webcam and Microphone

The built-in 2.0 mega pixel webcam and microphone makes it easy to take pictures or stream live images across the Internet – and connect in real-time with friends, family, and colleagues.



Slim and chic

Designed as space-savers, this 15.6 inch all-in-one desktop PC only measures 3.6cm in depth.



Fanless - as quiet as 22dBA

The Shuttle X50V2 PLUS features a cooling system that combines an integrated heat-sink with thermal pads - and removes the fan. As an added benefit, it's not only quiet but also dust-free.



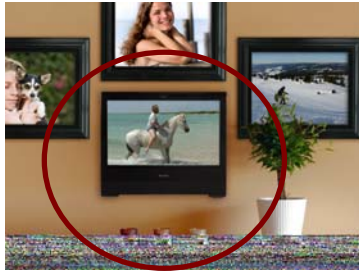
Carrying handle

Cleverly, the stand can be pulled up to serve as a handle - easy to move and light to carry with one hand.



Kensington Lock

This is a small, metal-reinforced hole as part of an anti-theft system. (The lock-and-cable apparatus is not included.)



VESA mounting

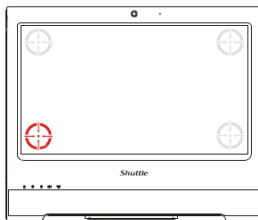
The stand on the rear can easily be removed unveiling four VESA mounting screw holes that can be used for mounting arms and other mounting devices from a variety of manufacturers.



Control AP Software

Click the „ControlAP“-Button and you can configure the following items with your fingers on the touchscreen:

- Screen brightness
- Light bar brightness
- Wireless LAN On/Off
- Web camera On/Off
- Configuration of LCD and external VGA screen



4 Point Touch Screen Calibration

The X50V2 PLUS features a precise touch screen input device. This can easily be calibrated just by pointing four times with the stylus pen on the screen. With this four point calibration, you can use demanding graphical user interfaces (GUI) that require precise cursor control to properly activate small icons, buttons, scroll bars, etc.



Optional serial and parallel legacy ports

Legacy ports are still a requirement for certain industrial applications. Thus, X50V2 PLUS optionally provides one parallel and two serial ports at the back panel (Accessory PLC68).



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



24/7 nonstop operation

The Shuttle All-in-One PC X50V2 Plus 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.

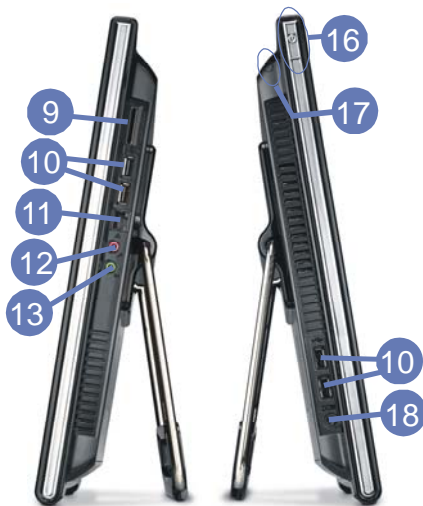
Conditions for permanent use:

- Ambient temperature while under load: 5-35°C
- Air humidity while under load: 10-80% (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.

Shuttle X50V2 PLUS Barebone Overview (Connectors, buttons, etc.)



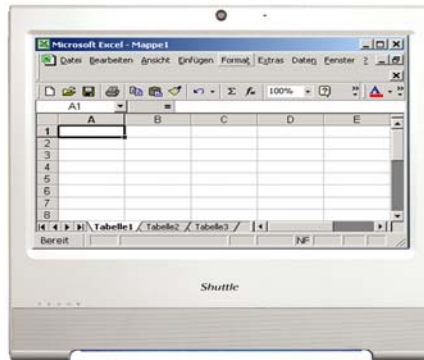
- 1 Touchscreen LCD display
- 2 Webcam
- 3 Microphone
- 4 Power on LED
- 5 Hard disk LED
- 6 Wireless LAN LED (Wifi)
- 7 Stereo speakers
- 8 Light bar
- 9 Card reader
- 10 4 USB connectors
- 11 LAN connector
- 12 Microphone input
- 13 Audio line out (head phone)
- 14 VGA video output
- 15 Stand (handle)
- 16 Power on button
- 17 Stylus pen with holder
- 18 DC-input for power supply
- 19 Kensington lock hole
- 20 Vesa mount
- 21 2x COM, 1x Par. Ports (optional accessory PCL68)



Shuttle X50V2 PLUS Barebone – Range of Applications



Entertainment
Music, Movies,
Photo gallery, TV*
*) TV tuner USB stick
required



Work
Banking, Shopping,
Office, Stock trading



Control
Surveillance,
Home Automation,
Control device



P.O.S.
Point of sales



Education
In schools, at home,
for children and adults



Communication
Email, VoIP, Messenger,
Blog, Video Conferencing



Digital Signage
Visual advertising,
entertainment, displaying
information in public areas

Shuttle X50V2 PLUS Barebone Black – Specifications

Chassis	<p>Color: black Dimensions: 391.3 x 327 x 36 mm (WxHxL), Weight: 3.6 kg 100mm VESA mount capable Mounting hole for Kensington lock Light bar at the bottom</p>																														
Operating system	<p>This system comes without operating system. It is compatible with Windows XP, Windows Vista and Windows 7</p>																														
Touch-screen	<p>Touchscreen function support fingertip input Resistance and single touch technology Including stylus pen for the touchscreen</p>																														
39.6cm (15.6-inch) display	<p>39.6cm/15.6" LCD display, ratio: 16:9 wide screen panel Resolution: 1366x768 = 1.05 Megapixels Adjustable Backlight: CCFL (Cold cathode fluorescent lamp)</p>																														
Processor	<p>Intel Dual Core Atom processor D525 (Codename: Pineview-D) 45nm manufacturing process, FCBGA559 Intel Hyper-Threading technology: 2-threads per core Intel 64 architecture, Core clock: 1.8 GHz L2 Cache: 1024kB , TDP: max. 13W Integrated North Bridge with controller for memory and graphics</p>																														
South bridge	<p>Intel® NM10 Platform Controller Hub (PCH), Codename: Tiger Point</p>																														
BIOS	<p>AMI BIOS in a 8Mb Flash ROM supports PnP, ACPI 3.0 Supports external USB flash memory card boot up</p>																														
Memory	<p>Supports up to 2 modules DDR3-667/800 SO-DIMMs with 204 pins Max. 2GB per module, total size max. 4 GB, Single channel architecture Memory modules that are designed for higher frequencies can also be used. The installed modules then run at an actual frequency of 800 MHz.</p> <table border="1"> <thead> <tr> <th>Chip name</th> <th>Module name</th> <th>Memory clock</th> <th>I/O clock</th> <th>Effective clock</th> </tr> </thead> <tbody> <tr> <td>DDR3-667</td> <td>PC3-5300</td> <td>83 MHz</td> <td>333 MHz</td> <td>667 MHz</td> </tr> <tr> <td>DDR3-800</td> <td>PC3-6400</td> <td>100 MHz</td> <td>400 MHz</td> <td>800 MHz</td> </tr> <tr> <td>DDR3-1066</td> <td>PC3-8500</td> <td>133 MHz</td> <td>533 MHz</td> <td>1066 MHz</td> </tr> <tr> <td>DDR3-1333</td> <td>PC3-10667</td> <td>166 MHz</td> <td>667 MHz</td> <td>1333 MHz</td> </tr> <tr> <td>DDR3-1600</td> <td>PC3-12800</td> <td>200 MHz</td> <td>800 MHz</td> <td>1600 MHz</td> </tr> </tbody> </table>	Chip name	Module name	Memory clock	I/O clock	Effective clock	DDR3-667	PC3-5300	83 MHz	333 MHz	667 MHz	DDR3-800	PC3-6400	100 MHz	400 MHz	800 MHz	DDR3-1066	PC3-8500	133 MHz	533 MHz	1066 MHz	DDR3-1333	PC3-10667	166 MHz	667 MHz	1333 MHz	DDR3-1600	PC3-12800	200 MHz	800 MHz	1600 MHz
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DDR3-1600	PC3-12800	200 MHz	800 MHz	1600 MHz																											
Hard disk drives	<p>Supports one Serial ATA hard disk or SATA SSD drive in 6.35cm/2.5" format</p>																														

Card reader	Integrated multi-format 4-in-1 card reader (USB 2.0) Supports the memory card types: SD, MMC, MS and MS pro
Webcam	Integrated Webcam module Max. Resolution: 2.0 Megapixel (1600x1200 UXGA)
Audio Microphone Speakers	IDT92HD81 Audio Codec with Azalia support, two analog audio connectors (3.5mm): 1) Line out (head phone) 2) microphone input Front panel with integrated Electret Condenser Microphone and 2x 2W speakers
Integrated graphics	The Graphics Processing Unit (GPU) is integrated into the processor Intel GMA 3150, 400MHz render clock frequency Intel Dynamic Video Memory Technology 4.0 (DVMT 4.0) Share system memory max. 256MB Supports DirectX 9 and 2D/3D instruction set, Pixel Shader 2.0 MPEG2 hardware acceleration Intel Clear Video / ProcAmp technology allows user adjustment of hue, saturation, brightness and contrast Two display ports: - Digital LVDS channel supports up to 1366*768, 18bpp resolution - Analog RGB supports up to 2048*1536, 60Hz resolution - Supports Extended Desktop Mode and Clone Mode
LAN	JMicron JMC261 single-chip PCIe Fast Ethernet combo Card Reader Host controller IEEE 802.3u 100Base-T specification compliant Supports 10/100 MBit/s operation Supports S3 Wake-on-LAN (WOL) feature
Wireless LAN (Wifi)	Supports 802.11 b/g and draft-n Mini PCIe x1 card
Connectors	VGA connector (D-Sub 15 pol., analog) 4x USB 2.0 (2x left side, 2x right side) Netzwerk (RJ45) Audio Line-out (head phone) Microphone input DC input for power supply Optional: 2x serial ports (9 pins) Optional: 1x parallel ports (25 pins)
LED's and buttons	Power button Power LED (blue) Hard disk LED (orange) Wireless-LAN / Wifi LED (green)
Power supply	Externes 40W Netzteil (lüfterlos), Abmessungen: 27 x 37 x 90 mm Energy Star 5 konform Eingang (Wechselspannung): 100-240V AC, 50-60Hz Ausgang: 19V DC, max. 2,1A

Certifications	Safety certifications: TÜV, CB, BSMI EMI certifications: CE, FCC, BSMI, R&TT Other certifications: RoHS, Energy Star 5
Environment	Operating temperature: 0~35°C, Humidity: 0~60%
Included Accessories	Quick Guide Driver DVD with Shuttle Control AP Software 40W Power Adapter Power cord
Optional Accessories	PCL68: provides additional ports - 2x RS232 (serial), 1x LPT (parallel)
Warranty	24 months Bring-in Service

Product overview: Shuttle X50 Barebone Series

Name	Processor	Chipset	Memory	Webcam	Ser/Par-Port	UPC Barcode No
Barebone X50	Intel Atom 330 1.6GHz TDP=8W	Intel 945GC Intel ICH7 22.2+3.3W	Max. 2x2GB DDR2-533/667 200 pin SO-DIMMs	1.3MP	Not available	White: 811686007593 Black: 811686002925
Barebone X50V2	Intel Atom D510 1.66GHz TDP=15W	Intel NM10 TDP= 2.5W	Max. 2x2GB DDR2-667/800 200 pin SO-DIMMs	1.3MP	Included in the package	White: 811686003076 Black: 811686003083
					Built-in	White: 811686003113 Black: 811686003090
Barebone X50V2 Plus	Intel Atom D525 1.8GHz TDP=13W	Intel NM10 TDP= 2.5W	Max. 2x2GB DDR3-667/800 204 pin SO-DIMMs	2.0MP	Optional (PCL68)	White: 811686003434 Black: 811686003441

Shuttle X50V2 PLUS Barebone Installation Instructions



As a barebone, the device is delivered without memory and hard drive. Please note the following when installing or removing certain components. The device features two SO-DIMM slots for a maximum capacity of 2x 2GB DDR3-667/800 (or higher) memory and one 2.5 inch drive bay for one S-ATA hard disk.

Please note and proceed as follows:

- a) Only authorized and skilled personnel must intervene
- b) Improper handling might damage the device which is not covered by warranty
- c) To avoid damage of electrical components by electrostatic discharge (ESD), ensure that the static electricity of your body is diverted permanently before you touch electrical components. Use an earthing wrist strap and an anti-static ground mat, if possible.



(1) As for tools, one 5mm hexagon screwdriver and one for cross-head screws is required.



(2) Disconnect the device from the mains and put it on a soft base with the display facing downward and fold the stand vertically upward. Next, carefully remove the cap with the Shuttle logo that is clicked into place by six hooks. The cap can be loosened using a plastic card.



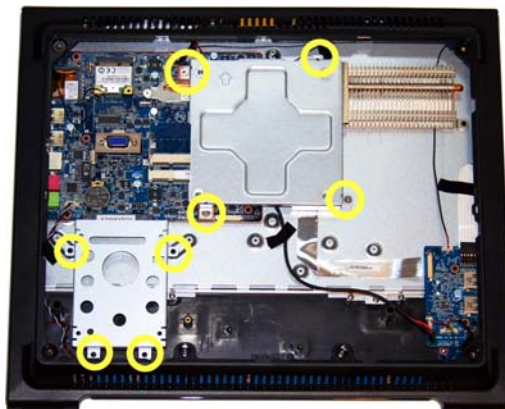
(3) Loosen the four cross-head screws (or Phillips screws) to remove the stand. Remove the four cross-head screws that fix the case cover.



(4) The case cover is clicked into place by several hooks. At the bottom of the case is a notch that can be used to lever the case cover out of place by carefully using a screwdriver or plastic card. Be sure to apply only little force in order not to break the hooks.



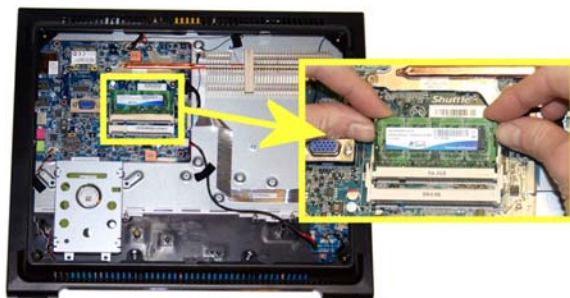
(5) As the next step, remove the large electromagnetic shielding (EMI cover). This metal sheet is fixed by three cross-head screws.



(6) Another shielding is fixed by four screws. Only remove this part to install or exchange memory modules. Loosen the four screws of the drive cage and remove the latter.



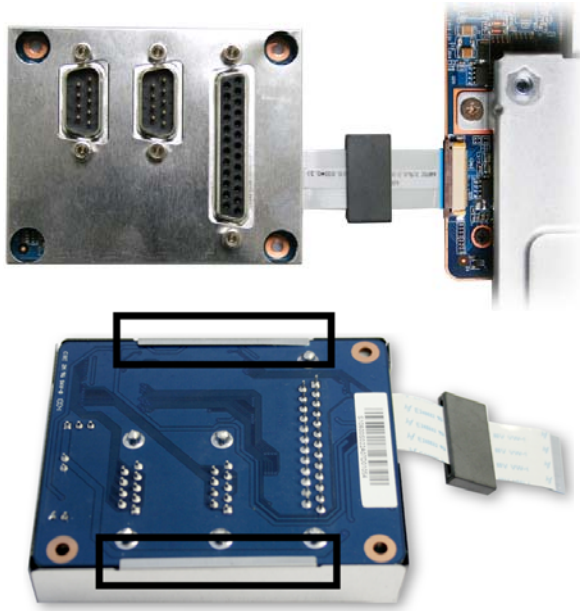
(7) Please insert a 2.5 inch S-ATA hard disk with the connectors facing towards the metal sheet into the drive cage. Please then fix the hard disk with four screws and carefully push it in afterwards to connect it. Please fix the drive cage with four screws.



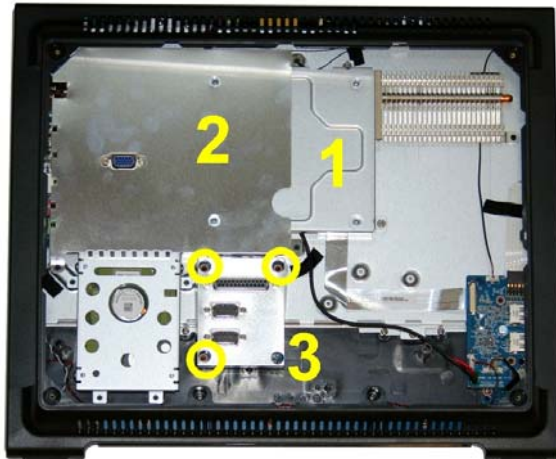
(8) Now install the memory modules and make sure they are clicked into place properly. Please see the notch when installing the module to make sure it faces in the right direction.



(9) Optionally a COM/LPT adapter (PCL68) can be installed. This adapter is to be connected to the mainboard via a ribbon cable. The connectors of the ribbon cable have one securing clip each that needs to be pushed forward first. Having then connected the ribbon cable to the mainboard, the cable is to be fixed with the securing clip with the contacts of the cable facing towards the board. Please do not forget to lead the cable through the ferrite core.



(10) Mount the electromagnetic shield of the COM/LPT adapter for which the hexagon screws need to be removed temporarily. Note: The electromagnetic shield must be attached to board so that the metal fixations of the shield clasp the board. Please connect the adapter with the mainboard afterwards. Make sure to have the cable and ferrite core aligned properly so that the electromagnetic shield is not damaged during further assembly.



(11) Please re-mount the little (1) and the large (2) electromagnetic shield. Please affix the COM/LPT adapter (3) with three screws.



(12) Replace the existing type plate sticker by the sticker as delivered to provide openings for the COM/LPT ports. Please re-mount the case cover and the stand vice versa. Finally, click the cap with the Shuttle logo back into place and cover the four screw holes with the self-adhesive rubber coverings included in the delivery scope.