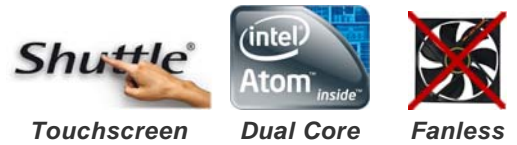## All-in-one Touchscreen Barebone PC

The Shuttle X50V2 Barebone is an all-in-one PC boasting a 39.6cm (15.6-inch) touchscreen LCD powered by Intel's Pineview-D dual core Atom processor. Intended for use in the home environment, the Shuttle X50V2 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 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 Barebone

Touchscreen   Dual Core   Fanless

Intel Pineview-D

Feature Highlight

All-in-one design	• 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)
CPU & Chipset	• CPU: Intel ATOM D510 Dual Core Codename: Pineview-D (1,66 GHz) • Chipset: NM10 (Plattform Controller Hub)
Storage (not included)	• Supports up to 4 GB 2x 200 pin SO-DIMM slots (max. 2x 2GB) • Supports one 6,35cm/2,5" SATA hard disk
Operating system	• Operating system not included • Compatible with Windows XP/Vista/7
Display & Graphics	• 39.6cm (15.6") touchscreen (1366x768) • Integrated graphics (GMA3150, DX9) • VGA Video output (Extended Mode)
Connectivity	• 4x USB, Audio: Mic, Line-out • LAN connector, Wireless LAN (draft-n) • Legacy ports: 2x serial, 1x parallel (Europe)
Built-in	• 4-in-1 card reader • 1.3 Megapixel webcam • 2x 2W speakers, Microphone • 100mm VESA mount capable • Light bar at the bottom
Power Supply	• 40W, fanless, Energy Star 5 compliant
Warranty	• 24 months Bring-in Service

UPC Code X50V2 White *)   UPC Code X50V2 Black *)

8 11686 00311 3   8 11686 00309 0

*) UPC code for X50V2 version including serial/parallel ports

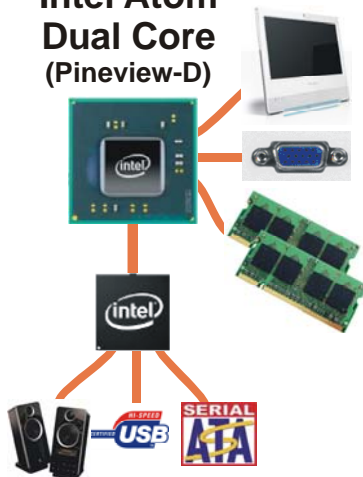Images for illustration purposes only.

Shuttle X50V2 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 is equipped with Intels new Atom processor, 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 X 5020T version equipped with Intel Atom D510 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 previous Atom platform with Atom 330 processor and 945GC chipset (X 5000T).

What does "Barebone" mean?

The Shuttle X50V2 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 DDR2-667/800 SO-DIMM memory modules (200 pins)
- Optional: USB keyboard and USB mouse
- Operating system (Windows XP / Vista / 7)

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 1.3 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 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.
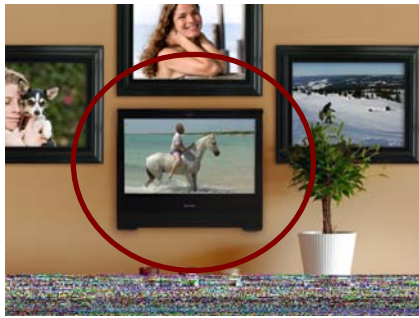
Carrying handle

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.)
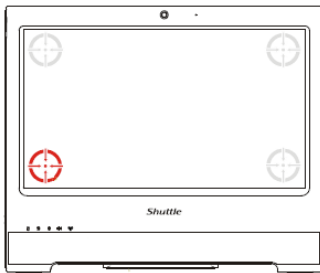
VESA mounting

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

4 Point Touch Screen Calibration

The X50V2 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.
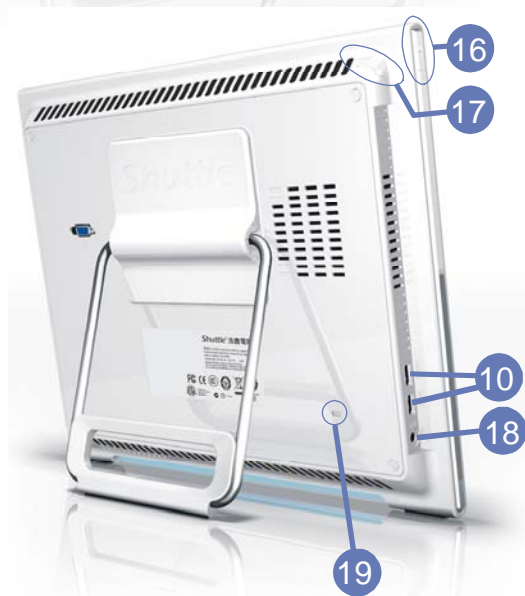
Serial and parallel legacy ports

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

Shuttle X 5020-Series – Overview

Name	Operating System	Hard disk	Memory	EAN Barcode Number
Barebone **X50V2**	None	None	None	White: 811686003113 Black: 811686003090
System **X 5020T**	Configurable	Configurable	Configurable	White: - Black: -
System **X 5020TA**	Windows 7 Home Premium	250 GB	2 GB	White: 4046047102068 Black: 4046047102075
System **X 5020XA**	None	250 GB	2 GB	White: 4046047102082 Black: 4046047102099
System **X 5020VA**	Linux openSuSe	250 GB	2 GB	White: 4046047102105 Black: 4046047102112

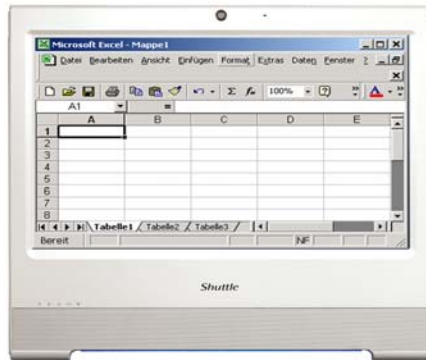## Shuttle X50V2 Barebone Overview (Connectors, buttons, etc.)

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
20	Vesa mount
21	2x COM, 1x Par. Ports

Shuttle X50V2 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 Barebone – Specifications

Chassis	Color: white or 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
Operating system	This system comes without operating system. It is compatible with Windows XP, Windows Vista and Windows 7
Touch-screen	Touchscreen function support fingertip input Resistance and single touch technology Including stylus pen for the touchscreen
39.6cm (15.6-inch) display	39.6cm/15.6" LCD display, ratio: 16:9 wide screen panel Resolution: 1366x768 = 1.05 Megapixels Adjustable backlight unit: High power LED
Processor	Intel Dual Core Atom processor D510 **(Codename: Pineview-D)** 45nm manufacturing process, FCBGA559 Intel Hyper-Threading technology: 2-threads per core Intel 64 architecture, Core clock: 1.66GHz, L2 Cache: 1024kB , TDP: max. 15W Integrated North Bridge with controller for memory and graphics
South bridge	Intel® NM10 Platform Controller Hub (PCH), Codename: Tiger Point
BIOS	AMI BIOS in a 8Mb Flash ROM supports PnP, ACPI 3.0 Supports external USB flash memory card boot up
Memory	Supports up to 2 modules DDR2-667/800 SO-DIMMs with 200 pins Max. 2GB per module, total size max. 4 GB, Single channel architecture
Hard disk drives	Supports one Serial ATA hard disk or SATA SSD drive in 6.35cm/2.5" format
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 with 1.3 Megapixel resolution
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**

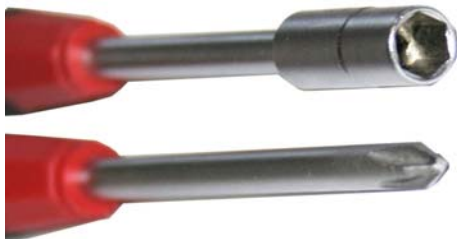|	
Integrated graphics	The Graphics Processing Unit (GPU) is integrated into the processor Intel GMA 3150, 400MHz render clock frequency Intel Dynamic Vidieo Memory Technology 4.0 (DVMT 4.0) Share system memory max. 256MB Supports DirectX 9 and 2D/3D instruction set, Pixel Shader 2.0 MPEG2 hardware acceleration 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 2x Serial ports, Parallel port DC input for power supply
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
Certifi-cations	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%
Accessories	Quick Guide Driver DVD with Shuttle Control AP Software 40W Power Adapter Power cord
Warranty	24 months Bring-in Service

Shuttle X50V2 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 DDR2-667/800 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 intervent
b) Improper handling might damage the device which is not covered by warranty
c) To avoid damage of electronical components by electrostatic discharge (ESD), ensure that the static electricity of your body is diverted permanently before you touch electronical 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.
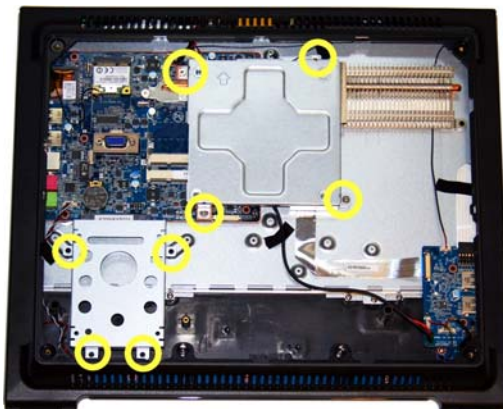
(3) Loosen the four cross-head screws (or Phillips screws) to remove the stand. Remove the four cross-head screws that fix the case cover.

(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.
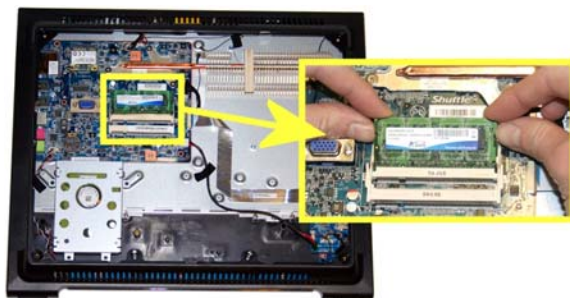

(5) As the next step, remove the large electromagnetic shielding (EMI cover). This metal sheet is fixed by three cross-head screws.

(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.
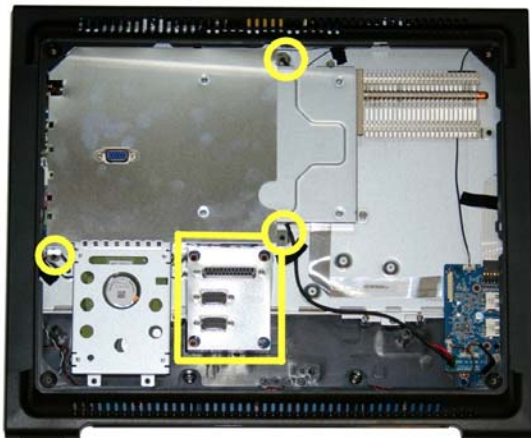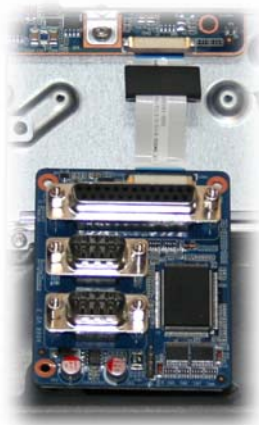

(8) Now install the memory modules and make sure they are clicked into place properly. Please see the notch when installing the module to make sure it faces in the right direction.
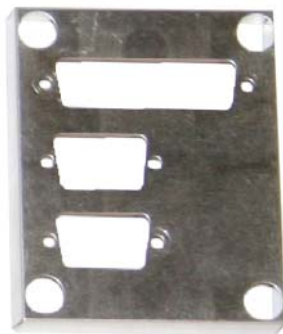

(9) Optionally a COM/LPT adapter can be installed. This adapter is to be connected to the mainboard via a ribbon cable. The connectors of the ribbon cable have one securing clip each that needs to be pushed forward first. Having then connected the ribbon cable to the mainboard, the cable is to be fixed 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) Please re-mount the little electromagnetic shield. Please affix the COM/LPT adapter with three screws. 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 large electromagnetic shield. Afterwards re-mount the electromagnetic shield of the COM/LPT adapter for which the hexagon screws need to be removed temporarily.

(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.