

SZ270R9

CUBE PC



PROCESSOR	Supports Intel® Skylake and Kabylake 95W Core® i3/i5/i7 series, Pentium, and Celeron® LGA 1151 processors	
MEMORY	DDR4 2133/2400 MHz, Supports dual channel up to 64GB (16GB x 4)	
VIDEO GRAPHICS	Intel HD Graphics, Supports DirectX 12	
VIDEO OUTPUT	HDMI + DisplayPort, Supports three independent displays, Supports 4K Ultra HD	
AUDIO	Realtek ALC892, 7.1 channel HD audio	
ETHERNET	Intel i211 x 2 10/100/1000 MB/s operation	Supports Wake on LAN function
STORAGE INTERFACE	SATA 6 GB/s	
ONBOARD CONNECTORS	(2) 4 pin fan connector (4) SATA 6.0 connectors (1) ATX main power (2x10) (1) ATX 12V power (2x2)	(1) RS232 header (1) Front USB 3.0 header (1) Front audio header (1) 2x5 pin USB header
FRONT PANEL	(1) Power Button (1) Power LED (1) HDD LED	(2) USB 3.0 (1) External microphone jack 1/8" (1) External headphone jack 1/8"
BACK PANEL	(1) HDMI (2) DisplayPort (4) USB 3.0 (4) USB 2.0 (2) LAN ports (1) Kensington Lock	(1) Line-in jack 1/8" (1) Line out jack 1/8" (1) Clear CMOS button (1) MIC in (3) Antenna holes
DRIVE BAYS	(4) 3.5" HDD bay Supports up to 2.5" HDD x8 if PHD3 HDD rack x4 accessory is used when system has an extra SATA or RAID card	
DIMENSIONS	13(L) x 8.5(W) x 7.79(H) inches	
POWER	Input: 100 - 240V AC Supports 80 PLUS Silver	80 PLUS 500W power supply
ACCESSORIES	Quick Guide CPU Thermal Grease SATA cable x 2	Driver DVD Power Cord Screw Package
EXPANSION SLOT	(1) PCI-E X16 slot (1) PCI-E X4 slot	(1) M.2 MAX to 2230 Type A, E key socket (2) M.2 MAX to 2280 Type M key socket
OS SUPPORT	Windows 7 & Embedded Series OS*, Windows 10 & Embedded Series OS, Linux	

*Only supported by Skylake processors

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R9-CHASSIS	Black aluminum chassis with plastic front panel Gaming style front panel with software controlled RGB LED lighting Kensington lock slot on the back as part of anti-theft system Dimensions: 13.7 (L) x 8.5 (W) x 7.5 (H) inches Weight: 7.7 LBS (net) / 11 LBS (gross)
MAINBOARD AND CHIPSET	Shuttle mainboard FZ270, proprietary design for XPC SZ270R9 Dimensions: 270 x 195 mm Chipset: Intel® Z270 (Codename: Union Point) Platform Controller Hub (PCH) as Single Chip Solution Solid capacitors for sensitive areas provide excellent heat resistance for enhanced system durability
BIOS	AMI BIOS, SPI Interface, 32MB Flash-ROM with SPI interface Supports PnP, ACPI 3.0, Hardware Monitoring Supports boot up from external USB flash memory Supports Unified Extensible Firmware Interface (UEFI)
POWER SUPPLY	Built-in 500W mini switching power supply (model PC63J) AC input voltage: 100 - 240V, 50 - 60 Hz 80 PLUS Silver compliant: PSU provides at least 85/89/85% of efficiency at 20/50/100% load Active PFC Circuit (Power Factor Correction) ATX main power connectors: 2x10 and 2x2 pin Graphics power connector: 6 pin and 8 pin Other connectors: 4 x SATA, 2 x Molex, 1 x Floppy
OPERATING SYSTEM	The system comes without an operating system installed. Compatibility: Windows 7, Windows 10, Linux 64bit Windows 7 is only supported in combination with 6th generation Intel® Core® processors [7]*
PROCESSOR SUPPORT	LGA 1151 (H4) Socket supports Intel® Core® i3/i5/i7, Pentium, and Celeron processors -6th generation (Skylake) -7th generation (KabyLake) Max supported processor power consumption (TDP): 95W 14nm process technology, up to 8MB of L3 cache Not compatible with Intel® Xeon E3 V5 processors for processors with LGA 1150 and LGA 1151 sockets The unlock function for Intel® K-Series processors is supported with this model The processor integrates PCI-Express, the memory controller, and graphics engine on the same die (performance features depend on the processor type) Please refer to the support list for more detailed processor information at global.shuttle.com
SYSTEM COOLING	Shuttle I.C.E. (Integrated Cooling Engine) advanced heatpipe cooling technology, linear-controlled 92 mm fan Silent X cooling and noise reduction technology with Active Airflow
MEMORY SUPPORT	4 x 288 pin slots Supports DDR4 2133/2400 MHz memory (PC4-17066/19200) at 1.2V Supports 2 + 2 Dual Channel mode Supports a max. of 16GB per DIMM, up to 64GB total
DRIVE BAYS	Storage bays: 3.5" x 4 (internal) Using the optional accessory PHD3, two 2.5" drives can be installed in one 3.5" drive bay
PCI-E SLOTS	1 x PCI-Express x16 v3.0 slot (PEG, for graphic cards only) 1 x PCI-Express x4 v3.0 slot Supports dual slot (double width) graphic cards (occupies the second PCI-Express slot) Length of graphic cards can be up to 280 mm or 273 mm, if power connectors are on the back 6 pin and 8 pin power connector for graphic card
TWO M.2 2280 SLOTS	PCI-Express Gen 3.0 X4 with up to 32 GB/s and SATA v3.0 (max 6 GB/s) Supports M.2 cards with a width of 22 mm and a length of 42, 60, or 80 mm (Type 2242/2260/2280) Supports M.2 SSDs with SATA or PCI-Express interface Intel® Optane™ Technology ready
M.2 2230 SLOT	Interfaces: PCI-Express Gen. 2.0 X1 and USB 2.0 Max. width: 22mm, Max length: 30 mm Supports WLAN expansion cards (optional WLN-M accessory) [6]*

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INTEGRATED GRAPHICS	<p>Intel HD graphics function features depend on the processor type used Supports DirectX 12, OGL 5.x, OCL 2.x</p> <p>This model has three video outputs: -HDMI v1.4b (1080p/60 and 2160p/30 supported) -DisplayPort v1.2 x 2 (1080p/60 and 2160p/60 supported)</p> <p>Supports displays with 4K Ultra HD resolution at 3840 x 2160 [3]* Supports three independent Full HD displays with integrated graphics function Supports more displays in combination with a discrete graphics card [2]* Supports Blu-Ray playback with HDCP content protection Supports multi-channel digital audio over the same cable Maximum shared memory: 512MB</p>	
SUPPORTS INTEL® OPTANE™	<p>Intel® Optane™ Technology accelerates the speed of one hard disk through data caching and requires a 7th Gen. Intel Core processor and an Optane SSD with 3D-Xpoint memory (ie in M.2 format)</p>	
MULTI-CHANNEL AUDIO	<p>High Definition Audio with Realtek ALC662 codec Front: MIC in, Headphones in Back: Line-in (blue), line-out (green), MIC in (pink) with 5.1 channel line-out (front, rear, center/bass) 7.1 channel Digital Audio via HDMI and DisplayPort outputs</p>	
GIGABIT LAN CONTROLLER	<p>Two RJ45 ports Intel i211 x 2 Ethernet Controller with MAC, PHY, and PCIe interface Supports 10/100/1000 MB/s operation Supports Wake-on-LAN Supports network boot by Preboot eXecution environment (PXE)</p>	
SATA CONNECTORS	<p>The mainboard provides five Serial-ATA 3.0 interfaces, max 6GB/s supported 4 x Serial ATA connectors onboard Support Intel Rapid Storage Technology (RST, Raid 0/1/5/10, JBOD)</p>	
FRONT PANEL CONNECTORS	<p>Microphone input Headphone output (line-out) 2 x USB 3.0</p>	<p>Power button with Power indicator (Blue LED) Turbo button for overclocking mode [8]* Front RGB LED lighting (configurable with Shuttle OC tool)</p>
BACK PANEL CONNECTORS	<p>HDMI v1.4b DisplayPort v1.2 x 2 [4]* USB 3.0 x 4 USB 2.0 x 4 Audio x 3 (line-in, line-out, MIC in)</p>	<p>Clear CMOS button Gigabit LAN (RJ45) x 2 WLAN antenna holes x 3 (optional WLN-M) Serial RS232 port (optional, H-RS232 accessory)</p>
OTHER CONNECTORS (ONBOARD)	<p>USB 2.0 x 2 (2x5 pin) RS232 (2x5 pin) for optional H-RS232</p>	<p>Fan connectors x 2 (4 pin), both connectors are occupied Front: USB 3.0, USB 2.0, audio, power buttons, LEDs</p>
INCLUDED ACCESSORIES	<p>XPC installation guide Driver DVD Serial ATA cables x 4 Screw pack</p>	<p>AC Power Cord (with protective earth contacts) Thermal paste Protector cap for CPU socket (don't use if heatpipe/fan is mounted)</p>
OPTIONAL ACCESSORIES	<p>COM port adapter for RS232 (H-RS232) Wireless LAN 802.11 + BT (WLN-M) [6]*</p>	<p>3.5" to 2.5" drive adapter (PHD3)</p>
ENVIRONMENTAL CRITERIA	<p>Operating temperature: 0 - 40°C</p>	<p>Humidity: 10 - 90% (non-condensing)</p>
CERTIFICATIONS	<p>EMI: FCC, CE, BSMI, C-Tick Safety: ETL, CB, BSMI</p>	<p>Other: RoHS, Energy Star 5.0, ErP</p>
	<p>This model is classed as a technical information equipment (ITE) in class B and is intended for use in living rooms and offices. The CE mark approves 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 eco-design requirements for energy related products (ErP)</p>	

*See following page for specification notes

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[1] ABOUT OVERCLOCKING

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

[2] SUPPORTS ADDITIONAL DISPLAYS

The integrated graphics already supports two additional displays via digital video outputs but with a discrete PCI-Express graphics card, this model can support more displays. This function is based on the Switchable Graphics feature introduced with the 2nd generation of Intel® Core™ processors. This can be enabled in the BIOS setup utility by pressing the “Delete” key after powering on the PC and going to the “Advanced” tab to change the “Initiate Graphics Adapter” setting to “Switchable”.

[3] 4K ULTRA HD RESOLUTION

A 4K display with Ultra HD resolution (3840 x 2160) should be connected via DisplayPort (supports a higher refresh rate of 60 Hz). Video playback performance depends on the video format, bitrate, and processor used. Daily office applications wouldn't require the system to full load but playback requirements for smooth 4K video (2160p) requirements will be different (an Intel® Core™ i3 processor or higher and dual channel memory (2 or 4 modules) is recommended).

[4] HOW TO CONVERT DISPLAYPORT TO HDMI/DVI

The DisplayPort output can be converted into a HDMI or DVI output using an additional passive adapter cable. The integrated graphics automatically detects the connected display and outputs the appropriate electric signal - either 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.

[5] SIMULTANEOUS THREE DISPLAYS

The SZ270R9 supports a maximum of two displays with a DVI or HDMI input. If needed, a third digital display requires connecting directly to the DisplayPort output (without an adapter).

[6] OPTIONAL WIRELESS LAN MODULE (WLN-M)

This model supports the optional Shuttle accessory WLN-M which includes a M.2 2230 card with IEEE 802.11 ac and Bluetooth 4.0 functionality and two external antennas with appropriate antenna cables.

[7] INSTALLATION OF WINDOWS 7

The Intel® 100 chipset series no longer supports the Enhanced Host Controller Interface (EHCI), which is the driver software for USB 2.0 ports. The new chipset only supports the updated Extensible Host Controller Interface (xHCI for USB 3.0) which is not supported by the original Windows 7 installation disk. This means that peripheral devices connected by USB (like a keyboard or mouse) will not work during the Windows 7 installation. There are two solutions that can be used: (1) use a PS/2 keyboard or mouse and install Windows 7 from an internal DVD drive or (2) add the required USB 3.0 drivers to the Windows 7 installation files (the steps for this solution can be found in the Shuttle FAQ section of global.shuttle.com). Windows 7 is only supported if a 6th generation Intel® Core™ processor is used.

[8] TURBO BUTTON

Please make sure the following requirements are met to enable the Turbo Button:

- 1) Operating system: Windows 10
- 2) Intel® Core™ processor of the K series (with unlocked multiplier)
- 3) Install and run the Shuttle Overclock Tool. You will find the latest version of this software [here](#)

BIOS DOWNLOADS: <http://global.shuttle.com/products/productsDownload?productId=2235>

SUPPORT LIST: <http://global.shuttle.com/products/productsSupportList?productId=2235>

FAQ LIST: <http://global.shuttle.com/support/faq>

PRODUCT WARRANTY: <https://us.shuttle.com/barebone-support/policy-xpc-barebone/>

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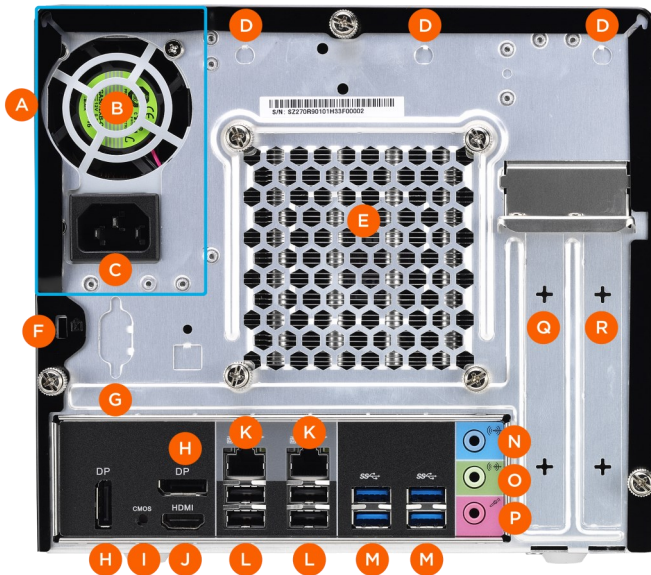
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Front View



- 1 Turbo Button
- 2 USB 3.0 port x 2
- 3 Microphone input
- 4 Headphone input
- 5 Power Button
- 6 RGB LED lighting
- 7 Ventilation grille for HDD fan

Back View



- A Power supply
- B Power supply fan
- C AC power connector
- D Antenna hole
- E Heatpipe cooling system
- F Kensington Lock hole
- G Optional COM port (RS232)
- H DisplayPort video output x 2
- I Clear CMOS button
- J HDMI port
- K Gigabit LAN port (RJ45) x 2
- L USB 2.0 x 4
- M USB 3.0 x 4
- N Audio line-in
- O Audio line-out
- P Audio MIC in
- Q PCI-Express X16 slot
- R PCI-Express X4 slot

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SUPPORTS INTEL[®] 6TH AND 7TH GENERATION PROCESSORS

The SZ270R9 support both Intel[®] 6th Generation (Sky Lake) and Intel[®] 7th Generation (Kaby Lake) Core i3/i5/i7, Pentium[®], and Celeron[®] 95W processors. Built-in DirectX 12 compatibility with Intel[®] HD graphics significantly increases CPU or GPU performance.



XPC OVERCLOCK TOOL

With our XPC Overclock tool, the system can be monitored (CPU temperature, usage, clock speed, voltage, etc) in real time to ensure the best stability. The tool is supported with Windows 10 64 bit and available in eight languages.*

*overclock function only available with unlocked K series processors



INSTANT OVERCLOCKING WITH TURBO BUTTON

If a K series processor is equipped in the SZ270R9, the overclock mode can be set to activate by pressing the turbo button to boost performance when required ([see specification notes](#) for turbo button setup).



RGB LIGHT CONTROL

Personalize your gaming rig with the RGB light control function. With six built-in default colors, three different light effects, and an RGB pallet bar, you can easily adjust colors for different modes (flashing and breathing) to give your SZ270R9 with a personal touch.



EXPANDABLE STORAGE

With a 14.3 liter size, the SZ270R9 can be expanded with up to four 3.5" drives and two NVMe M.2 SSDs for additional storage, ideal for creators and gamers.

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SHUTTLE OVERCLOCK TOOL

The latest version of this software can be found in the [download section](#)

NORMAL MODE

The processor is supplied with an external clock frequency (Base Clock - BCLK) which is multiplied by a certain value that results in a higher internal frequency. The Enhanced Intel Speedstep® Technology (EIST) automatically downclocks the processor when in power saving mode.

INTEL® TURBO BOOST TECHNOLOGY (CORE i5/i7 ONLY)

Under heavy load, the processor will automatically increase the multiplier and core frequency.

OVERCLOCKING THROUGH MULTIPLIER SETTING (ONLY WITH K SERIES PROCESSORS)

With Shuttle's Overclocking tool, the multiplier can be easily changed in Turbo Boost (Windows 10 only). The CPU voltage is automatically set and the processor used determines what grade of overclocking provides stable operation. When overclocking, the maximum clock frequency in Turbo Boost mode exceeds the limit stated by the manufacturer in which reliable operation is guaranteed. Overclocking is done at your own risk and Shuttle will not be responsible for any loss of data or hardware damage that occurs when it is used.

TURBO BUTTON

The overclocking mode can be enabled or disabled by just pressing the Turbo Button. The current state of the machine is indicated by the RGB LED lighting of the front panel (the LED color of normal and turbo mode can be changed in the RGB Light Control settings).

Example: Selected multiplier for Turbo Mode = 49, Intel i7-7700K processor

Mode	Multiplier	CPU Clock (GHz)	Overclocking?
No Load	42	4.2	No
Under Load without Turbo	44 - 45*	4.4 - 4.5*	No
Under Load with Turbo	49	4.9	Yes

*A higher value is possible if only one CPU core is under load

Turbo Mode disabled



Turbo Mode enabled



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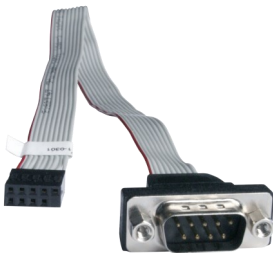
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ACCESSORY	WLN-M
DESCRIPTION	The WLN-M wireless LAN kit can be used to equip XPC cube and slim series models with the wireless LAN standard 802.11 n/ac at 2.4/5 GHz. The combo device supports Bluetooth 4.0.
ITEMS INCLUDED	M.2 2230 (NGFF) WLAN card, Antenna cable (XPC slim) x 2, Antenna cable (XPC cube) x 2, Dipole antenna x 2, Quick Guide, Driver DVD
OS SUPPORT	Windows 7, Windows 8.1, Windows 10, Linux (32/64 bit)



ACCESSORY	H-RS232
DESCRIPTION	With the help of this adapter, a serial RS232 port can be equipped in several XPCs. A sub-D connector is added to the back panel and is connected to the serial interface on the motherboard.
PORTS	External: Sub-D, 9 pins, male Internal: 10 pin (2x5), female



ACCESSORY	PHD3
DESCRIPTION	The PHD3 allows for installation of up to two 2.5" HDD/SSD into a larger 3.5" drive bay. With a second PHD3, up to four 2.5" drives can be installed (4th drive can only be installed in XPCs of the J & R series)
REMARKS	Please check number of available SATA data and power connectors. Current XPC models usually offer four SATA data connector and three SATA power connectors.

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SZ170R8 vs SZ270R9

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MODEL	SZ170R8	SZ270R9
CHIPSET	Intel Z170	Intel Z270
PROCESSOR SUPPORT	LGA 1151, max TDP 95W 14nm Skylake (6th Gen Core CPU) 14nm Kabylake (7th Gen Core CPU) Intel® Core™ i3/i5/i7, Pentium, Celeron	LGA 1151, max TDP 95W 14nm Skylake (6th Gen Core CPU) 14nm Kabylake (7th Gen Core CPU) Intel® Core™ i3/i5/i7, Pentium, Celeron
OVERCLOCKING?	Yes, with K series processor	Yes, with K series processor
TURBO BUTTON?	No	Yes
MEMORY	4 x 16GB DDR4 2133 MHz max	4 x 16GB DDR4 2133/2400 MHz max
PCI-E SLOTS	(1) PCI-E X16 v3.0 (1) PCI-E X4 v3.0	(1) PCI-E X16 v3.0 (1) PCI-E X4 v3.0
VIDEO OUTPUT	HDMI + DisplayPort, Supports triple independent displays, Supports 4K Ultra HD, DirectX 12	HDMI + DisplayPort, Supports triple independent displays, Supports 4K Ultra HD, DirectX 12
AUDIO	Realtek AL892, 7.1 channel HD audio	Realtek AL662, 7.1 channel HD audio
ETHERNET	Intel i219LM 10/100/1000 MB/s operation Supports Wake on LAN function	Intel i211 10/100/1000 MB/s operation Supports Wake on LAN function
SATA ONBOARD	SATA 6G x 4, eSATA 6G x 1	SATA 6G x 4
FRONT PANEL	Power button with LED, HDD LED, MIC-in, Headphone out, USB 3.0 x 2	Power button with LED, HDD LED, MIC-in, Headphone out, USB 3.0 x 2
BACK PANEL	HDMI, DisplayPort USB 3.0 x 6, USB 2.0 x 4 Gigabit LAN (Intel i219LM) x 1 Audio x 5, Clear CMOS button	HDMI, DisplayPort USB 3.0 x 6, USB 2.0 x 4 Gigabit LAN (Intel i211) x 2 Audio x 3, Clear CMOS button
DRIVE BAYS	(4) 3.5" HDD bay	(4) 3.5" HDD bay
POWER	500W 80 PLUS Silver	500W 80 PLUS Silver
OPTIONAL ACCESSORIES	RS232 port (H-RS232) WLAN kit (WLN-P) 3.5"/2.5" drive rack (PHD3)	RS232 port (H-RS232) WLAN kit (WLN-P) 3.5"/2.5" drive rack (PHD3)
EXPANSION SLOT	M.2 2280 x 1 slot Mini PCI-E socket SATA and PCI-E X4 V3 (NVMe support) SATA and PCI-E X16 V3, Supports dual slot	M.2 2280 x 2 slot M.2 2230 slot, Supports optional WLAN SATA and PCI-E X4 V3 (NVMe support) SATA and PCI-E X16 V3, Supports dual slot Supports Intel® Optane™ Memory technology
OS SUPPORT	Windows 7, Windows 8.1, Windows 10, Linux 64 bit*	Windows 7, Windows 8.1, Windows 10, Linux 64 bit*

*Windows 7 and 8.1 only for Skylake processors

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6th Generation Intel Core Desktop Processors (LGA 1151 14 nm Skylake-S)

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

K = unlocked, T = power optimized, HT = hyper threading. The SZ270R9 does not support the unlock function of Intel K-series processors.

See more support information at global.shuttle.com

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7th Generation Intel Core Desktop Processors (LGA 1151 14 nm Kaby Lake-S)

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

For more information on all products, please contact us at sales@us.shuttle.com or 626.820.9000