Slim Design

Operating

System

Processor

Chipset

Memory

Graphics

Storage

M.2 slots

Other

Connectors

Power Supply

Optional Accessories

Robust Slim PC for powerful Skylake and Kaby Lake processors

The Shuttle XPC slim Barebone DH110SE is a robust 1.3I Barebone PC with H110 chipset for Intel LGA1151 desktop processors, codenamed "Skylake" and "Kaby Lake" [6]. It allows for two digital displays to be operated at the same time and supports up to 32 GB SO-DIMM memory. Its slim metal chassis provides versatile connectivity and reliable operation in environments with ambient temperatures of up to 50 °C. This platform is targeted at professional applications such as Digital Signage, POS, POI, gambling machines, office, healthcare and industry.

Feature Highlights

190 x 165 x 43 mm (LWH)

Intel H110 Chipset

• HDMI, DisplayPort

2x 260-pin SO-DIMM slots

1x M.2 2260 M slot (SATA)

• 2x USB 3.0, 6x USB 2.0

WLAN Module (WLN-M)

Vertical Stand (PS02)

Slim 1.3 litre metal chassis, black

Operating temperature: 0~50 °C

• The operating system is not included

Supports Windows 7 / 8.1 / 10, Linux 64-bit

No Windows 7/8.1 support w/ Kaby Lake CPUs

 Supports LGA 1151 Skylake or Kaby Lake processors up to a max. TDP of 65W [6]

Supports Core i7 / i5 / i3, Pentium, Celeron
Heatpipe cooling system with two fans

• Supports DDR4-2133 (1.2 V), max. 2x 16 GB

• Integrated Intel HD graphics, 4K support (features depend on processor)

Supports two independent displays

• 1x 2.5" bay for SATA hard disk or SSD

• 1x M.2 2230 AE for optional WLAN (WLN-M)

• SD card reader, 2x audio (line out, mic)

• Gigabit LAN (RJ45), supports WOL

Connector for external power button

"Always on" Jumper, DC-input 19 V

• External 90 W / 19 V fanless power adapter

XPC slim Barebone DH1105E











Images for illustration only. Processor, memory, storage and operating system not included.



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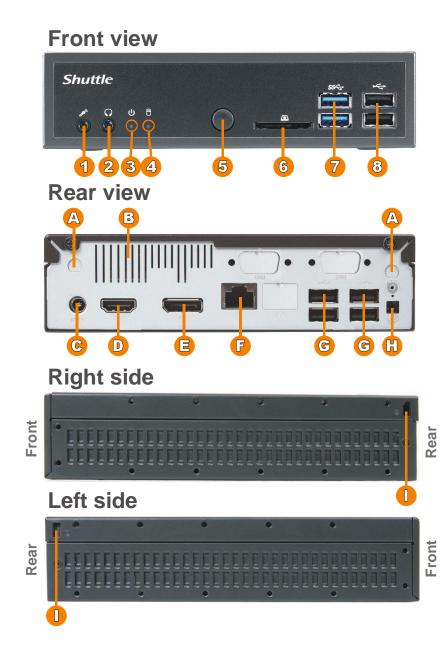
www.shuttle.eu

slim Bar DH11 DH11 Sinter Sint

Fritz-2533

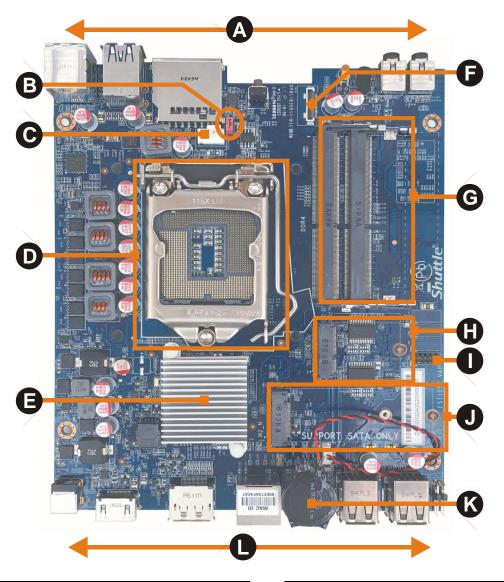
Shuttle Computer Handels GmbH Fritz-Strassmann-Str. 5 25337 Elmshorn | Germany Tel. +49 (0) 4121-47 68 60 Fax +49 (0) 4121-47 69 00 sales@shuttle.eu

Shuttle XPC slim Barebone DH110SE – Front and Back Panel



- 1 Microphone input
- 2 Headphone output
- 3 Power LED
- 4 Hard disk LED
- 5 Power Button
- 6 SD Card Reader
- 7 2x USB 3.0
- 8 2x USB 2.0
- A 2x WLAN perforation
- B Ventilation grille
- **C** DC power input
- D HDMI video output
- E DisplayPort (DP) video outputs
- F RJ45 Gigabit LAN
- G 4x USB 2.0
- H Connector for external power button, Clear CMOS and 5V DC voltage (4-pin, 2.54 mm pitch)
- I 2x hole for Kensington Lock

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Shuttle XPC slim Barebone DH110SE – Mainboard

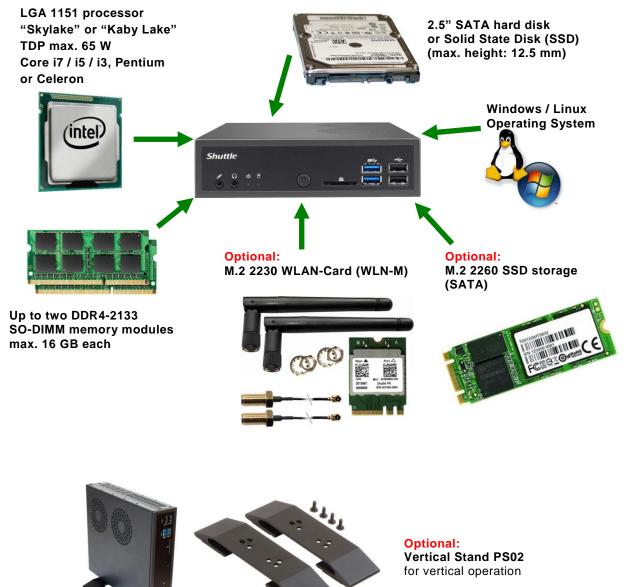
Α	Front Panel	
В	Always Power-On Jumper	
С	Fan Connector	
D	LGA 1151 Processor Socket	
Е	Intel H110 Chipset	
F	SATA 3.0 (6 Gbps) Connector	

G	SO-DIMM Socket for DDR4-2133
	Memory
Η	M.2-2230 Slot for an optional
	WLAN module (WLN-M)
Ι	Debug Interface
J	M.2-2260 M-key Slot for SSDs
Κ	CMOS Battery
L	Back Panel

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Shuttle XPC slim Barebone DH110SE – Required Components

The following components need to be added to make it a fully-configured Mini PC



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Shuttle XPC slim Barebone DH110SE – Product Features



Robust, stylish and particularly small

You should have held it in your own hands to see how small it actually is. Barely measuring a volume of 1.35 litre, its steel chassis gives it the appropriate stability required for professional applications in digital signage. Despite its dimensions of $19 \times 16.5 \times 4.3$ cm (LWH), the overall system performance is very high thanks to support of Intel Core desktop processors of the Skylake generation. The interior of the DH110SE is very tidy too so that it won't take long to set it up. Its sleek and stylish looks let it easily find a place in both home and office environments.



Low noise thanks to heatpipe cooling system

An active dual-fan heatpipe cooling system ensures whisper-quiet operation and system stability.

Extended temperature range and reliability

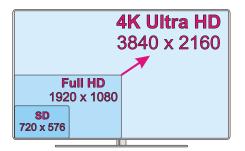
The DH110SE is outstandingly robust thanks to its rugged chassis. With an ambient temperature range from 0-50 °C it is suitable for use in the most demanding environments. Solely designed with all solid capacitors, the DH110SE is guaranteed to deliver maximum stability, reliability and longer system lifetime for long-term applications like digital signage.

Caution: For high ambient temperatures over 40 °C we strongly recommend to use SSDs (supporting at least 70 °C) and rugged SO-DIMM memory with a wider temperature tolerance (up to 95 °C).

Dual Display with HDMI and DisplayPort

The DH110SE features two digital video outputs: HDMI and DisplayPort (DP). Dual View technology offers multiple display support on up to two separate monitors. This helps improve on productivity by allowing for spreading multiple windows across two monitors while working with them simultaneously.





Supports 4K Ultra HD at 60 Hz

The DH110SE supports displays running at 4K (3840 x 2160 / 2160p) high resolution at 60 Hz frames per second when connected to its DisplayPort video outputs. Being the successor to the Full HD standard, Ultra HD delivers a four times higher resolution with a wider colour space and colour depth.

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M.2 2260 Slot for SSD cards

The M.2 2260 M slot supports M.2 SSD storage cards with SATA interface.

Type 2260 means, it supports the usual M.2 cards with a width of 22 mm and a length of 60 mm, but also 2242 standard cards are supported. Cards with 80 mm in length (2280) are not supported.

M.2 2230 Slot for optional WLAN

The M.2 2230 AE slot is intended for Wireless LAN (Wifi), Bluetooth, GSM/UMTS cards and others.

Shuttle offers the optional accessory "WLN-M" (see picture), which provides WLAN 802.11 ac and Bluetooth 4.0 functionality and can be installed into your Shuttle XPC slim Barebone DH110SE.



- Front Panel -



Kensington Lock This is a small, me

This is a small, metal-reinforced hole as part of an anti-theft system. The DH110SE provides an appropriate hole on both side of its chassis. The lock and cable are not included.

External power button by separate remote line

If because of space constraints (e.g. in case of a fixed installation), the machine cannot be switched on by pressing the front power button, it can be powered on by a separate remote line. You will find an appropriate four-pin connector at the back panel of the DH110SE (pitch 2.54 mm). Furthermore, this connector provides a Clear CMOS function and +5V DC voltage supply for external devices.

+5V voltage (2) (● ●) (4) Power Button Clear CMOS (1) (■ ●) (3) Ground

Power on after Power fail

The BIOS setup provides a "Power-On after Power Fail" function that can be found under "Power Management Configuration". As the name indicates, this function determines the PC's behaviour after power failure: (1) unconditional power on, (2) restore former status (3) keep system turned off (4) Power-On by LAN or (5) Power-On by Real-Time-Clock. As a matter of the nature of this function, it may fail after short power failures. This is why the DH110SE also comes with a hardwarebased solution. By removing Jumper JP2 (see image) the system will start unconditionally once power is applied.

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Product Comparison

	DH110SE	DH110	DH170	DQ170			
Chassis	1.35L, 19 x 16.5 x 4.3 cm						
Processor	Socket LGA1151, "Skylake" (6th Gen.) or "Kaby Lake" (7th Gen.), TDP max. 65W						
Support	Note: Windows 7 and 8.1 is not	•					
Chipset	Intel H110	Intel H110	Intel H170	Intel Q170			
Operation System Support	Windows 7, 8.1, 10 and Linux (64-bit only)						
TPM-Support	Firmware-TPM (optional)	Firmware-TPM (optional)	Firmware- TPM (opt.)	Hardware- TPM Chip			
Multi-Display	supports 2 Displays	supports 2 Displays	supports 3 Dis	olays			
UHD/4K	HDMI: 2160p/30 (30 frames/sec.)					
Support	DisplayPort: 2160p/60 (60 frame	s/sec.)					
Memory	2x SO-DIMM (260-pin)	2x SO-DIMM (204-pin)					
Support	max. 2x 16 GB DDR4-2133	max. 2x 16 GB DDR3L-1600					
Audio	Realtek ALC662						
Network	Single LAN	Dual LAN	Dual LAN				
Network	Realtek RTL8111G	Intel i211 + Intel i219LM	Intel i211 + Inte	el i219LM			
Drive Bays	1x 2.5" / 12.5mm SATA						
Mini-Slots	1x M.2-2260 SATA	1x M.2-2260 SATA/PCIe	1x M.2-2260 S/	ATA/PCIe			
WIIII-31015	1x M.2-2230 supports WLAN	1x M.2-2230 supports WLAN	1x Mini-PCIe Half Size				
Front Panel	Power button, Power LED, HDD SD card reader, Head-phones, M	LED licrophone, 2x USB 3.0, 2x USB 2	.0				
Back Panel	HDMI 1.4, DisplayPort 1.2 4x USB 2.0 1x Gigabit LAN (Realtek) 2x Kensington Lock 2x WLAN antenna (opt.) External power button (opt.)	HDMI 1.4, DisplayPort 1.2 2x USB 3.0 1x USB2.0/eSATA Combo 1x PS/2 Combo 2x Gigabit LAN (Intel) RS232 + RS232/422/485 2x Kensington Lock 2x WLAN antenna (opt.) External power button (opt.)	HDMI 1.4, 2x DisplayPort 1.2 2x USB 3.0, 2x USB 2.0 2x Gigabit LAN (Intel) RS232 + RS232/422/485 2x Kensington Lock 2x WLAN antenna (opt.) External power button (opt.)				
Accessories	-/-	VESA mount	VESA mount				
Optional Accessories	WLN-M: WLAN Kit PS02: Vertical Stand PV04: VESA Mount	WLN-M: WLAN Kit PS02: Vertical Stand PVG01: D-Sub/VGA Port	WLN-P: WLAN PS02: Vertical PVG01: D-Sub/	Stand			
Operation Temperature	max. 50 °C	max. 50 °C	max. 50 °C				
Power Adapter	90 W / 19 V	90 W / 19 V (also supports 84 W / 12 V power adapters)	90 W / 19 V				
Front View	Shuttle	Shuttle	Shuttle				
Rear View							

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Shuttle XPC slim Barebone DH110SE - Specifications

Chassis Nettop PC with black chassis made of steel Dimensions: 190 x 165 x 43 mm (WH) = 1.35-lifte Weight: 1.3 kg net and 2.1 kg gross Two holes for Kensington Locks and numerous threaded holes (M3) at both sides of the chassis Storage Boy 1x 6.35 cm / 2.5" storage bay supports one hard disk or SSD drive Device height: 12.5 mm (max.) Operation System This system comes without operating system. It is compatible with Windows 10 / 8.1 / 7 and Linux 64 bit. Note: Windows 7 and 8.1 is only supported in combination with the 6th generation Intel Core processors 'Skylate''. Mainboard Chipset: Intel® H110 Chipset (Intel® DH82H110 PCH, code name 'Sunrise Point') Platform Controller Hub (PCH) as Single-Chip-Solution AMI BIOS in 8 Mbit EEPROM with SPI interface All capacitors are high quality solid capacitors Supports hardware monitoring and watch dog functionality Supports bardware monitoring and watch dog functionality Supports power on after power failure [3] Power Actigater External 90 W power adapter (fanless) Intel Core 17 / 15 / 13. Pentium and Celeron processors - 6th generation, code name 'Skylake'' - 7th generatio		
Storage Bay Device height: 12.5 mm (max.) Operation System This system comes without operating system. It is compatible with Windows 10 / 8.1 / 7 and Linux 64 bit. Note: Windows 7 and 8.1 is only supported in combination with the 6th generation Intel Core processors "Skylake". Mainboard Chipset BIOS Chipset: Intel® H110 Chipset (Intel® DH82H110 PCH, code name "Sunrise Point") Platform Controller Hub (PCH) as Single-Chip-Solution AMI BIOS in 8 Mbit EEPROM with SPI interface All capacitors are high quality solid capacitors Supports Unified Extensible Firmware Interface (UEFI) Supports Unified Extensible Firmware Interface (UEFI) Supports Dower on after power failure [3] Power Adapter External 90 W power adapter (fanless) Input: 100240 V AC, 50/60 Hz, Output: 19 V DC, 4.74 A, max. 90 W DC Connector: 5.5 / 2.5 mm (outer / inner diameter) Socket LGA 1151 (H4) supports Intel Core i7 / 15 / 13, Pentium and Celeron processors - 6th generation, code name "Kaby Lake" [6] Maximum supported processor power consumption (IDP) = 65W 14mm process technology, up to 8 MB of 13 cache Not compatible with Intel Xeon E3 V5 processors for socket LGA1151 and processors with the older Socket IGA 1150. Does not support the unlock-function of Intel K-Series processors. The processor integrates PCI-Express, memory controller and the graphics engine on the same die (performance features depending on processor type) Please refer to the support list for detailed processor support information at global.shuttle.com.	Chassis	Dimensions: 190 x 165 x 43 mm (LWH) = 1.35-litre Weight: 1.3 kg net and 2.1 kg gross Two holes for Kensington Locks and numerous
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Mainboard Platform Controller Hub (PCH) as Single-Chip-Solution AMI BIOS in 8 Mbit EEPROM with SPI interface All capacitors are high quality solid capacitors BIOS Supports hardware monitoring and watch dog functionality Supports Unified Extensible Firmware Interface (UEFI) Supports power on after power failure [3] Power Adapter External 90 W power adapter (fanless) Input: 100240 V AC, 50/60 Hz, Output: 19 V DC, 4.74 A, max. 90 W DC Connector: 5.5 / 2.5 mm (outer / inner diameter) Socket LGA 1151 (H4) supports Intel Core i7 / 15 / 13, Pentium and Celeron processors - 6th generation, code name "Kaby Lake" [6] Maximum supported processor power consumption (TDP) = 65W 14nm processor Not compatible with Intel Xeon E3 V5 processors for socket LGA1151 and processors with the older Socket LGA 1150. Dees not support the unlock-function of Intel K-Series processors. The processor integrates PCI-Express, memory controller and the graphics engine on the same die (performance features depending on processor type) Please refer to the support list for detailed processor support information at global.shuttle.com.		It is compatible with Windows 10 / 8.1 / 7 and Linux 64 bit. Note: Windows 7 and 8.1 is only supported in combination with the 6th generation Intel
Power Adapter Input: 100-240 V AC, 50/60 Hz, Output: 19 V DC, 4.74 A, max. 90 W DC Connector: 5.5 / 2.5 mm (outer / inner diameter) Socket LGA 1151 (H4) supports Intel Core i7 / i5 / i3, Pentium and Celeron processors - 6th generation, code name "Skylake" - 7th generation, code name "Kaby Lake" [6] Maximum supported processor power consumption (TDP) = 65W 14nm process technology, up to 8 MB of L3 cache Processor Not compatible with Intel Xeon E3 V5 processors for socket LGA1151 and processors with the older Socket LGA 1150. Does not support the unlock-function of Intel K-Series processors. The processor integrates PCI-Express, memory controller and the graphics engine on the same die (performance features depending on processor type) Please refer to the support list for detailed processor support information at global.shuttle.com. Processor	Chipset	Platform Controller Hub (PCH) as Single-Chip-Solution AMI BIOS in 8 Mbit EEPROM with SPI interface All capacitors are high quality solid capacitors Supports hardware monitoring and watch dog functionality Supports Unified Extensible Firmware Interface (UEFI)
Intel Core i7 / i5 / i3, Pentium and Celeron processors - 6th generation, code name "Skylake" - 7th generation, code name "Kaby Lake" [6] Maximum supported processor power consumption (TDP) = 65W 14nm process technology, up to 8 MB of L3 cache Not compatible with Intel Xeon E3 V5 processors for socket LGA1151 and processors support with the older Socket LGA 1150. Does not support the unlock-function of Intel K-Series processors. The processor integrates PCI-Express, memory controller and the graphics engine on the same die (performance features depending on processor type) Please refer to the support list for detailed processor support information at global.shuttle.com.		Input: 100~240 V AC, 50/60 Hz, Output: 19 V DC, 4.74 A, max. 90 W
Heatpipe processor cooling with two 60 mm fans on the upper side of the chassis		 Intel Core i7 / i5 / i3, Pentium and Celeron processors 6th generation, code name "Skylake" 7th generation, code name "Kaby Lake" [6] Maximum supported processor power consumption (TDP) = 65W 14nm process technology, up to 8 MB of L3 cache Not compatible with Intel Xeon E3 V5 processors for socket LGA1151 and processors with the older Socket LGA 1150. Does not support the unlock-function of Intel K-Series processors. The processor integrates PCI-Express, memory controller and the graphics engine on the same die (performance features depending on processor type) Please refer to the support list for detailed processor support information at
		Heatpipe processor cooling with two 60 mm fans on the upper side of the chassis

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Memory Su Support Su	x 260-pin SO-DIMM slot upports DDR4-2133 (PC4-17000) SDRAM memory at 1.2 V upports Dual Channel mode upports max. 16 GB per DIMM, maximum total size of 32 GB upports two unbuffered DIMM modules (no ECC)
de <u>Tw</u> - s Graphics - s HE - s	ne features of the integrated graphics function epend on the processor type used. <u>vo digital video outputs:</u> DisplayPort 1.2 and HDMI 1.4 supports two independent Full HD displays simultaneously [3] supports Full HD resolution at 1920 x 1200 (1080p / 60 Hz) supports 4K UHD resolution at 3840 x 2160 (max. 2160p / 60 Hz on DP or max. 30 Hz on DMI) [4] supports Blu-ray (BD) playback with HDCP supports HD video plus multi-channel digital audio via a single cable.
M.2 2260 Slot ar	ne M.2 2260 M slot supports M.2 SSD cards with SATA interface supports M.2 cards with a width of 22mm nd a length of 42 or 60mm (type 2242, 2260). ards with 80mm length (2280) are not supported.
- F M.2 2230 AE - U Slot It : fo	ne M.2 2230 AE slot provides the following interfaces: PCI-Express v2.0 X1 USB 2.0 supports M.2 cards with a width of 22 mm and a length of 30 mm. This slot is intended or Wireless LAN (Wifi), Bluetooth, GSM/UMTS cards and others. A SATA interface for SSD ards is not available here.
TwAudio1)2)	udio Realtek® ALC 662 5.1 channel High-Definition Audio vo analog audio connectors (3.5 mm) at the front panel: 2-channel line out (headphones) microphone input igital multi-channel audio output: by HDMI and DisplayPort
Gigabit LAN Su Controller Su	ealtek 8111G Ethernet network controller (Gigabit) upports 10 / 100 / 1.000 MBit/s operation upports WAKE ON LAN (WOL) upports network boot by Preboot eXecution Environment (PXE)
	x Serial-ATA III, 6 Gb/s (600 MB/s) bandwidth ith Serial-ATA power connector (onboard)
Card Reader	tegrated card reader supports SD, SDHC and SDXC memory flash cards upports boot up from SD card

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Front Panel Connectors	Microphone input Audio Line-out (headphones) 2x USB 3.0 2x USB 2.0 SD card reader Power button Power LED (blue) HDD LED (yellow)
Back Panel Connectors	1x HDMI connector [1] 1x DisplayPort connector (DP) [2] 4x USB 2.0 1x Gigabit LAN (RJ45) DC-input connector for external power adapter 4-pin connector (2.54 mm pitch) supports - external power on button - Clear CMOS function - +5V DC voltage for external components 2x Perforation for optional Wireless LAN antennas 2x hole for Kensington Locks
Other Onboard Connectors	1x jumper for power on after power fail (hardware solution) [3] 1x fan connector (4-pin) occupied by the cooling system 1x connector for CMOS battery (occupied)
Supplied Accessories	Multi-language user guide (EN, DE, FR, ES, JP, KR, SC, TC) Four screws M3 x 4 mm (to mount a 2.5" storage device into the bay) Driver DVD (Windows 64-bit) Serial ATA cable for 2.5" drive including power cable External 90 W power adapter with power cord Protection cap for CPU socket (do not use if heatpipe or fan is mounted) Heatsink compound
Optional Accessory	WLN-M: WLAN module in M.2-2230 format supports IEEE 802.11ac and Bluetooth 4.0 PS02: Stand for vertical operation PV04: VESA mounting kit
Environmental Specifications	Ambient temperature range: 0~50 °C [5] Relative humidity, non-condensing: 10~90%
Conformity Certifications	 EMI: FCC, CE, BSMI, C-Tick Safety: ETL, CB, BSMI Other: RoHS, Energy Star 5.0, ErP 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 directives: (1) 2004/108/EC relating to electromagnetic compatibility (EMC), (2) 2006/95/EC relating to Electrical Equipment designed for use within certain voltage limits (LVD), (3) 2009/125/EC relating to ecodesign requirements for energy-related products (ErP)

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Footnotes:

[1] HDMI output supports DVI-D with optional adapter

[2] How to convert DisplayPort into HDMI/DVI

The DisplayPort outputs can be converted to HDMI or DVI by an additional, passive adapter cable. For example: DELOCK 82590: 1 m, DisplayPort (male, 20p) to HDMI-A (male, 19p) DELOCK 82435: 5 m, DisplayPort (male, 20p) to DVI-D (male, 24p)

The integrated graphics automatically detects the connected display and puts out the appropriate electric signal either through DisplayPort (without an adapter) or HDMI/DVI (with an adapter). However, a monitor with a DisplayPort connector cannot be connected to the HDMI port with a simple, passive adapter.

[3] Power on after power fail - The BIOS setup provides a "Power-On after Power Fail" function that can be found under "Power Management Configuration". As the name indicates, this function determines the PC's behaviour after power failure: (1) unconditional power on, (2) restore former status or (3) keep system turned off. As a matter of the nature of this function, it may fail after short power failures. This is why the DH110SE also comes with a hardware-based solution. By removing Jumper JP2 (on the mainboard behind the power button) the system will start unconditionally once power is supplied.

[4] 4K Ultra-HD resolution - A 4K-display with Ultra-HD resolution (3840 x 2160) should only be connected via DisplayPort, as only this port supports a higher refresh rate of 60 Hz. Certain displays (e.g. Dell UP2414Q) however require MST mode (Multi-Stream Transport) to be enabled which sends two separate images at half resolution each to the display. These two images are then combined and put in correct order by the Intel graphics driver when in Collage mode. Please note that HBR2-mode (High Bit Rate 2) must be supported by each display to have more than one of them run at 4K resolution.

[5] Note- on operating temperature - For high ambient temperatures over 40 °C we strongly recommend to use SSDs (supporting at least 70 °C) and rugged SO-DIMM memory modules with a temperature range of up to 95 °C.

[6] Kaby Lake processor support

The 7th generation Intel Core processors "Kaby Lake" are supported from BIOS version DH110100.200. Download website: <u>http://global.shuttle.com/support/download</u>

Note: If a Kaby Lake processor is used, this XPC will only support Windows 10 and Linux operating systems. Windows 7 and 8.1 will no longer be supported.

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6th Generation Intel Core Desktop Processor Family

Socket LGA 1151 14 nm "Skylake-S" processor overview (Date: September 2015) Processors with a TDP > 65 W are <u>not</u> supported (marked in red)

Name	Model	Cores/ Threads	CPU Clock	Turbo Clock	Cache	TDP	Graphics Engine	Graphics Clock
	6700K	4 / 8	4.0 GHz	4.2 GHz	8 MB	91 W	HD 530	350~1150 MHz
Core i7	6700	4 / 8	3.4 GHz	4.0 GHz	8 MB	65 W	HD 530	350~1150 MHz
	6700T	4 / 8	2.8 GHz	3.6 GHz	8 MB	35 W	HD 530	350~1100 MHz
	6600K	4 / 4	3.5 GHz	3.9 GHz	6 MB	91 W	HD 530	350~1150 MHz
	6600	4/4	3.3 GHz	3.9 GHz	6 MB	65 W	HD 530	350~1150 MHz
	6600T	4/4	2.7 GHz	3.5 GHz	6 MB	35 W	HD 530	350~1100 MHz
Core i5	6500	4/4	3.2 GHz	3.6 GHz	6 MB	65 W	HD 530	350~1150 MHz
	6500T	4/4	2.5 GHz	3.1 GHz	6 MB	35 W	HD 530	350~1100 MHz
	6400	4/4	2.7 GHz	3.3 GHz	6 MB	65 W	HD 530	350~1150 MHz
	6400T	4/4	2.2 GHz	2.8 GHz	6 MB	35 W	HD 530	350~1100 MHz
	6320	2/4	3.9 GHz	_	4 MB	65 W	HD 530	350~1150 MHz
	6300	2/4	3.8 GHz	_	4 MB	65 W	HD 530	350~1150 MHz
Core i3	6300T	2/4	3.3 GHz	_	4 MB	35 W	HD 530	350~1100 MHz
	6100	2/4	3.7 GHz	_	4 MB	65 W	HD 530	350~1150 MHz
	6100T	2/4	3.2 GHz	_	4 MB	35 W	HD 530	350~1100 MHz
	G4520	2/2	3.6 GHz	_	3 MB	51 W	HD 530	350~1150 MHz
	G4500	2/2	3.5 GHz	_	3 MB	51 W	HD 530	350~1150 MHz
Pentium	G4500T	2/2	3.0 GHz	_	3 MB	35 W	HD 530	350~1100 MHz
	G4400	2/2	3.3 GHz	_	3 MB	51 W	HD 530	350~1150 MHz
	G4400T	2/2	2.9 GHz	-	3 MB	35 W	HD 530	350~1100 MHz
	G3920	2/2	2.9 GHz	-	2 MB	51 W	HD 530	350~1050 MHz
Celeron	G3900	2/2	2.8 GHz	-	2 MB	51 W	HD 530	350~1050 MHz
	G3900T	2/2	2.6 GHz	_	2 MB	35 W	HD 530	350~950 MHz

K = unlocked, S = Performance optimized lifestyle, T = Power optimized lifestyle, HT = Hyper Threading (SMT).
 Note: The Shuttle XPC slim Barebone DH110SE does not support the unlock-function of Intel K-Series processors.
 Please refer to the support list for detailed processor support information at global.shuttle.com.

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7th Generation Intel Core Desktop Processor Family

Socket LGA1151 14nm "Kaby Lake-S" processor overview (Date: January 2017) Processors with a TDP>65W are <u>not</u> supported (marked in red)

Name	Model	Cores/ Threads	CPU Clock	Turbo Clock	Cache	TDP	Graphics Engine	Graphics Clock
Core i7	7700K	4 / 8	4.2 GHz	4.5 GHz	8 MB	91 W	HD 630	350~1150 MHz
	7700	4 / 8	3.6 GHz	4.2 GHz	8 MB	65 W	HD 630	350~1150 MHz
	7700T	4 / 8	2.9 GHz	3.8 GHz	8 MB	35 W	HD 630	350~1150 MHz
	7600K	4 / 4	3.8 GHz	4.2 GHz	6 MB	91 W	HD 630	350~1150 MHz
	7600	4/4	3.5 GHz	4.1 GHz	6 MB	65 W	HD 630	350~1150 MHz
	7600T	4/4	2.8 GHz	3.7 GHz	6 MB	35 W	HD 630	350~1100 MHz
Core i5	7500	4/4	3.4 GHz	3.8 GHz	6 MB	65 W	HD 630	350~1100 MHz
	7500T	4/4	2.7 GHz	3.3 GHz	6 MB	35 W	HD 630	350~1100 MHz
	7400	4/4	3.0 GHz	3.5 GHz	6 MB	65 W	HD 630	350~1000 MHz
	7400T	4/4	2.4 GHz	3.0 GHz	6 MB	35 W	HD 630	350~1000 MHz
	7350K	2/4	4.2 GHz	-	4 MB	60 W	HD 630	350~1050 MHz
	7320	2/4	4.1 GHz	-	4 MB	51 W	HD 630	350~1050 MHz
	7300	2/4	4.0 GHz	-	4 MB	51 W	HD 630	350~1050 MHz
Core i3	7300T	2/4	3.5 GHz	-	4 MB	35 W	HD 630	350~1100 MHz
Core is	7101E	2/4	3.9 GHz	_	3 MB	54 W	HD 610	350~1100 MHz
	7101TE	2/4	3.4 GHz	-	3 MB	35 W	HD 610	350~1100 MHz
	7100	2/4	3.9 GHz	-	3 MB	51 W	HD 630	350~1100 MHz
	7100T	2/4	3.4 GHz	-	3 MB	35 W	HD 630	350~1100 MHz
	G4620	2/4	3.7 GHz	-	3 MB	51 W	HD 630	350~1100 MHz
	G4600	2/4	3.6 GHz	-	3 MB	51 W	HD 630	350~1100 MHz
Pentium	G4600T	2/4	3.0 GHz	_	3 MB	35 W	HD 630	350~1050 MHz
	G4560	2/4	3.5 GHz	_	3 MB	54 W	HD 610	350~1050 MHz
	G4560T	2/4	2.9 GHz	-	3 MB	35 W	HD 610	350~1050 MHz
	G3950	2/2	3.0 GHz	-	2 MB	51 W	HD 610	350~1050 MHz
Celeron	G3930	2/2	2.9 GHz	-	2 MB	51 W	HD 610	350~1050 MHz
	G3930T	2/2	2.7 GHz	-	2 MB	35 W	HD 610	350~1000 MHz

K = unlocked, T = Power optimized lifestyle, HT = Hyper Threading (SMT).

Note: The Shuttle XPC slim Barebone DH110SE does not support the unlock-function of Intel K-Series processors. Please refer to the support list for detailed processor support information at global.shuttle.com.

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