

Cost-effective and reliable Digital Signage communication platform

Shuttle's DS61 is a slim, but powerful x86-based Digital Signage Platform offering the best quality, performance and connectivity to meet the requirements of processing high quality digital media. DS61 helps you build an affordable media player to spice up your marketing and merchandising effectiveness at exhibitions, hotels, office lobbies, customer waiting areas, shopping malls and retail outlets - the possibilities are highly versatile. With its robust metal chassis and outstanding temperature range the DS61 is an industrial-grade signage platform designed for long-term, smooth and reliable operation.

1.3L Slim PC Barebone **DS 61**



Feature Highlights

Slim Design	<ul style="list-style-type: none"> • Slim 1.3 litre metal chassis, black • 190 x 165 x 43 mm (LWH) • Operating temperature: 0~50°C • Including VESA mount (75/100 mm)
Operating system	<ul style="list-style-type: none"> • The operating system is not included • Compatible w. Windows XP/Vista/7/8, Linux
Processor	<ul style="list-style-type: none"> • Supports Socket 1155 CPUs, max. 65W TDP • Supports Core i7 / i5 / i3, Pentium, Celeron • Supports 32nm and 22nm processors • Including cooling system with 2 fans
Chipset	<ul style="list-style-type: none"> • Intel H61 Express Chipset
Memory	<ul style="list-style-type: none"> • 2x 204 pin SO-DIMM slots • Supports DDR3-1333/1600, max. 2x 8 GB
Graphics	<ul style="list-style-type: none"> • Integrated Intel HD graphics (features depends on processor) • Video-outputs: HDMI and DVI-I
Storage Bays	<ul style="list-style-type: none"> • Bays: 1x 6.35cm/2.5" for hard disk or SSD • Slot: Full-Size Mini-PCIe slot supports mSATA
Other Connectors	<ul style="list-style-type: none"> • 2x Audio (Line out and microphone) • 2x USB 3.0 rear, 2x USB 2.0 front • SD card reader • Dual Gigabit LAN (RJ45), supports WOL, PXE • 2x COM ports (RS232 + RS232/RS422/RS485) • Connector for external power button
Power Supply	<ul style="list-style-type: none"> • External 90W fanless power adapter
Application	<ul style="list-style-type: none"> • Digital Signage, POS, control device, etc.

Images for illustration purposes only.
This product does not include processor, memory, storage and operating system.



Shuttle DS61 Specifications

Chassis	<p>Nettop PC with black chassis made of metal</p> <p>Dimensions: 190 x 165 x 43 mm (LWH) = 1.35 litres</p> <p>Storage bays</p> <p>Two holes for Kensington Locks (at both sides of the chassis)</p>
Storage Bay	<p>1x 6.35cm / 2.5" storage bay supports one hard disk or SSD drive</p> <p>Device height: 9.5 or 12.7mm (max.)</p>
Operation System	<p>This system comes without operating system.</p> <p>It is compatible with Windows 8, Windows 7, Windows Vista, Windows XP and Linux (tested with OpenSUSE 12.2, Ubuntu 12.10 and Fedora 17)</p>
Mainboard Chipset BIOS	<p>Chipset: Intel® H61 Express Chipset</p> <p>AMI BIOS in 8Mbit EEPROM with SPI interface</p> <p>All capacitors are high quality solid capacitors</p> <p>Supports hardware monitoring and watch dog functionality</p> <p>Supports Unified Extensible Firmware Interface (UEFI) [2]</p> <p>Supports resume after power failure</p>
Power Adapter	<p>External 90W power adapter (fanless)</p> <p>Input: 100~240V AC, 50/60 Hz</p> <p>Output: 19V DC, 4.74A, max. 90W</p>
Processor Support	<p>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</p> <ul style="list-style-type: none"> - Codename "Sandy Bridge", 32nm process technology and - Codename "Ivy Bridge", 22nm process technology <p>Not compatible with older Socket-1156 processors.</p> <p>The Processor integrates PCI-Express, memory controller and the graphics engine on the same die (depends on processor type)</p> <p>Please refer to the support list for detailed processor support information.</p>
Processor Cooling	<p>Processor cooling with and two 60mm fans on the upper side of the chassis</p>
Memory Support	<p>2x SO-DIMM slots with 204 pins</p> <p>Supports DDR3-1066/1333/1600 SDRAM memory (PC3-8500/10600/12800)</p> <p>The maximum memory clock rate depends on the processor type.</p> <p>Supports Dual Channel mode</p> <p>Supports max. 8 GB per DIMM, maximum total size of 16 GB</p> <p>Supports two unbuffered DIMM modules of 1.5V</p>

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<p><i>Integrated Graphics</i></p>	<p>The features of the integrated graphics function [3] depend 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 DVI, max. resolution up to 1920x1200 @ 60Hz Supports D-Sub, max. resolution up to 2048x1536 @ 75Hz (optional VGA-to-DVI-adapter required) Supports Blu-ray Stereoscopic 3D with HDMI 1.4a [1] Supports HDCP function with DVI and HDMI ports Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with DVI and HDMI ports Supports Dual-Independent-Display via HDMI and DVI-I port HDMI supports HD video plus multi-channel digital audio via a single cable</p>
<p><i>Mini-PCIe slots</i></p>	<p>1x Mini PCI Express expansion slot, full size supports PCIe 2.0, SATA 3G and USB 2.0 e.g. for Mini SATA (mSATA) flash memory cards [6]</p>
<p><i>Audio</i></p>	<p>Realtek® ALC 662 High-Definition Audio (5.1 channel) Two analog audio connectors (3.5mm) at the front panel: 1) 2 channel line out (head phone) 2) microphone input Digital multi-channel audio output: via HDMI</p>
<p><i>Dual Gigabit LAN Controller</i></p>	<p>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)</p>
<p><i>Drive Connectors</i></p>	<p>2x Serial-ATA II, 3 Gb/s (300 MB/s) bandwidth Supports Unified Extensible Firmware Interface (UEFI) [2] Note: This barebone system comes with one pre-installed SATA cable</p>
<p><i>Card reader</i></p>	<p>Integrated card reader supports SD, SDHC and SDXC memory flash cards</p>
<p><i>Front Panel Connectors</i></p>	<p>Microphone input Audio Line-out (headphone) 2x USB 2.0 SD card reader Power button Power LED (blue) HDD LED (yellow)</p>

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<p><i>Back Panel Connectors</i></p>	<p>HDMI connector [1] (supports DVI-D with optional adapter) DVI-I connector (supports VGA with optional adapter) 2x USB 3.0 2x GigaBit LAN (RJ45) 2x RS232 serial ports (5V/12V, 1x switchable to RS422 / RS485) DC-input connector for external power adapter 2 pin connector for power on button Perforation for Wireless LAN antennas (2 holes)</p>
<p><i>Other Onboard Connectors</i></p>	<p>6x USB 2.0 (three 2x5 pin headers) 2x USB 2.0 (2x5 pin, occupied by the front panel) 2x fan connectors (3pin and 4 pin) for the system fans Clear CMOS jumper (2 pins) Digital audio: S/PDIF output (3 pins) Connector for CMOS battery (with battery) 2x10 pins LPC interface (2 mm pitch size) 2x front panel connectors (for audio) Power connector for SATA drives (4 pins) LVDS and converter connector Jumpers for panel voltage and converter voltage select</p>
<p><i>Scope of delivery</i></p>	<p>Multi-language user guide VESA mount 75/100mm (two metal brackets, four screws) Driver DVD (Windows 7 32/64 bit, Windows Vista 32/64 bit, Windows XP 32 bit) 1x SATA cable (preinstalled for 2.5 HDD/SSD drive) 1x 4 pin to SATA power cable External power adapter with power cord Screws and heatsink compound</p>
<p><i>Environmental Specifications</i></p>	<p>Operating temperature range: 0~50°C Relative humidity, non-condensing: 10~90%</p>
<p><i>Conformity Certifications</i></p>	<p>EMI: FCC, CE, BSMI, C-Tick Safety: CB, BSMI, ETL Others: RoHS, Energy Star V5.0, EuP Lot 6 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</p>

[1] HDMI version supported

HDMI 1.4 is not 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 outputs (HDMI and DVI-I)

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 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.

[5] Optional Wireless LAN module:

this Slim PC supports an optional WLAN module, which consists of a half-size Mini-PCIe card with IEEE 802.11n functionality and an external antenna with appropriate antenna cable.

[6] 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 physical "Mini PCI Express" mini card form factor.

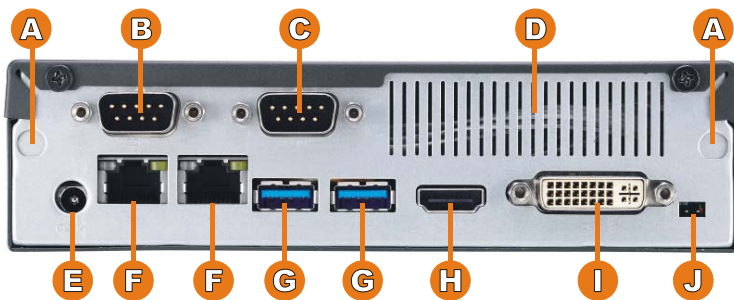
Shuttle DS61 – Front and Back Panel

Front view



- 1 SD Card Reader
- 2 Power LED
- 3 Hard disk LED
- 4 Power Button
- 5 2x USB 2.0
- 6 Microphone input
- 7 Headphone output

Rear view



- A 2x WLAN perforation
- B RS232/RS422/RS485
- C RS232
- D Ventilation grille
- E DC power input
- F 2x RJ45 Gigabit LAN
- G 2x USB 3.0
- H HDMI video port
- I DVI-I video port
- J Connector for external power button
- K 2x holes for Kensington Lock
- L VESA mount (two parts)

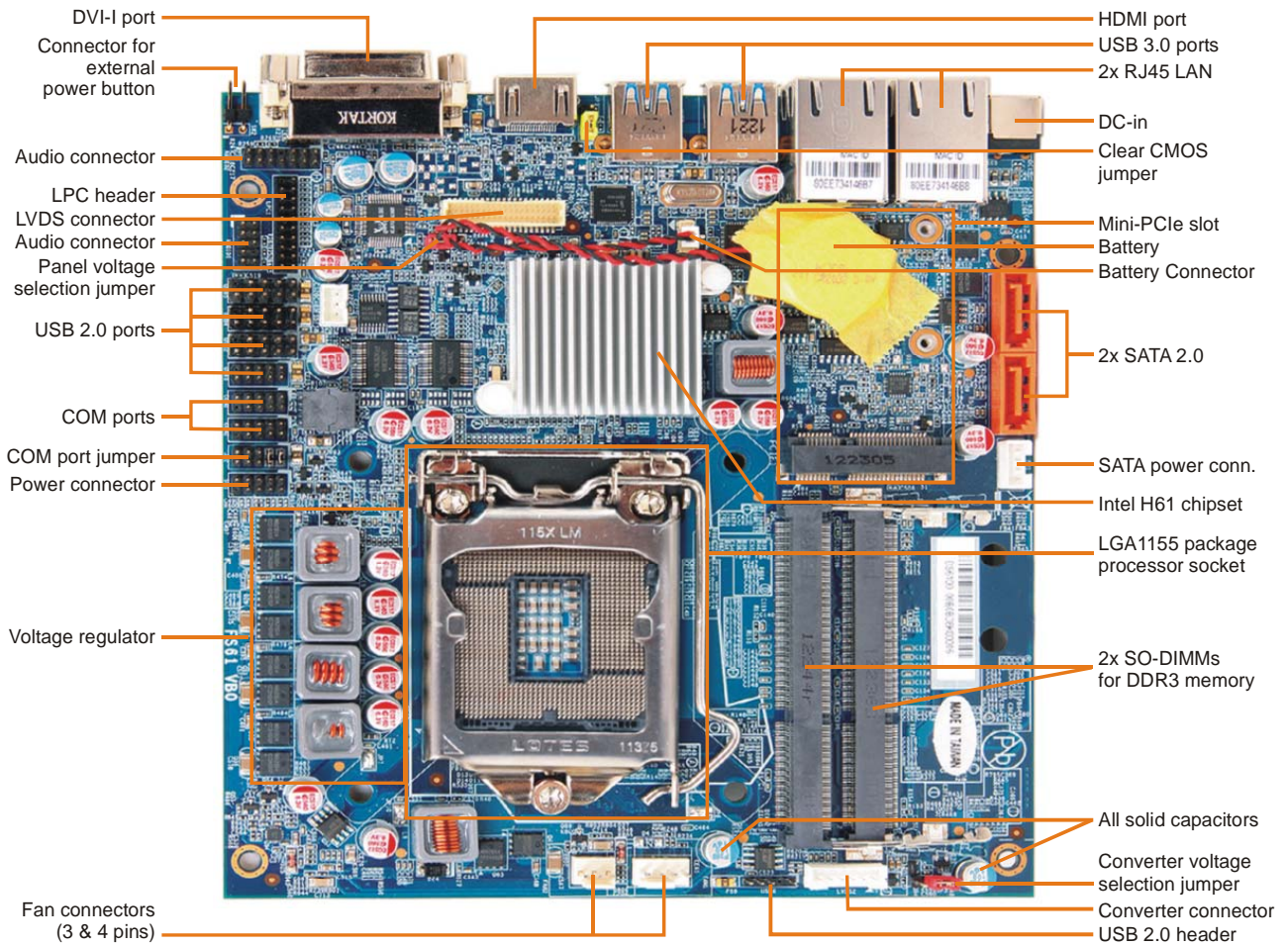
Right side



Left side



Shuttle DS61 – Mainboard



2nd 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
Pentium	G550T	2	-	2.2 GHz	-	2 MB	35 W	HD	850~1000 MHz
	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
Core i3	G850	2	-	2.9 GHz	-	3 MB	65W	HD	850~1100 MHz
	G860	2	-	3.0 GHz	-	3 MB	65W	HD	850~1100 MHz
	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
Core i5	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
	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
Core i7	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
	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
Core i7	3570T	4	-	2.3 GHz	3.3 GHz	6 MB	45 W	HD 2500	650~1150 MHz
	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.