## All-in-one Touchscreen Barebone PC

The Shuttle X50V3 Barebone is an all-in-one PC boasting a 39.6cm (15.6-inch) LCD touchscreen powered by Intel's dual core Atom processor D2700. Intended for use in the home environment, the Shuttle X50V3 Barebone is targeted at hardware experts seeking to build a complete system according to their individual requirements. Most of the hardware is yet built in, just three components need to be installed: memory, hard disk (or SSD) and operating system. Equipped with Intel's integrated graphics, it provides generous performance for daily computing with internet and office applications. An external display can be connected via HDMI or D-Sub. A 2.0MP 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. With the optional accessory PCL69 you can upgrade the device with additional ports: 2x RS232 (serial) and 1x LPT (parallel).

*Shuttle All-in-One PC*
# X50v3 Black Barebone



**Touchscreen**   **Dual Core**   **Fanless**



## Feature Highlights

| | |
|---|---|
| *All-in-one Design* | • All-in-One PC Barebone platform with resisitive touchscreen<br>• Small: 391 x 327 x 42 mm (WHL)<br>• Stand can also be used as a handle<br>• 100mm VESA mount capable<br>• External, fanless power supply (40W) |
| **Display & Graphics** | • 39.6cm (15.6") resistiive touchscreen with 1366x768 resolution<br>• Integrated graphics (GMA3650, DX9)<br>• HDMI + D-Sub/VGA Video output |
| **CPU & Chipset** | • CPU: Intel ATOM D2700 Dual Core 2.13 GHz<br>• Chipset: NM10 (Platform Controller Hub) |
| **Storage (not included)** | • Supports DDR3-800/1066 (or higher) 2x 204 pin SO-DIMM slots, total max. 4GB<br>• Supports 1x 6,35cm/2,5" SATA hard disk / SSD |
| **Operating System** | • Operating system not included<br>• Compatible with Windows 7, 32 Bit |
| **Connectivity** | • HDMI, D-Sub, 4x USB, Microphone-in, Line-out<br>• Gigabit LAN, Wireless LAN (n)<br>• Optional: 2x RS232, 1x LPT (PCL69) |
| **Built-in** | • SD card reader<br>• 2.0 Megapixel webcam<br>• 2x 2W speakers<br>• Electret Condenser Microphone |
| **Power Supply** | • 40W, fanless, Energy Star 5 compliant |
| **Warranty** | • 24 months Bring-in Service |







Shuttle order number:
PAB-X50V312

*www.shuttle.eu*

Images for illustration purposes only.

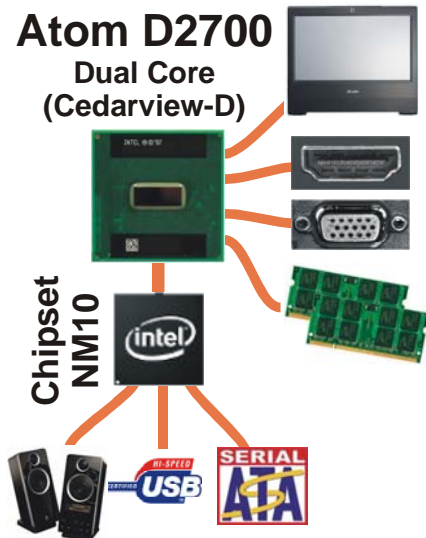# Shuttle X50V3 Barebone - Product Features

## 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.

**Atom D2700**
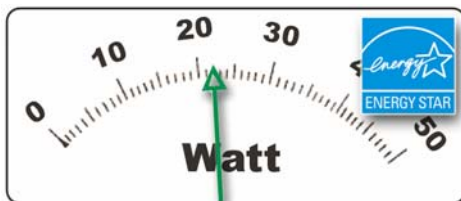**Dual Core**
**(Cedarview-D)**

**Chipset NM10**

## Atom D2700 processor integrates the graphics core

Shuttle X50V3 is equipped with Intel's Atom processor D2700, codenamed Cedarview. It brings both the graphics core with HDMI and D-Sub ports and the memory controller on-die which helps reduce the thermal output and memory latency. The CPU is connected to the Southbridge NM10.

## Dual Core. Do more.

Shuttle's all-in-one PC banks on the embedded Intel Atom D2700 Dual Core processor which boosts system productivity, particularly with regards to multi-threaded applications.

## Power saving

The new X50V3 version is equipped with an Intel Atom D2700 Dual Core processor and eco-friendly ENERGY STAR 5.0 qualified power adapter that consumes about 20~27 Watt (with 4GB RAM, 500GB hard disk) only.

## What does "Barebone" mean?

The Shuttle X50V3 Barebone is targeted at hardware experts seeking to build a complete system according to their individual requirements. Most of the 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 or SSD
- One or two DDR3 SO-DIMM memory modules (204 pins)
- Optional: USB keyboard and USB mouse
- Windows 7 (32 Bit) Operating system: Home Premium or Professional

## 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. Helps you save on space, looks simply stylish, reduces cable clutter.

### HDMI and D-Sub/VGA Port

The digital HDMI port or the analog D-Sub/VGA port can be used to connect a secondary external LCD display or a beamer to the PC. The integrated graphics unit supports both clone mode and extended mode.

### 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 from 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.
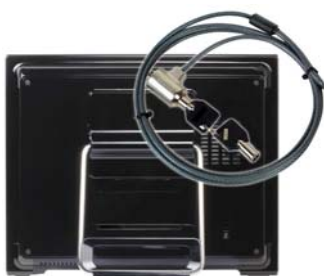
### Fanless - as quiet as 22dBA

The Shuttle X50V3 features a cooling system that combines an integrated heatsink with thermal pads - and removes the fan. As an additional benefit, it's not only quiet but also dust-free.
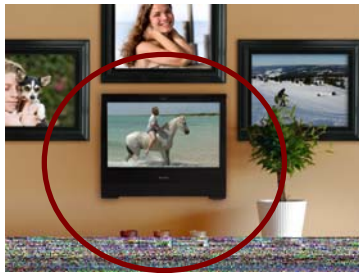
### Carrying handle

Cleverly, the stand can be pulled upwards to serve as a handle making the X50V3 easy to move and carry around.
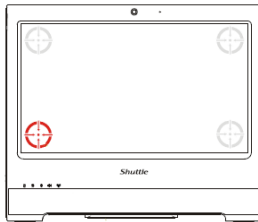
### Kensington Lock

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

## VESA mounting

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

## 4 Point Touch Screen Calibration

The X50V3 features a precise touchscreen input device. This can easily be calibrated with the eGalax touch software by just pointing on each corner of the screen using the stylus pen. 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 widely popular among industrial applications. Thus, the X50V3 optionally provides one parallel and two serial ports on the back panel (Accessory PLC69).

## 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 X50V3 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.

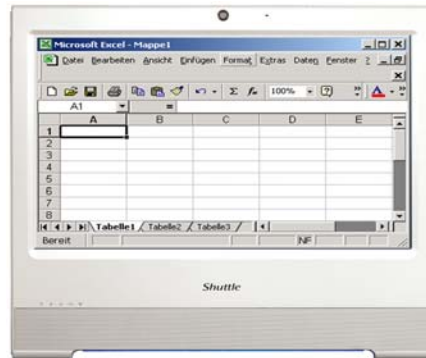## Shuttle X50V3 Barebone Overview (Connectors, buttons, etc.)



| | |
|---|---|
| 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 | HDMI video output |
| 9 | 4x USB 2.0 connectors |
| 10 | D-Sub VGA video output |
| 11 | DC-input for power adapter |
| 12 | Stand (handle) |
| 13 | Power on button |
| 14 | Stylus pen with holder |
| 15 | Card reader |
| 16 | Microphone input |
| 17 | Audio line out (head phone) |
| 18 | RJ45 Gigabit LAN connector |
| 19 | Kensington lock hole |
| 20 | Vesa mount |
| 21 | 2x COM, 1x Par. Ports (optional accessory PCL69) |

## Shuttle X50V3 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 X50V3 Barebone Black – Specifications

| | |
|---|---|
| *Fanless and silent* | Passive cooling, no fan noise at all<br>Perfect to be used in noise-sensitive environments<br>Fanless, dust-free and thus virtually maintenance-free |
| *Chassis* | Colour: black, matt / non-glossy<br>Dimensions: 391.3 x 327 x 42 mm (WxHxL)<br>100mm VESA mount capable<br>Mounting hole for Kensington lock<br>Weight: 2.93 kg net, 4.2 kg gross |
| *Operating system* | This system comes without operating system.<br>It is compatible with Windows 7 32 bit version |
| *Touch-screen* | Touchscreen function support fingertip input<br>Resistance and single touch  technology<br>Including stylus pen for the touchscreen |
| *39.6cm (15.6-inch) display* | 39.6cm/15.6" LCD display, ratio: 16:9 wide screen panel<br>Resolution: 1366x768 = 1.05 Megapixels<br>Backlight unit: High power LED |
| *Processor* | Intel Dual Core Atom processor D2700 (Codename: Cedarview)<br>Intel Hyper-Threading technology: 2-threads per core<br>32 nm manufacturing process, Micro-FCBGA11 package<br>Intel 64 architecture, Core clock: 2.13 GHz<br>L2 Cache: 1024kB , TDP: max. 10W<br>Supports SSE2, SSE3, SSSE3, Execute Disable Bit<br>Integrated North Bridge with controller for memory and graphics<br>Passive cooling without any fan |
| *Integrated Graphics* | The Graphics Processing Unit (GPU) is integrated into the processor<br>Intel GMA 3650, Graphics Base Frequency: 640 MHz, supports DirectX 9<br>Maximum shared memory: 8MB pre-allocated<br>plus 384MB Video Memory Technology (DVMT)<br>Two video outputs: HDMI v1.3 and D-Sub (VGA)<br>Supports dual display in clone or extended model |
| *Chipset* | Intel® NM10 Express Chipset<br>Platform Controller Hub (PCH), Code name: Tiger Point |
| *BIOS* | AMI BIOS in a 8Mbit Flash ROM supports PnP, ACPI 2.0<br>Supports external USB flash memory card boot up<br>Supports Power fail resume / AC power on state / always on / always off<br>Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states<br>Supports Unified Extensible Firmware Interface (UEFI) [1] |

| Memory | 2x SO-DIMM slots with 204 pins, Single-Channel<br>Supports memory modules with up to 4 GB.<br>Total maximum memory capacity supported: 4 GB (1x 4GB or 2x 2GB)<br>Only unbuffered non-ECC SODIMMs are supported<br>Supports DDR3-800 (PC3-6400) and DDR3-1066 (PC3-8500) |
|---|---|

| Chip name | Module name | Memory clock | I/O clock | Effective clock |
|---|---|---|---|---|
| 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 *) |

*) Memory modules that are designed for higher frequencies can also be used. DDR3-1333/1600 memory modules then run at an actual effective frequency of 1066 MHz.

| Hard disk or SSD | Supports one Serial ATA hard disk (max. 5400 rpm)<br>or one SATA SSD drive in 6.35cm/2.5" format<br>The SATA 2.0 interface supports up to 300MB/s data transfer speed<br>Supports a drive with 9.5mm height (12.5mm is not supported)<br>Supports Unified Extensible Firmware Interface (UEFI) [1] |
|---|---|
| Card reader | Integrated card reader supports SD, SDHC and SDXC memory flash cards |
| Webcam | Integrated Webcam module with 2.0 Megapixel (1600x1200) resolution |
| Microphone Speakers | Front panel with integrated Electret Condenser Microphone and<br>2x 2W speakers |
| Integrated Audio | IDT92HD81 Audio Codec with Azalia support<br>Two analog audio connectors (3.5mm):<br>1) Line out (head phone)<br>2) microphone input<br>Digital Audio is supported via the HDMI port. |
| Wired Network | RJ45 connector supports Gigabit LAN at 10/100/1000 Mbit/sec.<br>Network controller JMC 251<br>Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states |
| Wireless LAN (Wifi) | Supports IEEE 802.11b/g/n, max. 150Mbps up-/downstream<br>Security: WPA/WPA2(-PSK), WEP 64/128bit, IEEE 802.11x/i<br>Half size Mini-PCIe-Card |
| Connectors | HDMI 1.3 (supports digital video and digital audio)<br>VGA connector (D-Sub 15 pol., analog)<br>4x USB 2.0 (2x left side, 2x right side)<br>Network (LAN, RJ45)<br>Audio Line-out (head phone)<br>Microphone input<br>DC input for external power adapter<br>optional: 2x COM, 1xLPT (Accessory: PCL69) |

| | |
|---|---|
| *LEDs and buttons* | Power button<br>Power LED (blue)<br>Hard disk LED (orange)<br>Wireless-LAN / Wifi LED (green) |
| *Power adapter* | External 40W AC/DC power adapter (fanless)<br>Energy Star 5 compliant<br>AC Input: 100~240V AC, 50~60Hz<br>DC Output: 19V DC, max. 2.1A<br>Dimensions: 27 x 37 x 90 mm<br>DC Connector: 5.5/2.5mm (outer/inner diameter) |
| *Included Accessories* | Quick Guide<br>Driver DVD<br>40W Power Adapter<br>Power cord |
| *Optional Accessories* | COM/LPT adapter module PCL69: 1x parallel and 2x serial (RS-232)<br>Carrying bag PF55 |
| *24/7 nonstop operation* | This device is approved for 24/7 permanent operation.<br>Requirements:<br>- Free circulation of air amongst the PC must be guaranteed.<br>- Ventilation holes must be clear.<br>- If a hard disk is installed, this must also be approved for permanent operation by its manufacturer (max. one hard disk) |
| *Certifi-cations* | EMI: CE, FCC, BSMI, C-Tick, CCC<br>Safety: CB, BSMI, ETL<br>Other compliances: RoHS, Eup Lot6 |
| *Environment* | Operating temperature: 0~35°C<br>Humidity: 10~90% |
| *Conformity* | 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:<br>- EMV-guideline 89/336/EWG electromagnetic tolerance<br>- LVD-guideline 73/23/EWG use of electric devices within certain voltage-limits |

# Shuttle X50 Barebone Series – Product Comparison

| Model -> | X50 | X50V2 | X50V2 Plus | X50V3 |
|---|---|---|---|---|
| Lifetime | 05/2009 ~ 03/2010 | 01/2010 ~ 05/2011 | 04/2011 ~ Q4/2012 | Q2/2012 ~ n.a. |
| Atom Processor | Atom 330<br>1.6 GHz<br>TDP=8W | Atom D510<br>1.66 GHz<br>TDP=15W | Atom D525<br>1.8 GHz<br>TDP=13W | Atom D2700<br>2.13 GHz<br>TDP=10W |
| BIOS Version | Award | AMI | AMI | AMI |
| Integr. Graphics | GMA950, DX9 | GMA3150, DX9 | GMA3150, DX9 | GMA3650, DX9 |
| Cooling | With fan | Passive | Passive | Passive |
| North Bridge | Intel 945GC (22W) | - | - | - |
| South Bridge | Intel ICH7 (3.3W) | Intel NM10 (2.5W) | Intel NM10 (2.5W) | Intel NM10 (2.5W) |
| Memory | Max. 2x2GB<br>DDR2-667/533<br>200 pin SO-DIMMs | Max. 2x2GB<br>DDR2-800/667<br>200 pin SO-DIMMs | Max. 2x2GB<br>DDR3-800/667<br>204 pin SO-DIMMs | Max. 2x2 or 1x4GB<br>DDR3-1066/800<br>204 pin SO-DIMMs |
| Webcam | 1.3 MP | 1.3 MP | 2.0 MP | 2.0 MP |
| Display Backlight | CCFL | LED | LED | LED |
| Connectors | D-Sub VGA<br>5x USB 2.0<br>RJ45 (Gigabit)<br>3x Audio<br>Card reader | D-Sub VGA<br>4x USB 2.0<br>RJ45 (10/100)<br>2x Audio<br>Card reader<br>2x RS232<br>1x LPT (parallel) | D-Sub VGA<br>4x USB 2.0<br>RJ45 (10/100)<br>2x Audio<br>Card reader | HDMI 1.3<br>D-Sub VGA<br>4x USB 2.0<br>RJ45 (Gigabit)<br>2x Audio<br>Card reader |
| COM/LPT port | Not available | Included | Optional (PCL68) | Optional (PCL69) |
| Power consumption (Idle/Full) | 39~52W | 19~22W | 19~22W | 20~27W |
| Power Adapter | 65W | 40W | 40W | 40W |
| Hardware control Webcam, WLAN… | Two buttons | Control AP Software | Control AP Software | BIOS setting |
| Chassis / Dimensions | Glossy surface<br>39.13 x 32.7 x 3.6 cm | Glossy surface<br>39.13 x 32.7 x 3.6 cm | Glossy surface<br>39.13 x 32.7 x 3.6 cm | Non-Glossy surface<br>39.13 x 32.7 x 4.2 cm |
| Back cover with embossed Shuttle-Logo? | Yes | Yes | Yes | No |
| Light bar at the bottom | Yes | Yes | Yes | No |
| UPC Barcode | White: 811686007593<br>Black: 811686002925 | COM/LPT enclosed:<br>White: 811686003076<br>Black: 811686003083<br><br>COM/LPT built-in:<br>White: 811686003113<br>Black: 811686003090 | White: 811686003434<br>Black: 811686003441 | White: 811686003885<br>Black: 811686003878 |