

## XH510G

SLIM PC



<b>PROCESSOR</b>	Supports Intel® 10th/11th Core® i3/i5/i7/i9 series, Pentium Gold, and Celeron® LGA 1200 65W processors	
<b>MEMORY</b>	2 x SODIMM DDR4 2666/2933/3200 MHz, Supports dual channel up to 64GB (32GB x 2)	
<b>VIDEO GRAPHICS</b>	Intel UHD Graphics	
<b>VIDEO OUTPUT</b>	HDMI + DisplayPort Supports dual independent displays	
<b>AUDIO</b>	Realtek ALC662/897/888, HD audio	
<b>ETHERNET</b>	Intel i219LM 10/100/1000 MB/s operation	Supports Wake on LAN function
<b>STORAGE INTERFACE</b>	SATA 6 GB/s	
<b>ONBOARD CONNECTORS</b>	RS232 COM port (2x5 pin) 4 pin fan connector SATA connector	4 pin USB 2.0 connector Power-on-after-power-fail (hardware solution by jumper) 2 pin onboard ATX connector
<b>FRONT PANEL</b>	(1) Power Button (1) Power LED (1) HDD LED (2) USB 2.0	(2) USB 3.2 Gen 1 (1) MIC-in (1) Line-Out
<b>BACK PANEL</b>	(1) HDMI (1) DisplayPort (2) USB 3.2 Gen 1 (2) USB 2.0	(1) DC-in (1) RJ45 Gigabit LAN (2) Antenna holes
<b>DRIVE BAYS</b>	(1) 2.5" HDD/SSD bay	
<b>DIMENSIONS</b>	9.8 (L) x 7.9 (W) x 3.1 (H) inches	
<b>POWER</b>	Input: 100 - 240V AC Output: 19.5V/9.23A DC	180W power supply
<b>ACCESSORIES</b>	Quick Guide Screw package VESA bracket with screws Power adapter Power cord	Driver DVD CXP01 (optional adapter cable for external power button) PCP11 (optional COM port adapter for RS232) PVG01 (optional D-Sub VGA output) WLN-M (optional WLAN & Bluetooth kit)
<b>EXPANSION SLOT</b>	(1) M.2 MAX to 2280 Type M (top, NVME & SATA support) (1) M.2 MAX to 2280 Type M (bottom, NVME & SATA support)	(1) M.2 MAX to 2230 Type E key socket (1) PCI-E X16
<b>OS SUPPORT</b>	Windows 10/11 64 bit, Linux (64 bit)	
<b>CERTIFICATION</b>	Safety: CB, BSMI, cTUVus	EMI: FCC, CE, BSMI, RCM, VCCI, UKCA

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<b>CHASSIS</b>	<p>Black slim 3.9L type chassis</p> <p>Horizontal or vertical orientation with optional stand PS01</p> <p>Kensington lock slot on the back as part of anti-theft system</p> <p>Dimensions: 9.8 (L) x 7.9 (W) x 3.1 (H) inches</p> <p>Weight: 4.1 LBS (net) / 7 LBS (gross)</p>
<b>MAINBOARD AND CHIPSET</b>	<p>Shuttle mainboard XH510G</p> <p>Chipset: Intel® H510</p> <p>Supports hardware monitoring and watch dog functionality</p> <p>Solid capacitors for sensitive areas provide excellent heat resistance for enhanced system durability</p>
<b>BIOS</b>	<p>AMI BIOS, SPI Interface, 16 MB Flash-EPROM</p> <p>Supports Unified Extensible Firmware Interface (UEFI)</p> <p>Supports boot up from external USB flash memory</p> <p>Supports power on after power failure [1]*</p> <p>Supports firmware TPM v2.0 (fTPM) [5]*</p>
<b>POWER SUPPLY</b>	<p>External 180W power adapter (fanless)</p> <p>AC input voltage: 100 - 240V, 50 - 60 Hz, max 2.5A</p> <p>Output: 19.5V DC 9.23A, 180W max wattage</p> <p>AC connector with protective earth contacts, cable length 5.6 feet</p>
<b>OPERATING SYSTEM</b>	<p>The system comes without an operating system installed.</p> <p>Compatibility: Windows 10/11 and Linux 64bit</p>
<b>PROCESSOR SUPPORT</b>	<p>LGA 1200 Socket supports Intel® Core® i3/i5/i7/i9, Pentium Gold, and Celeron processors</p> <p>Supports the 10th/11th generation Intel Core processors, codename "Comet Lake-S" and "Rocket Lake-S"</p> <p>Max supported processor power consumption (TDP): 65W</p> <p>14nm process technology, up to 10 CPU cores and 20 threads, up to 20MB of L3 cache</p> <p>Not compatible with older socket LGA 1151(v2) processors</p> <p>The unlock function for Intel® K-Series processors is not supported with this model</p> <p>The processor integrates PCI-Express, the memory controller, and graphics engine (Performance features depend on the processor type) [6]*</p> <p>Please refer to the support list for more detailed processor information at <a href="http://global1.shuttle.com">global1.shuttle.com</a></p>
<b>SYSTEM COOLING</b>	<p>Processor cooling with heatpipe technology, two 60 mm fans</p>
<b>MEMORY SUPPORT</b>	<p>2 x 260 pin SODIMM slots</p> <p>Supports DDR4 2666/2933/3200 MHz memory</p> <p>Supports Dual Channel mode</p> <p>Supports a max. of 32GB per DIMM, up to 64GB total</p> <p>Supports two unbuffered DIMM modules (no ECC or registered)</p> <p>Memory clock speed depends on the processor model (11th Gen supports DDR4-3200, 10th Gen Core i7/i9 series processors support DDR4-2933, other models support DDR4-2666)</p>
<b>DRIVE BAYS</b>	<p>Supports one 2.5" HDD/SSD drive with max 9.5 mm height, accessible from the bottom</p> <p>System includes a pre-installed data/power cable [3]*</p> <p>Connector supports SATA III with max. 6 GB/s</p>
<b>M.2 SLOTS</b>	<p>M.2 2280 M/BM slot 1 (top slot):</p> <p>PCI-Express Gen 4.0 X16 (PCI-E v3.0 w/ 10th Gen CPU), SATA v3.0 (6 GB/s) interface</p> <p>Supports M.2 SSDs with a max length of 80, 60 or 80 mm (type 2242, 2260, 2280) and M.2 SSDs with PCIe or NVMe interface (PCI-E v3.0 X4 NVMe)</p> <p>M.2 2280 M/BM slot 2 (bottom slot):</p> <p>Supports M.2 card with a max length of 80 mm (type 2280), SATA v3.0 (6 GB/s) interface</p> <p>M.2 2230E slot</p> <p>PCI-Express v2.0 X1, USB 2.0</p> <p>Supports M.2 cards with a max width of 22 mm and a length of 30 mm (intended for WiFi cards)</p>

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<p><b>INTEGRATED GRAPHICS</b></p>	<p>Intel HD graphics function features depend on the processor type used [6]*</p> <p>This model has two video outputs:                      -1 x HDMI v2.0a (HDMI v1.4b with 10th Gen "Comet Lake" CPU)                      -1 x DisplayPort v1.4</p> <p>Both outputs supports displays with 4K Ultra HD resolution at 3840 x 2160 with 60 Hz refresh rate (2160p) and supports multi-channel digital audio over the same cable (HDMI 1.4b supports Ultra HD with 30 Hz only)                      Supports two independent displays with the integrated graphics                      Optional analog D-sub/VGA video output [4]*</p>	
<p><b>MULTI-CHANNEL AUDIO</b></p>	<p>High Definition Audio with Realtek ALC662/897/888 codec, 7.1 channel Digital Audio via HDMI and DisplayPort                      Two analog audio connectors (3.5 mm) on the front                      (1) Microphone input                      (2) Headphones out (line out)</p>	
<p><b>GIGABIT LAN CONTROLLER</b></p>	<p>Intel i219LM                      Supports 10/100/1000 MB/s operation                      Supports Wake-on-LAN                      Supports network boot by Preboot eXecution environment (PXE)</p>	
<p><b>PCI-E EXPANSION SLOT</b></p>	<p>PCI-Express X16 v4.0 slot with installed 90° Riser Card (only PCI-E v3.0 with 10th Gen CPUs)                      Supports single-slot (single-width) graphic cards</p> <p>The expansion card must meet the following conditions:                      -Max dimensions: approx. 8.2 (L) x 4.7 (W) x 1.1 (H) inches                      -Max power consumption: 75W (5V, max 2A; auxiliary voltage via 4-pin Molex connector)</p>	
<p><b>FRONT PANEL CONNECTORS</b></p>	<p>Microphone input                      Headphone output (line-out)                      2 x USB 3.2 Gen 1                      2 x USB 2.0</p>	<p>Power button                      Power indicator (Blue LED)                      Hard disk drive indicator (Yellow LED)</p>
<p><b>BACK PANEL CONNECTORS</b></p>	<p>HDMI v2.0a supports screw lock (HDMI 1.4b w/ 10th gen CPU)                      DisplayPort 1.4                      USB 3.2 Gen 1 x 2                      USB 2.0 x 2                      Kensington Lock x 1</p>	<p>Gigabit LAN (RJ45) x 1                      WLAN antenna holes x 2                      Perforation for optional VGA or COM port [4]*                      1 x DC input connector for external power adapter (19.5V input)                      1 x 4 pin connector (for external power or Clear CMOS function; 5V DC voltage for external components)</p>
<p><b>OTHER CONNECTORS (ONBOARD)</b></p>	<p>USB 2.0 connector (4 pin, internal USB)                      RS232 COM port (2x5 pin, 2 mm pitch)                      Analog VGA output (2x10 pin, 1 mm pitch) [4]*                      2x5 pin debug port</p>	<p>Fan connectors x 2 (4 pin), one occupied by cooling system                      2-pin onboard ATX connector w/ 5V (max 2A; 4-pin Molex)                      Power on after power failure (hardware solution by jumper) [1]*</p>
<p><b>INCLUDED ACCESSORIES</b></p>	<p>XPC installation guide                      Driver DVD                      Bracket for one 2.5" drive                      SATA and power cables                      Screw pack for one 2.5" drive</p>	<p>VESA mount and screws (75x75, 100x100 mm standard)                      Power adapter (with protective earth contacts)                      Protector cap for CPU socket (do not use if heatpipe or fan is mounted)                      Internal adapter cable (4 pin, Molex, 5V/2A auxiliary voltage)</p>
<p><b>OPTIONAL ACCESSORIES</b></p>	<p>WLAN module w/ antennas (WLN-M)                      D-Sub VGA video output (PVG01) [4]*</p>	<p>Backpanel COM port adapter for RS232 (PCP11) [4]*                      Adapter cable for external power button (CXP01)</p>
<p><b>ENVIRONMENTAL CRITERIA</b></p>	<p>Operating temperature: 0 - 50°C [2]*</p>	<p>Humidity: 10 - 90% (non-condensing)</p>
<p><b>CERTIFICATIONS</b></p>	<p>EMI: BSMI, CE, RCM, UKCA, VCCI                      Safety: BSMI, CB, cTUVus</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>	

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### [1] POWER ON AFTER POWER FAILURE

The BIOS setup provides a power on after power fail function that can be found under "Power Management Configuration". The function determines the PC's behavior after power failure: (1) unconditional power on, (2) restore former status, or (3) keep system turned off. The function may fail after short power failures, but the PC comes with a hardware based solution. By removing the appropriate jumper JP1 (located in a corner of the mainboard near the DIMM sockets), the system will start unconditionally once power is supplied.

### [2] HIGH AMBIENT TEMPERATURE

For high ambient temperature over 40°C, SSDs are strongly recommended instead of hard disk drives.

### [3] POWER CONNECTOR FOR SATA DRIVES

The supplied power cables for SATA drives provide a voltage of 5V. Only in very exceptional cases, a 2.5" hard disk also requires a 12V line, which is not supported out of the box .

### [4] OPTIONAL VGA OR COM PORT

The back panel has a perforation for the installation of a D-sub connection (VGA or serial RS232 port). The required adapter is not included and can be purchased separately (Note: with the installation of a VGA connector, three monitor ports are available but only two can be used simultaneously).

### [5] TPM FUNCTION

This model features Firmware-TPM (fTPM) v2.0 (a hardware TPM chip can be fitted on request).

### [6] INTEL PROCESSORS WITHOUT GRAPHICS

Intel processors without integrated graphics have a model name ending with "F" (for example Core i7-10700F). A graphics card is required if using a CPU without integrated graphics.

**BIOS DOWNLOADS:** <https://global.shuttle.com/products/productsDownload?pn=XH510G>

**SUPPORT LIST:** <https://global.shuttle.com/products/productsSupportList?pn=XH510G>

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

**PRODUCT WARRANTY:** <https://www.shuttlecomputers.com/policies>

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# XH510G

SLIM PC

## Front View



- |                          |                                     |
|--------------------------|-------------------------------------|
| 1 USB 3.1 Gen 1 port x 2 | 4 Headphone output                  |
| 2 USB 2.0 port x 2       | 5 Power on button with LED          |
| 3 Microphone input       | 6 LED indicator for hard disk drive |

## Back View



- |                                     |                                  |
|-------------------------------------|----------------------------------|
| A WLAN antenna hole x 2             | H USB 2.0 port x 2               |
| B Perforation for optional COM port | I DC-in connector                |
| C Kensington Lock                   | J 4-pin connector                |
| D HDMI 2.0a port (video/audio)      | K Hole for PRC01 power connector |
| E D-sub VGA (video)                 | L PCI-E X16 expansion slot       |
| F Gigabit LAN (RJ45)                | M PCI-E X1 expansion slot        |
| G USB 3.2 Gen 1 port x 2            |                                  |

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## PCI-E X16 EXPANSION SLOT

The XH510G supports single slot cards up to 8.2 x 4.7 x 1.2 inches (length x width x height) and a max of 75W. The barebone also supports powerful components such as an Intel® Core® i9 processor or 64GB RAM.

This allows for numerous applications to be run that required a bigger PC in the past.

EXPANSION CARD	POSSIBLE APPLICATIONS
<b>Gaming Graphic Card</b> e.g. Gigabyte GT-1030	Desktop PC 3D Workstation
<b>Multi-port Graphics Card</b> e.g. Matrox C680 with 6x Mini-DisplayPort	Visualization for Control Rooms Surveillance and Security Digital Signage with Video Wall Information Display (POI)
<b>CAD Graphics Card</b> e.g. NVIDIA Quadro P2200	CAD Applications Content Creation 3D Workstation
<b>Video Capture Card</b> e.g. with 4x SDI/BNC	Multi-channel Capture System
<b>Special Network Card</b> e.g. Multiport or 10 GB/s	Proxy and Firewall Applications Intranet Server
<b>Fieldbus Card</b> e.g. EtherCAT, Profibus, CAN, Modbus, etc	Industry Automation Conveyor Technology Building Automation
<b>Multi I/O Card</b> e.g. 8x COM-Port, DA/AD converter, general purpose input/output (GPIO)	Point of Sales (POS) Vending Machine Automation/Control System
<b>Receiver Card</b> e.g. for SAT, DVB-T2, Cable	Home Entertainment

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# XH510G

SLIM PC



## SUPPORTS INTEL® 10TH/11TH GENERATION PROCESSORS

Equipped with a LGA1200 socket, the XH510G supports Intel® Celeron®, Pentium® Gold, and Core™ i3/i5/i7/i9 65W processors. Integrated Ultra HD graphics 750 and supports up to 64GB (32GB x 2) of DDR4-3200 memory.



## PCI-E X16 SLOT

Various add-on cards such as a capture card, sound card, USB card, RS232, PoE card, digital I/O card, and more can be installed in the built-in PCI-E X16 expansion slot.

\*Maximum size for cards is 8.2 x 4.7 x 1.18 inches, PRC01 doesn't include a power adapter



M.2

## M.2 EXPANSION SLOTS

The XH510G is equipped with two M.2 slots (M.2 2280 Type M) to expand the storage or device. One M.2 2230 Type E slot is for installing Wi-Fi and Bluetooth modules for higher transmission bandwidth.

\*M.2 M key slot in bottom side only supports SATA gen 3.0



SMART FAN

## SMART FAN DESIGN

A heat-pipe cooling system with smart fan allows for constant air circulation inside and outside of the machine, resulting in high stability and low noise for 24/7 long term operation. The XH510G has industrial capacitors for 0 - 50°C environmental operation demands of commercial applications.



NONSTOP

## 24/7 CERTIFIED

Approved for 24/7 operation, the XH510G uses industrial capacitors in order to meet the environmental operation demands of commercial applications.\*

\*For high ambient temperatures over 40°C, SSDs are recommended

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<b>ACCESSORY</b>	<b>CXP01</b>
<b>DESCRIPTION</b>	Connector for an external power button, includes fitting connection that requires a push button switch
<b>PORTS</b>	Dual header connector, 2.54mm pitch Two female crimp contact pins, tin-plated Outer Diameter: 6.5 mm Two-pole cable: 2 x 0.34 mm <sup>2</sup>
<b>REMARKS</b>	Cable provides tin-plated leads for a push button switch Connection to the external power button can be screw-type or soldering



<b>ACCESSORY</b>	<b>PCP11</b>
<b>DESCRIPTION</b>	The PCP11 accessory adds a COM port for compatible models listed
<b>COMPATIBILITY</b>	P20U/P22U/P51U/P52U series, DS10U/DS20U series, XH410G/XH510G/XH510G2, 5H610R4
<b>PORTS</b>	External: Sub-D, 9-pin, male Internal: 10-pin (2x5), female, 2 mm pitch



<b>ACCESSORY</b>	<b>PVG01</b>
<b>DESCRIPTION</b>	The PVG01 equips compatible slim PCs with an analog VGA output, For slim 1L PCs, this means only one serial interface (COM 1) can be used after installation.
<b>SPECIFICATIONS</b>	Length: 6.3 inches, Back panel connector: 15 pin Mini D-sub female socket, Internal connector: Subminiature 2x10 pin female
<b>REMARKS</b>	Slim PCs with H81/H110/H310/H410/H510 chipsets can support up to two displays at the same time, so only two out of the available video outputs can be used.



<b>ACCESSORY</b>	<b>WLN-M</b>
<b>DESCRIPTION</b>	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.
<b>REMARKS</b>	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
<b>OS SUPPORT</b>	Windows 7, Windows 8.1, Windows 10/11, Linux (32/64 bit)

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# XH410G vs XH510G

**SLIM PC**


MODEL	XH410G	XH510G
CHIPSET	Intel H410	Intel H510
PROCESSOR SUPPORT	LGA 1200, max TDP 65W 14nm Comet Lake-S (10th Gen Core CPU) Intel® Core™ i3/i5/i7/i9, Pentium Gold, Celeron	LGA 1200, max TDP 65W 14nm Comet Lake-S/Rocket Lake-S (10th/11th Gen Core CPU) Intel® Core™ i3/i5/i7/i9, Pentium Gold, Celeron
MEMORY	2 x 32GB DDR4 2666/2933 MHz (64GB max)	2 x 32GB DDR4 2666/2933/3200 MHz (64GB max)
VIDEO OUTPUT	HDMI 2.0a + D-sub VGA, Supports dual displays, Supports 4K Ultra HD, DirectX 12	HDMI 2.0a + DisplayPort 1.4, Supports dual displays, Supports 4K Ultra HD, DirectX 12
AUDIO	Realtek AL662, 7.1 channel HD audio	Realtek AL662/897/888, 7.1 channel HD audio
ETHERNET	Intel i219LM 10/100/1000 MB/s operation Supports Wake on LAN function	Intel i219LM 10/100/1000 MB/s operation Supports Wake on LAN function
SATA ONBOARD	SATA III 6 GB/s	SATA III 6 GB/s
PCI-EXPRESS SLOTS	Single Slot PCI-Express v3.0 X16	Single Slot PCI-Express v3.0/v4.0 X16
FRONT PANEL	Power button with LED, HDD LED, MIC-in, Headphone out, USB 3.2 Gen 1 x 2, USB 2.0 x 2	Power button with LED, HDD LED, MIC-in, Headphone out, USB 3.2 Gen 1 x 2, USB 2.0 x 2
BACK PANEL	HDMI 2.0a, D-sub VGA USB 3.2 Gen 1 x 2, USB 2.0 x 2 Gigabit LAN (Intel i219LM) x 1 Audio x 3, Clear CMOS button	HDMI 2.0a/1.4b**, DisplayPort 1.4 USB 3.2 Gen 1 x 2, USB 2.0 x 2 Gigabit LAN (Intel i219LM) x 1 Audio x 3, Clear CMOS button
DRIVE BAYS	(1) 2.5" HDD/SSD bay*	(1) 2.5" HDD/SSD bay*
OPTIONAL ACCESSORIES	Adapter cable (CXP01) RS232 COM port adapter (PCP11) Vertical Stand (PS01) WLAN kit (WLN-M)	Adapter cable (CXP01) RS232 COM port adapter (PCP11) Vertical Stand (PS01) D-Sub/VGA port adapter (PVG01) WLAN kit (WLN-M) LTE/4G kit (WWN03)
EXPANSION SLOT	M.2 2280 M slot (for PCI-E or SATA SSDs) M.2 2230 E slot, Supports optional WLAN	M.2 2280M (for SATA SSDs) M.2 2280 M slot (for PCI-E or SATA SSDs) M.2 2230 E slot, Supports optional WLAN
OS SUPPORT	Windows 10/11, Linux 64 bit	Windows 10/11, Linux 64 bit

\*Supports one HDD/SSD with max height of 9.5mm

\*\*HDMI 2.0a is only supported with 11th Gen Rocket Lake-S CPU

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### 10th Generation Intel Core Desktop Processors (LGA 1200 14 nm Comet Lake S)

Name	Model	Cores/Threads	CPU Clock	Turbo Clock	Cache	TDP	Memory	Graphics	Graphics Clock
Core i9	10900K	10/20	3.7 GHz	5.1 GHz	20 MB	125W	DDR4-2933	UHD 630	1.2 GHz
	10900KF	10/20	3.7 GHz	5.1 GHz	20 MB	125W	DDR4-2933	None	None
	10900	10/20	2.8 GHz	5.0 GHz	20 MB	65W	DDR4-2933	UHD 630	1.2 GHz
	10900F	10/20	2.8 GHz	5.0 GHz	20 MB	65W	DDR4-2933	None	None
	10900T	10/20	1.9 GHz	4.5 GHz	20 MB	35W	DDR4-2933	UHD 630	1.2 GHz
	10850K	10/20	3.6 GHz	5.0 GHz	20 MB	35W	DDR4-2933	UHD 630	1.2 GHz
Core i7	10700K	8/16	3.8 GHz	5.0 GHz	16 MB	125W	DDR4-2933	UHD 630	1.2 GHz
	10700KF	8/16	3.8 GHz	5.0 GHz	16 MB	125W	DDR4-2933	None	None
	10700	8/16	2.9 GHz	4.7 GHz	16 MB	65W	DDR4-2933	UHD 630	1.2 GHz
	10700F	8/16	2.9 GHz	4.7 GHz	16 MB	65W	DDR4-2933	None	None
	10700T	8/16	2.0 GHz	4.4GHz	16 MB	35W	DDR4-2933	UHD 630	1.2 GHz
Core i5	10600K	6/12	4.1 GHz	4.8 GHz	12 MB	125W	DDR4-2666	UHD 630	1.2 GHz
	10600KF	6/12	4.1 GHz	4.8 GHz	12 MB	125W	DDR4-2666	None	None
	10600	6/12	3.3 GHz	4.8 GHz	12 MB	65W	DDR4-2666	UHD 630	1.2 GHz
	10600T	6/12	2.4 GHz	4.0 GHz	12 MB	35W	DDR4-2666	UHD 630	1.2 GHz
	10505	6/12	3.2 GHz	4.6 GHz	12 MB	65W	DDR4-2666	UHD 630	1.2 GHz
	10500	6/12	3.1 GHz	4.5 GHz	12 MB	65W	DDR4-2666	UHD 630	1.15 GHz
	10500T	6/12	2.3 GHz	3.8 GHz	12 MB	35W	DDR4-2666	UHD 630	1.1 GHz
	10400	6/12	2.9 GHz	4.3 GHz	12 MB	65W	DDR4-2666	UHD 630	1.1 GHz
	10400F	6/12	2.9 GHz	4.3 GHz	12 MB	65W	DDR4-2666	None	None
10400T	6/12	2.0 GHz	3.6 GHz	12 MB	35W	DDR4-2666	UHD 630	1.1 GHz	
Core i3	10325	4/8	3.9 GHz	4.7 GHz	8 MB	65W	DDR4-2666	UHD 630	1.15 GHz
	10320	4/8	3.8 GHz	4.6 GHz	8 MB	65W	DDR4-2666	UHD 630	1.15 GHz
	10305	4/8	3.8 GHz	4.5 GHz	8 MB	65W	DDR4-2666	UHD 630	1.15 GHz
	10305T	4/8	3.8 GHz	4.5 GHz	8 MB	65W	DDR4-2666	UHD 630	1.1 GHz
	10300	4/8	3.7 GHz	4.4 GHz	8 MB	65W	DDR4-2666	UHD 630	1.15 GHz
	10300T	4/8	3.0 GHz	3.9 GHz	8 MB	35W	DDR4-2666	UHD 630	1.1 GHz
	10105F	4/8	3.7 GHz	4.4 GHz	6 MB	65W	DDR4-2666	None	None
	10105	4/8	3.7 GHz	4.4 GHz	6 MB	65W	DDR4-2666	UHD 630	1.1 GHz
	10105T	4/8	3.0 GHz	3.9 GHz	6 MB	35W	DDR4-2666	UHD 630	1.1 GHz
	10100	4/8	3.6 GHz	4.3 GHz	6 MB	65W	DDR4-2666	UHD 630	1.1 GHz
	10100F	4/8	3.6 GHz	4.3 GHz	6 MB	65W	DDR4-2666	None	None
	10100T	4/8	3.0 GHz	3.8 GHz	6 MB	35W	DDR4-2666	UHD 630	1.1 GHz
Pentium® Gold	G6605	2/4	4.3 GHz	-	4 MB	58W	DDR4-2666	UHD 630	1.1 GHz
	G6600	2/4	4.2 GHz	-	4 MB	58W	DDR4-2666	UHD 630	1.1 GHz
	G6505	2/4	4.2 GHz	-	4 MB	58W	DDR4-2666	UHD 630	1.1 GHz
	G6500	2/4	4.1 GHz	-	4 MB	58W	DDR4-2666	UHD 630	1.1 GHz
	G6500T	2/4	3.5 GHz	-	4 MB	35W	DDR4-2666	UHD 630	1.05 GHz
	G6405	2/4	4.1 GHz	-	4 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G6405T	2/4	3.5 GHz	-	4 MB	35W	DDR4-2666	UHD 610	1.05 GHz
	G6400	2/4	4.0 GHz	-	4 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G6400T	2/4	3.4 GHz	-	4 MB	35W	DDR4-2666	UHD 610	1.05 GHz

K = unlocked, T = power optimized, F = without integrated graphics (requires graphic card), TDP = Thermal Design Power (max. power consumption).

The XH510G does not support the unlock function of Intel K-series processors and TDP > 65 not supported. See more support information at [global.shuttle.com](https://global.shuttle.com)

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## XH510G

SLIM PC

## 10th Generation Intel Core Desktop Processors (LGA 1200 14 nm Comet Lake S) cont.

Name	Model	Cores/Threads	CPU Clock	Turbo Clock	Cache	TDP	Memory	Graphics	Graphics Clock
Celeron®	G5925	2/2	3.6 GHz	-	4 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G5920	2/2	3.5 GHz	-	2 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G5905	2/2	3.5 GHz	-	4 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G5905T	2/2	3.3 GHz	-	4 MB	35W	DDR4-2666	UHD 610	1.05 GHz
	G5900	2/2	3.4 GHz	-	2 MB	58W	DDR4-2666	UHD 610	1.05 GHz
	G5900T	2/2	3.2 GHz	-	2 MB	35W	DDR4-2666	UHD 610	1.05 GHz

## 11th Generation Intel Core Desktop Processors (LGA 1200 14 nm Rocket Lake-S)

Name	Model	Cores/Threads	CPU Clock	Turbo Clock	Cache	TDP	Memory	Graphics	Graphics Clock
Core i9	11900K	8/16	3.5 GHz	5.3 GHz	16 MB	125W	DDR4-3200	UHD 750	1.3 GHz
	11900KF	8/16	3.5 GHz	5.3 GHz	16 MB	125W	DDR4-3200	None	None
	11900	8/16	2.5 GHz	5.2 GHz	16 MB	65W	DDR4-3200	UHD 750	1.3 GHz
	11900F	8/16	2.5 GHz	5.2 GHz	16 MB	65W	DDR4-3200	None	None
	11900T	8/16	1.5 GHz	4.9 GHz	16 MB	35W	DDR4-3200	UHD 750	1.3 GHz
Core i7	11700K	8/16	3.6 GHz	5.0 GHz	16 MB	125W	DDR4-3200	UHD 750	1.3 GHz
	11700KF	8/16	3.6 GHz	5.0 GHz	16 MB	125W	DDR4-3200	None	None
	11700	8/16	2.5 GHz	4.9 GHz	16 MB	65W	DDR4-3200	UHD 750	1.3 GHz
	11700F	8/16	2.5 GHz	4.9 GHz	16 MB	65W	DDR4-3200	None	None
	11700T	8/16	1.4 GHz	4.6 GHz	16 MB	35W	DDR4-3200	UHD 750	1.3 GHz
Core i5	11600K	6/12	3.9 GHz	4.9 GHz	12 MB	125W	DDR4-3200	UHD 750	1.3 GHz
	11600KF	6/12	3.9 GHz	4.9 GHz	12 MB	125W	DDR4-3200	None	None
	11600	6/12	2.8 GHz	4.8 GHz	12 MB	65W	DDR4-3200	UHD 750	1.3 GHz
	11600T	6/12	1.7 GHz	4.1 GHz	12 MB	35W	DDR4-3200	UHD 750	1.3 GHz
	11500K	6/12	3.9 GHz	4.9 GHz	12 MB	95W	DDR4-3200	UHD 750	1.3 GHz
	11500	6/12	2.7 GHz	4.6 GHz	12 MB	65W	DDR4-3200	UHD 750	1.3 GHz
	11500T	6/12	1.5 GHz	3.9 GHz	12 MB	35W	DDR4-3200	UHD 750	1.2 GHz
	11400	6/12	2.6 GHz	4.4 GHz	12 MB	65W	DDR4-3200	UHD 730	1.3 GHz
	11400F	6/12	2.6 GHz	4.4 GHz	12 MB	65W	DDR4-3200	None	None
	11400T	6/12	1.3 GHz	3.7 GHz	12 MB	35W	DDR4-3200	UHD 730	1.2 GHz

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