46.7cm/18.5" All-in-One Barebone PC

This sleek All-in-One touchscreen PC combines impressive computing power with fluent graphics performance. Thanks to the support of Intel Core desktop processors up to TDP=65W also energy-saving technologies are on board. This processor allows for fluent work with different applications at once just as with a conventional desktop PC. The HDMI output enables dual-monitoring for enhanced office applications up to multimedia and presentations on large screens. The optional COM/LPT port is especially relevant for electronic POS and control systems.

Feature Highlight

All-in-one design	• Full featured stylish PC barebone • 100x100 VESA mount compatible
Display & Graphics	• 46.7cm (18.5"), Resolution: 1366 x 768 • Resistive single- touch display • Integrated graphics (depends on CPU) • HDMI video outputs
CPU & Chipset	• CPU: supports Intel Core Prozessors Supports 32nm Sandy Bridge and 22nm Ivy Bridge, TDP max. 65W • Chipset: H61 (Plattform Controller Hub)
Storage (not included)	• Supports DDR3-1333 2x 204 Pin SO-DIMM slots, max. 2x 8GB • Supports one 6.35cm/2.5" SATA hard disk
Operating system	• Operating system not included • Compatible with Windows XP / 7 / 8, Linux
Connectivity	• HDMI (supports digital audio) • 2x USB 3.0, 6x USB 2.0, Microfon, Line-out • Dual RJ45 Gigabit LAN, Wireless LAN (b/g/n) • 1x COM port (RS232) • Optional: 2x COM and 1x LPT (parallel)
Built-in	• SD card reader • 2.0 Megapixel webcam • 2x 2 W speakers • Microphone
Power Supply	• 120W, fanless, Energy Star 5 compliant
Environment	• Operating temp.: 0~40°C • Humidity: 10~90% non-condensing
Certificates	• EMI: CE, FCC ,BSMI ,C-Tick • Safety: CB , 3C, ETL ,BSMI • Others: RoHS and Energy Star 5 Compliance

Shuttle All-in-One PC

X70S Barebone

- 18.5“ Single-touch
- Supports LGA1155 CPUs
- HDMI port
- Webcam, Card Reader
- 2x USB 3.0, 6x USB 2.0
- RS232 COM port
- Dual-Gigabit-LAN

Images for illustration purposes only.

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Shuttle All-in-One PC X70S – Connectors

A	2x USB 2.0 ports	**I**	Power LED indicator	**Q**	Microphone input
B	Power button	**J**	Hard disk LED indicator	**R**	Headphone / line-out
C	Webcam	**K**	2x serial ports (optional)	**S**	2x LAN ports
D	Microphone	**L**	Parallel port (optional)	**T**	2x USB 3.0 ports
E	Touchscreen display	**M**	Ventilation grilles	**U**	HDMI video port
F	Stereo speakers	**N**	Kensington® lock hole	**V**	2x USB 2.0 ports
G	SD card reader	**O**	Stand / handle	**W**	DC voltage input
H	2x USB 2.0 ports	**P**	VESA mount area	**X**	Serial port

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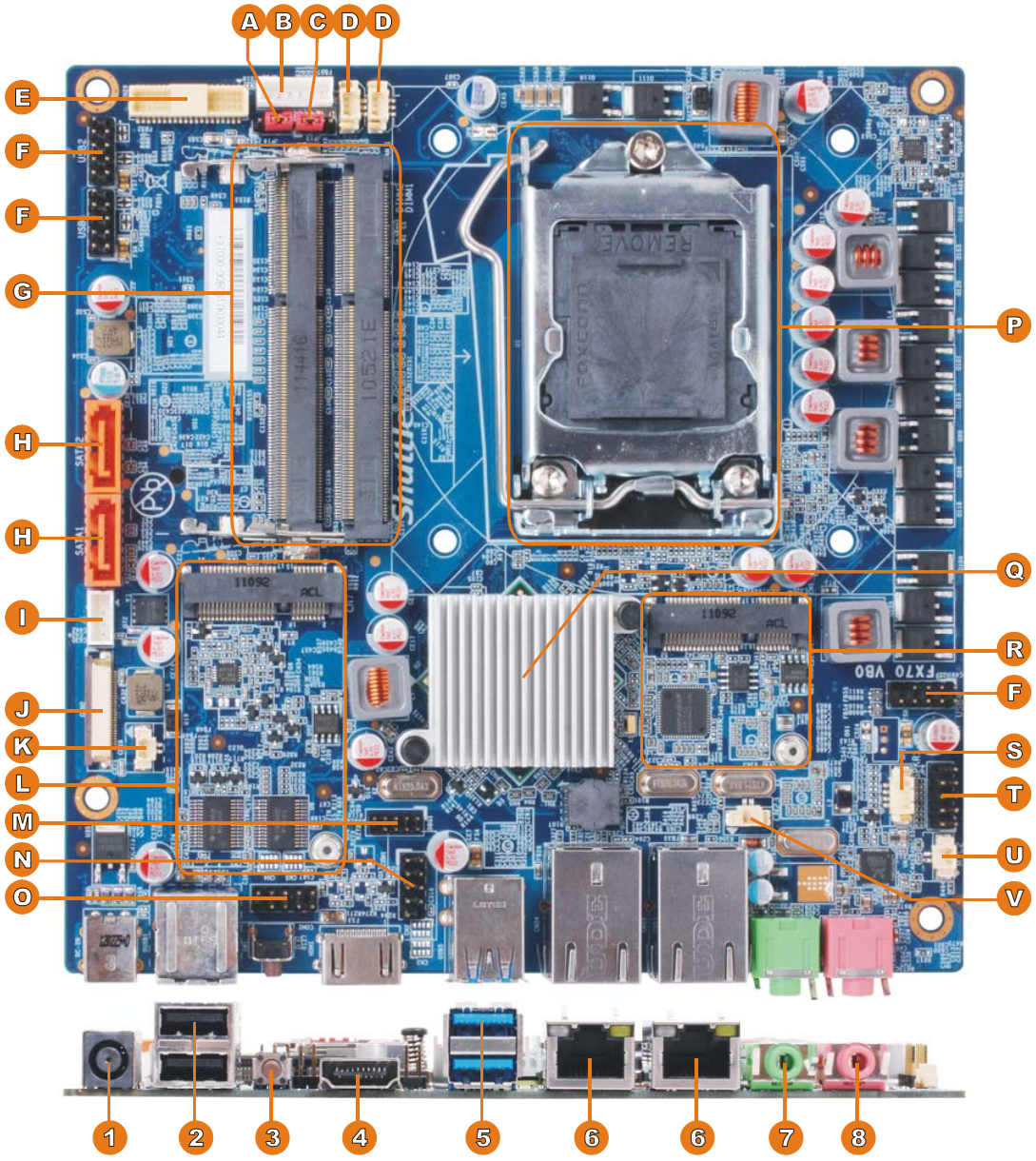
Shuttle All-in-One PC X70S – Mainboard



A	Panel voltage selection jumper
B	Power for LVDS
C	Converter voltage selection jumper
D	CPU cooling fan connector
E	LVDS connector
F	USB 2.0 (three headers with 2 ports)
G	Two SO-DIMMs for DDR3 memory
H	Two SATA 3 Gb/s
I	SATA power connector
J	LPC connector
K	Power button
L	Mini-PCIe slot with mSATA, Full-Size
M	EE debug port
N	Serial port COM 1
O	Serial port COM 2

P	LGA1155 socket (max. 65W)
Q	Intel H61 chipset
R	Mini-PCIe slot, half Size
S	Speaker connector
T	PWR header
U	Microphone input
V	Battery connector
1	Power connector
2	Two USB 2.0 ports
3	Clear CMOS button
4	HDMI port
5	Two USB 3.0 ports
6	Two Gigabit LAN port
7	Audio Line out
8	Audio Mic in

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Shuttle X70S Barebone – Specifications

Chassis	Color: black, matt / non-glossy Dimensions: 468 x 364 x 57mm (WxHxL) Weight: 6.5 kg gross, 4.6 kg net 100x100 mm VESA mount capable
Operating system	This system comes without operating system. It is compatible with Windows XP, Windows 7, Windows 8 and Linux
Touchscreen	Touchscreen function support fingertip input Resistance and single-touch technology Optional available with non-touch or single-touch.
Display	46,7 cm / 18,5" LCD display, ratio: 16:9 wide screen panel Resolution: 1366x768 = 1.05 Megapixels Adjustable backlight unit: High power LED
Chipset	Intel® H61 Express Chipset Platform Controller Hub (PCH) Code name: Cougar Point, TDP = 6.1W
BIOS	AMI BIOS in a 8Mbit Flash ROM supports PnP, ACPI 2.0 Supports external USB flash memory card boot up 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) [1]
Processor support	Socket 1155 (LGA 1155) supports the second and third generation of Intel Core i3 / i5 / i7 / Pentium / Celeron processors with a power consumption of up to 65W TDP - Codename "Sandy Bridge", 32nm process technology and - Codename "Ivy Bridge", 22nm process technology Not compatible with older Socket-1156 processors. The Processor integrates PCI-Express, memory controller and the graphics engine on the same die (depends on processor type) Please refer to the support list for detailed processor support information.
Heat-pipe cooling	Processor heat pipe cooling Processor cooling with heat pipe technology and two fans (6cm)
Memory support	2x SO-DIMM slots with 204 pins Supports DDR3-1333 SDRAM memory (PC3-10600) Supports Dual Channel mode Supports max. 8 GB per DIMM, maximum total size of 16 GB Supports two unbuffered DIMM modules of 1.5V

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Integrated graphics	The features of the integrated graphics function [3] depends on the used processor type. "Sandy Bridge" processor: Intel® HD Graphics 2000/3000, DirectX 10.1 "Ivy Bridge" processor: Intel® HD Graphics 2500/4000, DirectX 11 Maximum shared memory size: 1692MB Supports HDMI, max. resolution up to 1920x1200 @ 60Hz Supports Blu-ray Stereoscopic 3D with HDMI 1.4a [1] Supports HDCP function via HDMI port Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback via the HDMI port Supports Dual-Independent-Display via HDMI and the integrated display HDMI supports HD video plus multi-channel digital audio via a single cable
Audio	Audio Realtek® ALC 269 High-Definition Audio Two analog audio connectors (3.5 mm): 1) Microphone input 2) Front Line out (head phone) Digital audio output via HDMI
Dual Gigabit	Dual Realtek 8111E Ethernet network controller (Gigabit) Supports 10 / 100 / 1.000 MBit/s operation With two RJ45 ports (dual network) supports Teaming [4] Supports WAKE ON LAN (WOL) Supports network boot by Preboot eXecution Environment (PXE)
Wireless Network (WLAN)	Supports IEEE 802.11b/g/n max. 300 Mbps up-/downstream 2T2R: two built-in antennas (2 transmitter, 2 receiver) Half size Mini-PCIe-Card
Mini-PCIe	X70S features two Mini PCI Express expansion slots: 1) half size, supports PCIe 2.0 and USB 2.0 - occupied with WLAN card 2) full size, supports PCIe 2.0, SATA 3G and USB 2.0 e.g. for Mini SATA (mSATA) flash memory cards [5]
Hard disk drive or SSD	Supports one Serial ATA hard disk (max. 7200 rpm) or one SATA SSD drive in 6.35cm/2.5" format Two SATA 2.0 interface supports up to 300MB/s data transfer speed Supports a drive with 9.5 mm height (12.5 mm is not supported) 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 USB interface
Microphone and speakers	Front panel with integrated Electret Condenser Microphone and 2x 2W speakers

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Connectors	HDMI 1.4/1.3 (supports digital video and digital audio) [1] 2x USB 3.0 (back panel) 6x USB 2.0 (2x left side, 2x right side, 2x back panel) 2x Gigabit Network (LAN, RJ45) 1x Microphone input (3,5 mm) 1x Audio Line-out / head phone (3,5 mm) 1x Serial Port (RS232, D-Sub) 1x DC input for external power adapter optional: 2x COM (RS-232 + RS-232/422/485), 1x LPT (parallel)
Other onboard headers	2x fan headers (2x 3 pins) 6x USB 2.0 headers (three 2x5 pins) 1x 24 bit dual channel LVDS port, digital Video port for the display 2x SATA 2.0 connectors (3 Gbps, 300MB/s) 1x SATA power connector 1x LPC header for COM/LPT adapter accessory (optional) 2x RS-232 (two 2x5 pins
LEDs and buttons	Power button Power LED (blue) Hard disk LED (orange) Clear CMOS button
Power Adapter	External 120 W AC/DC power adapter (fanless) Energy Star 5 compliant AC Input: 100~240 V AC, 50~60 Hz DC Output: 19 V DC, max. 6.32 A
Included Accessories	Quick Guide Driver DVD 120W Power Adapter Power cord
Optional Accessoriess	COM/LPT adapter module: 1x parallel and 2x serial (RS-232 + RS-232/422/485) supports voltage supply 0V / 5V / 12V
Certifications and Compliance	EMI: CE, FCC, BSMI, C-Tick, CCC Safety: CB, BSMI, ETL Other compliances: RoHS, Eup Lot6
Environmen-tal criteria	Operating temperature: 0~40°C Humidity: 10~90% non-condensing
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: - EMV-guideline 89/336/EWG electromagnetic tolerance - LVD-guideline 73/23/EWG use of electric devices within certain voltage-limits

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[1] HDMI version supported
HDMI 1.4 is only supported by all LGA1155 processors. Some models support HDMI 1.3 only.
[2] Unified Extensible Firmware Interface (UEFI) - required when booting from hard disks larger than 2.2 TB under Windows 64 bit operating systems such as Windows 7, Windows Vista SP1 and Windows Server 2008/2003 SP1.
[3] Integrated video output (HDMI)
Not all LGA1155 Intel processors support integrated graphics. Please check the specification of the used processor. If you want to use the video outputs, then please make sure, that the used processor provides integrated graphics.
[4] Teaming Modus
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.
[5] mini-SATA (mSATA)
not to be confused with the "micro SATA" connector, is a newer industry standard which converts the electrical SATA interface (1.5 or 3.0 Gbit/s) to the pysical "Mini PCI Express" mini card form factor.

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2rd Generation Intel Core Processor Family (max. 65W)

LGA1155 socket "32nm Sandy Bridge" processor overview (Date: Oct. 2012)

Name	Model	Cores	HT	Clock	Turbo	Cache	TDP	Graphics	Graphics clock
Celeron	G440	1	-	1.6 GHz	-	1 MB	35W	HD	650~1000 MHz
	G460	1	Yes	1.8 GHz	-	1.5 MB	35W	HD	650~1000 MHz
	G465	1	Yes	1.9 GHz	-	1.5 MB	35W	HD	650~1000 MHz
	G530	2	-	2.4 GHz	-	2 MB	65W	HD	850~1000 MHz
	G530T	2	-	2.0 GHz	-	2 MB	35W	HD	650~1100 MHz
	G540	2	-	2.5 GHz	-	2 MB	65W	HD	850~1000 MHz
	G550T	2	-	2.2 GHz	-	2 MB	35 W	HD	850~1000 MHz
Pentium	G620T	2	-	2.2 GHz	-	3 MB	35W	HD	650~1100 MHz
	G620	2	-	2.6 GHz	-	3 MB	65W	HD	850~1100 MHz
	G630	2	-	2.7 GHz	-	3 MB	65W	HD	850~1100 MHz
	G630T	2	-	2.3 GHz	-	3 MB	35W	HD	650~1100 MHz
	G645	2	-	2.9 GHz	-	3 MB	65 W	HD	850~1100 MHz
	G645T	2	-	2.5 GHz	-	3 MB	35 W	HD	650~1100 MHz
	G840	2	-	2.8 GHz	-	3 MB	65W	HD	850~1100 MHz
	G850	2	-	2.9 GHz	-	3 MB	65W	HD	850~1100 MHz
	G860	2	-	3.0 GHz	-	3 MB	65W	HD	850~1100 MHz
Core i3	2100T	2	Yes	2.5 GHz	-	3 MB	35W	HD 2000	650~1100 MHz
	2100	2	Yes	3.1 GHz	-	3 MB	45W	HD 2000	850~1100 MHz
	2105	2	Yes	3.1 GHz	-	3 MB	45W	HD 3000	850~1100 MHz
	2120	2	Yes	3.3 GHz	-	3 MB	45W	HD 2000	850~1100 MHz
	2120T	2	Yes	2.6 GHz	-	3 MB	35W	HD 2000	650~1100 MHz
	2125	2	Yes	3.3 GHz	-	3 MB	65W	HD 3000	850~1100 MHz
	2130	2	Yes	3.4 GHz	-	3 MB	65W	HD 2000	850~1100 MHz
Core i5	2390T	2	Yes	2.7 GHz	3.5 GHz	3 MB	35W	HD 2000	650~1100 MHz
	2400S	4	-	2.5 GHz	3.3 GHz	6 MB	65W	HD 2000	850~1100 MHz
	2405S	4	-	2.5 GHz	3.3 GHz	6 MB	65W	HD 3000	850~1100 MHz
	2500T	4	-	2.3 GHz	3.3 GHz	6 MB	45W	HD 2000	650~1250 MHz
	2500S	4	-	2.7 GHz	3.7 GHz	6 MB	65W	HD 2000	850~1100 MHz
Core i7	2600S	4	Yes	2.8 GHz	3.8 GHz	8 MB	65W	HD 2000	850~1100 MHz

Please refer to the support list for detailed processor support information at global.shuttle.com.
K = unlocked, S = Performance optimized lifestyle, T = Power optimized lifestyle, HT = Hyper Threading (SMT).
Intel HD graphics HD 3000/2000 supports 12/6 Execution Units (Shader-Quads) and DirectX 10.1.
HDMI 1.4a is only supported with 2nd Intel® Generation Core(TM) i3/i5/i7 Processors. Pentium and Celeron Processors support HDMI 1.3. Certain processor models do not include integrated graphics.
Please refer to the support list for detailed processor support information at global.shuttle.com.

3rd Generation Intel Core Processor Family (max. 65W)

LGA1155 socket "22nm Ivy Bridge" processor overview (Date: Oct. 2012)

Name	Model	Cores	HT	Clock	Turbo	Cache	TDP	Graphics	Graphics clock
Pentium	G2100T	2	-	2.6 GHz	-	3 MB	35 W	HD	650~1050 MHz
	G2120	2	-	3.1 GHz	-	3 MB	55 W	HD	650~1050 MHz
Core i3	3220T	2	Yes	2.8 GHz	-	3 MB	35 W	HD 2500	650~1050 MHz
	3220	2	Yes	3.3 GHz	-	3 MB	55 W	HD 2500	650~1050 MHz
	3225	2	Yes	3.3 GHz	-	3 MB	55 W	HD 4000	650~1050 MHz
	3240	2	Yes	3.4 GHz	-	3 MB	55 W	HD 2500	650~1050 MHz
	3240T	2	Yes	2.9 GHz	-	3 MB	35 W	HD 2500	650~1050 MHz
Core i5	3330S	4	-	2.7 GHz	3.2 GHz	6 MB	65 W	HD 2500	650~1100 MHz
	3450S	4	-	2.8 GHz	3.5 GHz	6 MB	65 W	HD 2500	650~1100 MHz
	3470S	4	-	2.9 GHz	3.6 GHz	6 MB	65 W	HD 2500	650~1100 MHz
	3550S	4	-	3.0 GHz	3.7 GHz	6 MB	65 W	HD 2500	650~1150 MHz
	3570T	4	-	2.3 GHz	3.3 GHz	6 MB	45 W	HD 2500	650~1150 MHz
Core i7	3770T	4	Yes	2.5 GHz	3.7 GHz	8 MB	45 W	HD 4000	650~1150 MHz
	3770S	4	Yes	3.1 GHz	3.9 GHz	8 MB	65 W	HD 4000	650~1150 MHz

K = unlocked, S = Performance optimized lifestyle, T = Power optimized lifestyle, HT = Hyper Threading (SMT).
Intel HD graphics HD 4000/2500 features 16/6 Execution Units (Shader-Quads) and supports DirectX 11/OpenGL 3.1.
Please refer to the support list for detailed processor support information at global.shuttle.com.

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