Prima
XPC *Barebone*
SX48P2
Deluxe

The new pioneer in the Mini-PC sector

The next level in Shuttle's quest for optimum performance! Fuelled by the Intel X48 Express chipset, this Mini-PC Barebone is breaking into new areas: With an FSB of 1600 MHz Intel's Core 2 Quad Extreme QX9770 processor with 3.20 GHz and 12 MB cache in 45nm-design has found its ideal home. Equipped with up to 8 GB memory, three hard disks and a fingerprint-scanner, Bluetooth, WLAN, 2x Gigabit-LAN and space for two high-speed graphics cards, the XPC Barebone SX48P2 Deluxe knows no limits. The pre-installed 80-PLUS 450 watt power supply was developed specially for Mini-PCs. A digital 8-phase voltage transformer on the mainboard ensures a reliable power supply even at maximum load. Some PCS with such a small footprint of 32.5 x 22 x 21 cm (DWH) are only full of hot air. Shuttle on the other hand delivers performance and features in the smallest of spaces.

Feature Highlight

P2 chassis	• Black aluminum chassis • Drive bays: 1x 5.25", 3x 3.5"
Chipset	• Intel X48 Express + ICH9R
CPU	• Socket 775 • Supports Core 2 Quad/Extreme/Duo • Supports 1600, 1333, 1066 & 800MHz FSB • 3 zones cooling system, OASIS heat-pipe
Slots	• 2x PCI-Express 2.0 (x16) 1x Mini-PCIe (supports Turbo Memory)
Memory	• Supports 4x DDR3-1066/1333/1600 • Up to 8 GBytes total size
Drive connectors	• 4x SATA (internal) + 2x eSATA (external) Including eSATA power connector/cable supports RAID 0, 1, 5, 10 and JBOD • 1x IDE ATA 100, 1x floppy disk drive
Deluxe-Features	• Fingerprint scanner, USB Speed-Link • Bluetooth 2.0, WLAN 802.11b/g
Other Features	• 8-ch HD-audio, SPDIF out Dolby® Digital Live! and DTS™ Connect • Dual GigaBit LAN (supports Teaming) • USB 2.0 (2x front, 6x rear, 4x onboard)
Power supply	• 450 Watt ATX power supply (80 PLUS)
Application	• Gaming

Images for illustration purposes only.

intel X48 EXPRESS CHIPSET

1600FSB intel Core 2 Extreme quad-core

max. 8GB DDR3

intel Core 2 Quad inside™

intel Core 2 Duo inside™

intel Core 2 Extreme inside™

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Shuttle XPC Barebone SX48P2 Deluxe – Special Product Features
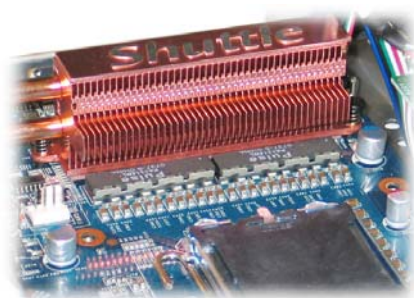
Shuttle XPC Prima Series offering extreme performance

Shuttle has introduced the XPC Prima series, with its revolutionary high performance models, for professional and performance demanding applications whether they be at work, everyday or for high-tech gaming.

Supports 1600 MHz FSB and 45nm processor technology

This Shuttle product supports the Intel® Core™2 Duo and Intel® Core™2 Quad processors with up to 1600 MHz front side bus and even the new 45nm Core™2 Multi-core processors. Multi core brings multi power!

8-phase digital power design

Today's high end mainboards often have a 4-phase power design. The Shuttle XPC Barebone SX48P2 Deluxe is based on a special 8 phase digital voltage regulator power design which has the advantage of quick transient response. It acts faster than 4-phase power designs to stabilize output current and voltage. This is especially critical when the CPU requires immediate current support when under heavy workload. Furthermore it operates at lower temperatures to increase component lifespan.

OASIS Cooling Technology

The newly designed OASIS cooling technology deliver a unique system of heat-sinks covering the MOSFET modules, the north bridge as well as the south bridge that effectively dissipates heat without the use of fans. Featuring an all-new Heat pipe design, Shuttle OASIS allows users to enjoy longer component lifetime through lower temperatures, added system stability and silent operation.

Supports up to 8GB DDR3 memory

As a most functional and high-performance gaming platform, this XPC features four memory slots and supports incredible 8GB of DDR3-1066/1333/1600 RAM. DDR3 SDRAM provides a much higher frequency potential than DDR2. The X48 Express chipset was officially designed to work with 1600MHz FSB and DDR3-1600 RAM speeds to deliver ground-breaking performance for enthusiasts to speed up their systems even more.

Supports two PCI Express x16 graphics cards

The Intel X48 chipset takes a major step beyond the P35 with its 32 PCI Express 2.0 lanes. The Shuttle XPC Barebone SX48P2 Deluxe supports two slots PCI Express x16 Version 2.0 delivers up to 16GB/s bandwidth per port, double that of PCIe 1.0, ensuring plenty of bandwidth for future graphics cards. Two graphics cards can be used to enable 4-monitor-operating.

Finest cinematic surround sound experience

What would a home theater be without booming, immersive 7.1 channel surround sound? Experience state-of-the-art sound quality provided by Dolby® Digital Live and DTS® Connect functionality.

450W 80 PLUS

80 PLUS® Certified Power Supplies

The 80 PLUS® performance specification requires power supplies in computers and servers to be 80% or greater energy-efficient. The SX48P2 Deluxe is in fact the first Shuttle XPC Barebone which has a powerful 450W power supply built in as standard.

Fingerprint reader

With an added a layer of security protection thru the integrated biometric fingerprint reader, you can keep your digital identity and data more secure and no longer worry about having to memorize for memorizing multiple passwords.

Innovative Speed-Link technology

File sharing among two PCs has never been easier with the innovative Speed-Link technology, simply connects both systems thru a USB cable without having the hassle of driver installation or worry about insufficient space of a DVD disc.

WLAN and Bluetooth

The built-in Bluetooth 2.0 Dongle connects the Shuttle XPC with surrounding Bluetooth-capable peripherals. The integrated 802.11 b+g WLAN antenna make the Shuttle XPC ready for a wireless connectivity to Internet or to other home PCs.

Dual Gigabit LAN with Teaming Support

This XPC features even two high-speed Gigabit LAN ports. The teaming function allows you to group both available network adapters together to function as a single adapter - a method of creating a virtual LAN. The benefit of this approach is that it enables load balancing and failover.

Supports up to three internal hard disks

The P2 chassis design supports three hard disks (or two hard disks and a 3.5" card reader) and an optical 5.25" drive - which is plenty for the case capacity of just 15 litres.

2x eSATA with External Power

The back panel provides two external Serial ATA ports and a power port. The included cables make it a snap to connect your external hard drive to your XPC. The Serial ATA interface is up to six times faster than USB 2.0/Firewire.

Supports RAID functionality

The south bridge incorporate six Serial ATA connectors with high performance RAID functions in RAID 0, 1, 5, 0+1, and JBOD. It is the ideal solution to enhance hard disk performance and data back up protection without the cost of add-on cards.

User Friendly Dynamic OverClock feature*)

The user can easily overclock the system through the bios from 3%,5%,7% to10%.

New Era of All-Solid Capacitor Shuttle Mainboards

By using all-solid capacitors Shuttle mainboards provide industry leading stability, reliability and longevity for PC gaming and entertainment systems. The average lifespan for a solid capacitor is more than six times greater than the more common and less expensive electrolytic capacitors.
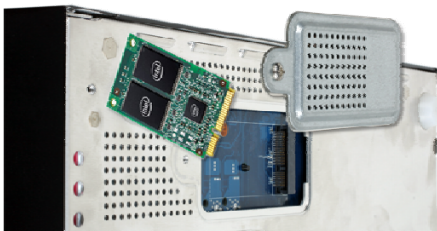
Mini PCIe slot supports Intel Turbo Memory module

There is one Mini-PCIe x1 slot at the bottom of the chassis which supports Intel® Turbo Memory (codename: Robson). Intel® Turbo Memory lets your system actually learn your habits to provide better system response. That's because it stores frequently used information near the processor, where it's more quickly available.

Supports Windows Vista Premium

Breathtaking Windows Aero™ 3D visual interface and a host of groundbreaking new features, Windows® Vista™ Premium promises to deliver a streamlined computing experience designed to fundamentally change how users view, find and organize their digital information.

*) Overclocking Warning:
Please note there is a certain risk involved with overclocking, including adjusting the setting in the BIOS or using third-party overclocking tools. Overclocking may affect your system stability or even cause damage of the components and devices of your system. It is done at your own risk and expense. Shuttle cannot be held responsible for possible damage caused by overclocking.

Shuttle XPC Barebone SX48P2 Deluxe Specifications

Special Deluxe-Features	Fingerprint recognition technology Speed-Link - easily connect 2 PCs via USB and share data Wireless LAN 802.11b/g, up to 54 Mbit/s data transfer rate Bluetooth 2.0 dongle
Chassis	P2-type aluminum chassis, color: black storage bays: 1 x 5.25", 3 x 3.5" (2 internal) stealthed drive doors dimensions: 32.5 x 22 x 21 cm (LWH) weight: 4.2 kg net / 6.0 kg gross
Mainboard	Shuttle FX48, Shuttle form factor, proprietary design for XPC SX48P2 Deluxe Chipset: Intel X48 Express (MCH) + ICH9R (I/O Conroller Hub) Solid Capacitors for excellent heat resistance for enhanced system durability Color slots/connectors design (Power switch, USB, PCIe, DDR3) Dimensions: 20.5 x 28 cm
Power Supply	450 Watt ATX mini PSU, AC input voltage: 100~240V 80 PLUS® certified (80% or greater energy-efficient) Dimensions: 85(W) x 83(H) x150(D) mm Connectors: 20-pin ATX, 4-pin ATX12V Active PFC circuit (Power Factor Correction) With AC power switch
Processor Support	Socket 775 supports Intel processors with Core technology Supports 800, 1066, 1333 or 1600MHz front side bus (FSB) Supports Core 2 Quad/Extreme/Duo, Pentium Dual-Core, Pentium D Supports Core 2 multi-core processors in 45nm technology Please refer the support list for detailed processor support information: http://global.shuttle.com/support_list.jsp
Over-clocking *)	CPU frequency, CPU voltage, RAM frequency, RAM voltage Dynamic Overclock feature (DOC): Easily overclock from 3/5/7/10% through the BIOS.
Cooling system	Shuttle I.C.E. heat-pipe module (Integrated Cooling Engine) SilentX Cooling and Noise Reduction Technology advanced Heatpipe technology, linear fan control. 3 independent airflow zones: CPU, HDD and Case (including power supply, mainboard and graphics card) OASIS Cooling Technology: additional fanless heat-pipe design covering the MOSFET modules (VRM), north- and southbridge

Memory Support	4 memory slots à 240 pins Supports DDR3-1066/1333/1600 memory (unbuffered, non-ECC) Supports Dual Channel max. 2 GB per DIMM, up to a total size of 8 GB
PCI-Express-Expansion Slots	2x PCI-Express x16 Version 2.0 expansion slots for x16 graphics cards (full 16 lanes each slot) Supports Dual Graphics: Two graphics cards can be used to enable 4-monitor-operating. Supports two single-slot or one double-width graphics card. 1x Mini-PCIe x1 slot at the bottom of the chassis supports Intel Turbo Memory (codename: Robson)
8-channel Audio	7.1 channel High Definition Audio, Realtek ALC888DD codec Supports Dolby® Digital Live! and DTS™ Connect (Digital Theater Systems) analog: line-out (8-ch), line-in, microphone, CD-in, AUX digital: optical and coaxial S/PDIF-out
Dual Gigabit-LAN Controller	2x RJ45 connectors supports Teaming-Mode**) 2x Marvell 88E8056 Ethernet network controller With PCI Express x1 interface IEEE 802.3u 1000Base-T compliant Supports 10 / 100 / 1.000 MBit/s opteration Supports Wake-on-LAN
Drive connectors	Serial-ATA II, 3 Gb/s (300 MB/s) bandwidth 4x internal (SATA) plus 2x external (eSATA) External Serial ATA power port with cable Intel Matrix Storage Technology enabled striping and mirroring Supports RAID 0, 1, 5, 10 and JBOD on just two or three hard disk drives Supports Native Command Queuing (NCQ) 1x IDE ATA 100 drives (JMicron JMB368 Controller) 1x floppy disk drive
Front panel connectors & functions	Microphone Headphone (Line-out) 2x USB 2.0 Fingerprint recognition Power button with LED Hard disk LED Bluetooth LED WiFi (WLAN) LED Reset button Fingerprint Sensor Speedlink On/Off button

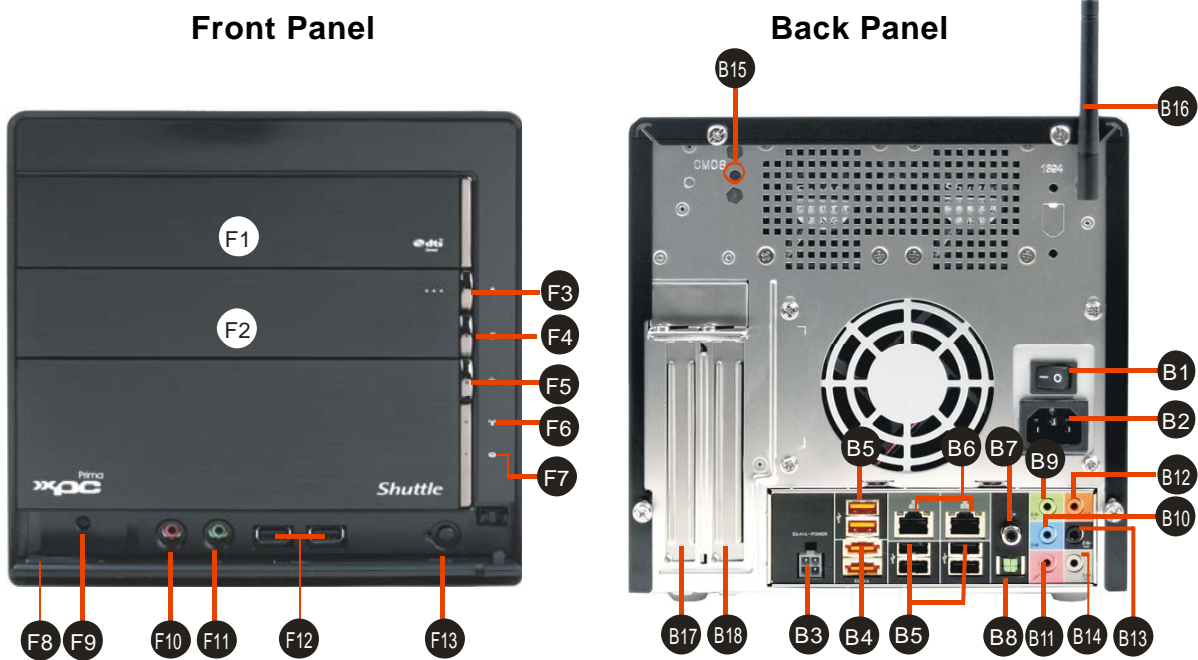|	
Back panel connectors	6x USB 2.0 2x GigaBit LAN (RJ45) 2x External Serial ATA (eSATA) with power port 8-ch Audio line-out (2x rear/front, bass/center, surround/back) Digital Audio S/PDIF output: optical and coaxial Audio Line-in Audio Microphone input Clear CMOS button Wireless LAN Antenna
Other connectors	4x USB 2.0 (two sets with 2x5 pins) 4x fan connectors (3x 4 pins, 1x 3 pins) Headers for PS/2 mouse and PS/2 keyboard CIR header
Accessories	Multi-language XPC manual Quick guides for Bluetooth (BT12) and WLAN (PN20) Driver DVD with software (Norton Internet Security 2007, Adobe Reader) Data cables: 1x floppy, 1x PATA, 3x SATA (PATA/2xSATA preinstalled) 1 set to 2 set 6-pin VGA power cable 2x CrossFire bridges for ATI graphics cards USB cable (type A-to-A) for USB Speedlink function 1 set 4 pin to SATA power cable Dipole antenna for the pre-installed WLAN module AC Power Cord 2x additional Front feet, Screws, Heatsink Compound

*) Overclocking Warning
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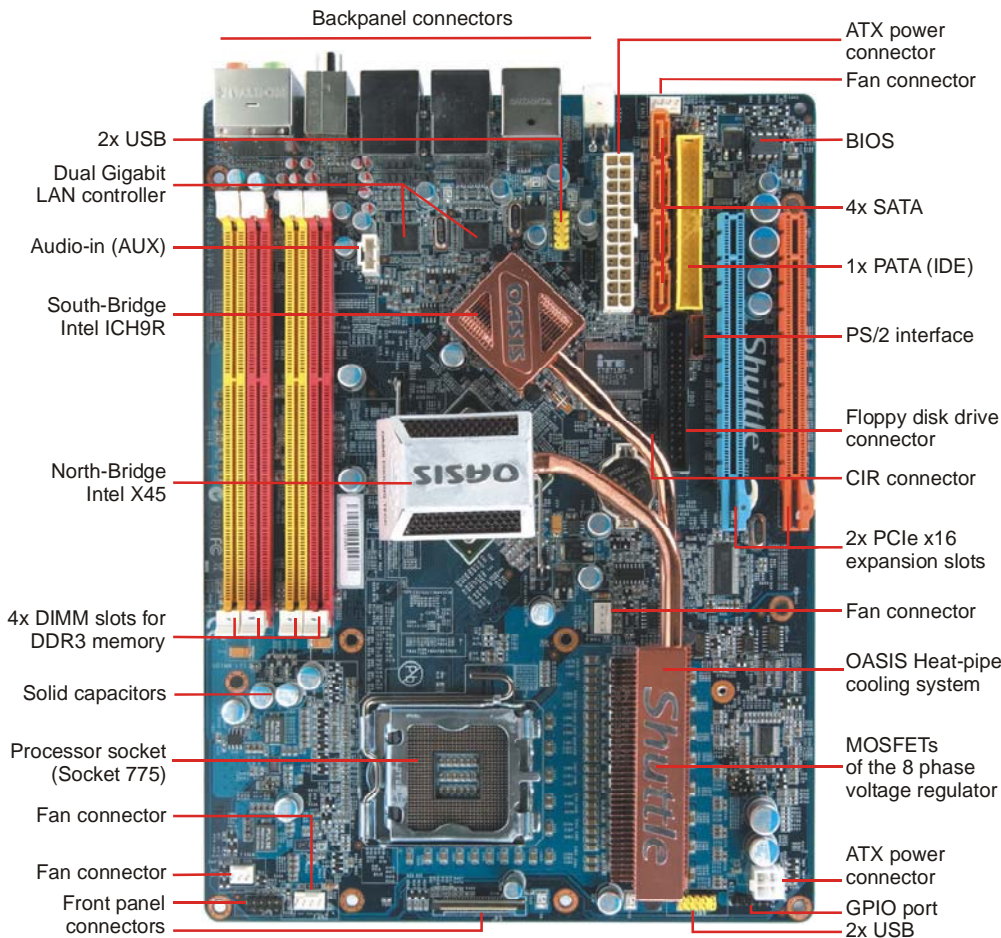
**) Teaming Mode
The teaming function allows you to group both available network adapters together to function as a single adapter - a method of creating a virtual LAN. The benefit of this approach is that it enables load balancing and failover.

Shuttle XPC Barebone SX48P2 Deluxe – Connectors and Components

Front Panel

Back Panel

Mainboard

- Backpanel connectors
- 2x USB
- Dual Gigabit LAN controller
- Audio-in (AUX)
- South-Bridge Intel ICH9R
- North-Bridge Intel X45
- 4x DIMM slots for DDR3 memory
- Solid capacitors
- Processor socket (Socket 775)
- Fan connector
- Fan connector
- Front panel connectors

- ATX power connector
- Fan connector
- BIOS
- 4x SATA
- 1x PATA (IDE)
- PS/2 interface
- Floppy disk drive connector
- CIR connector
- 2x PCIe x16 expansion slots
- Fan connector
- OASIS Heat-pipe cooling system
- MOSFETs of the 8 phase voltage regulator
- ATX power connector
- GPIO port
- 2x USB

Front Panel
F1	5.25" bay
F2	3.5" bay
F3	Eject button
F4	HDD LED
F5	Power Switch & LED
F6	WLAN LED
F7	Bluetooth LED
F8	Fingerprint sensor
F9	Reset Button
F10	Microphone input
F11	Headphone output
F12	USB 2.0 Ports
F13	Speed-link on/off

Back Panel
B1	AC Power Switch
B2	AC Power Socket
B3	External SATA power
B4	External SATA ports
B5	USB 2.0 ports
B6	Dual Gigabit LAN ports
B7	S/PDIF out (coaxial)
B8	S/PDIF out (optical)
B9	Line out (front)
B10	Line in
B11	Microphone in
B12	Line out (center/bass)
B13	Line out (back)
B14	Line out (side)
B15	Clear CMOS button
B16	Wireless LAN antenna
B17	PCI Express x16 slot
B18	PCI Express x16 slot