Shuttle

PRODUCT SPECIFICATIONS

BAREBONE XPC all-in-one P55U Black

15.6" ALL-IN-ONE PC FOR POS, POI AND KIOSK APPLICATIONS The Shuttle XPC all-in-one PC series P55U comes with a capacitive 15.6" multi-touchscreen in Full-HD resolution and is powered by a Gen12/13 Intel ULV processor. The modern processor architecture has a very positive effect on power consumption and computing performance. The existing WLAN function can optionally be supplemented with a 4G/5G function with up to 4 antennas. Thanks to its passive heatpipe cooling, the system is virtually noiseless, maintenance-free and approved for 24/7 nonstop operation. Particularly suitable for vertical applications is the arrangement of connectors at the bottom and the IP54 compliant front panel which is dust-protected and protected from splashing of water.







MULTI TOUCH



COMMON FEATURES

DISPLAY & GRAPHICS

OPERATING SYSTEM

PROCESSOR

RAM Memory

An operating system is not included

FULL-HD



■ IP54 compliant front panel ■ Dimensions: 394 x 273 x 40 mm (WHD)

■ Supports 24/7 Nonstop Operation ■ 100 mm VESA mount capable

■ 39.6 cm (15.6") LC Display, 1920x1080 pixel ■ Capacitive 10-point

multi-touch ■ Integrated Intel UHD graphics ■ HDMI 2.0b & VGA

■ Intel Celeron 7305 processor (Intel Core Gen. 12 "Alder Lake-U")

Processor cores: 1x P-cores, 4x E-cores, TDP: 15W, Cache: 8 MB

■ 2x 262-pin SO-DIMM slot ■ Supports DDR5-4800 ■ max. 2x 32 GB

■ First M.2-2280 slot supports one SSD card (PCIe X4/ NVMe or SATA)

Second M.2-2280 slot supports one SSD card (SATA) or one optional

■ Supports Windows 10/11 (64-bit) and Linux (64-bit)

■ Operating temperature: 0~40 °C ■ Fanless cooling system

Full HD WEBCAM

HDMI

VGA

NVMe SSD SUPPORT

Wi-Fi 5





BT 4.2

VESA MOUNT

FRONT



24/7

CONNECTIVITY

■ HDMI 2.0b ■ D-Sub/VGA ■ 2x USB 3.2 Gen 2 ■ 4x USB 3.2 Gen 1

■ 2x Serial COM ports (RS232 and RS232/422/485)

IP54

■ Gigabit LAN (Intel i219V) ■ 2x Audio (for microphone & headphones)

RI III T-IN

■ 2.0 Megapixel FHD webcam ■ 2x 2 W speakers ■ Electret Condenser Microphone WLAN-ac (Wi-Fi 5, RTL8821CE) with two internal antennas

POWER SUPPLY

■ External 90W / 19V power adapter ■ DC-input supports 12V and 19V

OPTIONAL ACCESSORIES

■ WLN-M1: WLAN kit (Intel AX200, WiFi-6) with two external antennas ■ WWN04: 4G/5G kit with four external antennas (supports one WAN card and one Nano SIM card - not included)

■ POV21: Robust Dual VESA Stand for one or two AIO PCs / Displays

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MODELS OF THE P55U SERIES

M.2 SLOTS FOR SSD CARDS

4G/5G module (WWN04 required)

Product	Intel Processor	Intel Generation	P-Cores / Threads	E-Cores / Threads	L3 Cache	max. RAM supported	Graphics clock max.	EUs	UPC Code
P55U	Celeron 7305	Gen 12	1/1	4/4	8 MB	2x 32 GB DDR5-4800	1100 MHz	48	887993007113
P 55 U 3	Core i3-1315U	Gen 13	2/4	4/4	10 MB	2x 48 GB DDR5-5200	1250 MHz	64	887993007120



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PRODUCT FEATURES





All applications at your fingertips - 10-point multi-touch The innovative touchscreen technology delivers the simplest operation possible and makes the screen the centre of action. Its high-quality design gives you access to all capabilities of the PC - by just touching the screen.

24/7 nonstop operation

The Shuttle XPC all-in-one P55U is officially approved for 24/7 permanent operation. Thanks to its low power consumption and completely passive cooling, this PC runs highly reliable making it perfectly suitable for digital signage and P0I/POS applications.

Conditions for permanent use:

- Ambient temperature while under load: 5 - 40 °C
- Air humidity while under load: 10 - 80 % (not condensing)
- Free circulation of air amongst the PC must be guaranteed
- Ventilation holes must be kept clear

Fanless and quiet

The Shuttle XPC all-in-one P55U uses a passive thermal module to lead heat out of the case quickly and evenly. The unique fanless design makes it perfect to be used in noisesensitive environments. As an additional benefit, fanless cases rarely gather dust on the inside and stay cleaner than others. So it's not only quiet and low in energy use, but also virtually maintenance-free.









Protection Class IP54 The front panel of the Shuttle XPC all-in-one P55U is dust-protected and protected from splashing of water according to IP protection class 54. Consequently, this All-in-One PC can be used for those indoor applications, where the touchscreen may be exposed to humidity and occasional splashing of water. This is particularly welcome in restaurants, laboratories, production or other places.

Optimised Cable Management Most of the connectors are now located at the back panel facing down. This leads to an effective cable management making for a clean, tidy appearance on the desk. On the left side sit those two USB connectors which need to be accessed from the front

Connects up to two external displays

The Shuttle XPC all-in-one P55U features two video outputs: One analog D-Sub/VGA connector and one HDMI 2.0 connector. Two separate displays can be connected in extended mode. Now add the built-in display of the P55U and there are three displays showing different content.

VESA mount *)

The stand on the rear can easily be removed to unveil four VESA mounting screw holes (100 x 100 mm) that can be used for mounting arms and other mounting devices from a variety of manufacturers.

*) VESA mount is not included. Shuttle recommends the optional Shuttle Stand POV21.





PRODUCT SPECIFICATIONS

Front and Back Panel



- 1. 2x Perforation for external antenna
- 2. 2x speakers (stereo)
- 3. Hole for Kensington lock
- 4. Stand (a) Stand mounting plate (b) VESA cover (c) 100 x 100 mm VESA mount
- 5. Power button
- 6. 2x USB 3.2 Gen 1 (5 Gbps, blue)
- 7. Hole with Clear CMOS button
- 8. Microphone
- 9. Full HD Webcam
- 10. LED indicates Webcam activity
- 11. Touchscreen LCD display 12. Power LED
- 13. Hard disk LED
- 14. 2x COM ports (Sub-D) 15. D-Sub/VGA video output

- 16. DC-input for power adapter
- 17. HDMI video output
- 18. RJ45 Gigabit LAN port
- 19. 2x USB 3.2 Gen 2 (10 Gbps, red)
- 20. 2x USB 3.2 Gen 1 (5 Gbps, blue)
- 21. Audio Line-out (headphones)
- 22. Microphone input
- 23. Rubber feet

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Installable Components



1. M.2-2280 SSD Card

The upper M.2-2280 slot can be equipped with a M.2 SSD card (80 mm length) which can have PCIe/NVMe or SATA interface. There is another M.2-2280 slot, which can either be used for an additional M.2 SSD (SATA only) or for the 46/56 accessory (5)

2. M.2-2230 WLAN Card

P55U is supplied with a WLAN function as standard. For this purpose, there is a pre-installed Wi-Fi 5 (WLAN-ac) card in the M.2-2230 slot. The card is connected to two internal antennas.

3. WLAN Ugrade Kit WLN-M1

The pre-installed WLAN function can be upgraded with the optional WLN-M1 accessory. This kit includes a Wi-Fi 6 (WLAN-ax) card with two external antennas.

4. DDR5 SO-DIMM memory

P55U supports two SO-DIMM memory modules; with a maximum of 32 GB DDR5-4800 each (or higher data rate).

5. 4G/5G Kit WWN04

This kit includes an adapter board for the lower M.2-2280 slot (CN5) and four external antennas. For data transmission in the mobile network, the these additional components are required

- a 4G/LTE card in M.2-3042 format or a 5G card in M.2-3052 format
- an activated nano SIM card

Optional Shuttle Accessory: Robust Dual VESA Stand POV21

The flexible design supports one or two AIO-PCs or Displays with 75x75 mm or 100x100 mm VESA mount up to 21.5" display size and a total weight of up to 20 kg. POV21 features optimised cable management with magnetic back cover and is flexible and easy to adjust.



Shuttle Product Comparison: P55U versus predecessors

MODEL	P55U Series	P52U Series	P51U Series		
Processor	Intel Core Gen 12/13, TDP=15W Codename: "Alder/Raptor Lake-U" P55U: Celeron 7305 P55U3: Core i3-1315U	Intel Core Gen 10, TDP=15W Codename: "Comet Lake-U" P52U: Celeron 5205U P52U3: Core i3-10110U	Intel Core Gen 8, TDP=15W Codename: "Whiskey Lake-U" P51U: Celeron 4205U P51U3: Core i3-8145U		
Operating System Support	Windows 11 – 64-bit Windows 10 – 64-bit Linux – 64-bit	Windows 11 – 64-bit Windows 10 – 64-bit Linux – 64-bit	Windows 11 – 64-bit Windows 10 – 64-bit Linux – 64-bit		
RAM memory (max.)	Supports 2x DDR5 S0-DIMM modules P55U: max. 2x 32GB DDR5-4800 P55U3: max. 2x 48GB DDR5-5200	Max. 2x 32 GB SO-DIMM Celeron: DDR4-2400 Core i3: DDR4-2666	Max. 2x 32 GB SO-DIMM Celeron: DDR4-2133 Core i3: DDR4-2400		
M.2 Slot	Two M.2-2280 slots for M.2-SSDs 1) supports PCIe/NVMe or SATA 2) supports SATA or 4G/5G kit	M.2-2280 slot for M.2-SSD P52U: PCIe X4 Gen 2 / SATA P52U3: PCIe X4 Gen 3 / SATA	M.2-2280 slot for M.2-SSD P51U: PCle X4 Gen 2 / SATA P51U3: PCle X4 Gen 3 / SATA		
2.5" bay	_	2.5" bay (max. 9.5 mm, SATA)	2.5" bay (max. 9.5 mm, SATA)		
LAN	Intel 219 Gigabit LAN	Intel 219 Gigabit LAN	Intel i211 Gigabit LAN		
WLAN	Realtek RTL8821CE supports WLAN-ac and BT 4.2 2x internal antenna	No WLAN module (2 internal antennas pre-installed)	Realtek RTL8821CE-CG supports WLAN-ac and BT 4.2 2x internal antenna		
Audio	Realtek <mark>ALC888S</mark> (HD Audio)	C-Media CM6542 (USB) or Realtek ALC269 (HD Audio)	Realtek ALC269 (HD Audio)		
Connectors Left side	Power button 2x USB 3.2 Gen 1 Hole with Clear CMOS button 2x Perforation for ext. antennas	Power button 2x USB 3.2 Gen 1 Hole with Clear CMOS button 1x Perforation for ext. antennas SD card reader	Power button 2x USB 3.2 Gen 1 Hole with Clear CMOS button 1x Perforation for ext. antennas SD card reader		
Connectors Right side	Hole for Kensington Lock 2x Perforation for ext. antennas	Hole for Kensington Lock 1x Perforation for ext. antennas Optional: 2x COM (D-Sub)	Hole for Kensington Lock 1x Perforation for ext. antennas Optional: 2x COM (D-Sub)		
Connectors Bottom	HDMI 2.0b VGA/D-Sub 2x USB 3.2 Gen 2 2x USB 3.2 Gen 1 2x COM (RS232+RS232/422/485) Gigabit LAN (Intel) Audio Line-Out Microphone Input DC input (supports 12V and 19V)	HDMI 1.4b VGA/D-Sub 2x USB 3.2 Gen 1 2x USB 2.0 2x COM (RS232) Gigabit LAN (Intel) Audio Line-Out Microphone Input DC input (supports 12V and 19V)	HDMI 1.4b VGA/D-Sub 2x USB 3.2 Gen 1 2x USB 2.0 2x COM (RS232) Gigabit LAN (Intel) Audio Line-Out Microphone Input DC input (supports 12V and 19V)		
Power Adapter	90 W / 19 V 3-pin AC plug	65 W / 19 V 2-pin AC plug	65 W / 19 V 2-pin AC plug		
Optional Shuttle Accessories	 WLN-M1 (WLAN-ax-kit / Wi-Fi 6 with two external antennas) WWN04 (4G/5G kit for mobile network with 4 antennas) POV21 (Robust Dual VESA Stand) 	WLN-M1 (WLAN-ax-kit / Wi-Fi 6 with two external antennas) 2x PCP11 (COM port) POV21 (Robust Dual VESA Stand)	WLN-M1 (WLAN-ax-kit / Wi-Fi 6 with two external antennas) 2x PCP11 (COM port) POV21 (Robust Dual VESA Stand)		



Product Comparison: Shuttle XPC All-in-One Models

Chassis	Display Size / Pixel / Type	Processor Type	by Inte	Chassis Colour		
			Gen. 8	Gen. 10	Gen. 12/13	COLUUI
	11.6″ 1366 x 768 Capacitive Multitouch	Celeron (P25N: N-Series processor)	_	P22U	P25N	Black
	15.6" 1366 x 768 Resistive Singletouch	Celeron	X50V7 X50V7L *)	X50V8	X50V9	Black, White
		Core i3	X50V7U3 X50V7U3L *)	X50V8U3	X50V9U3	Black, White
	15.6″	Celeron	P51U	P52U	P55U	Black
	1920 x 1080 Capacitive Multitouch	Core i3	P51U3	P52U3	P55U3	Black
	19.5" 1600 x 900 Capacitive Multitouch	Celeron	_	P92U	_	Black, White
		Core i3	_	P92U3	_	Black, White
		Core i5	_	P92U5	_	Black

X50V7L and X50V7U3L are model variants without WLAN module

SHUTTLE XPC all-in-one BAREBONE P55U Black - SPECIFICATIONS

FANLESS AND SILENT	Passive heatpipe cooling, no fan noise at all Perfect to be used in noise-sensitive environments Fanless, dust-free and thus virtually maintenance-free						
24/7 NONSTOP Operation	This device is approved for 24/7 permanent operation. Requirements: - Free circulation of air amongst the PC must be guaranteed. - Ventilation holes must be kept clear.						
IP54 PROTECTED	The front panel is dust-protected and protected from splashing of water according to protection class IP54.						
CHASSIS	Colour: black Dimensions: 393.6 x 272.5 x 39.8 mm (W x H x D) 100 mm VESA mount with installed hinged stand Hole for optional Kensington lock (right side) Weight: 3.25 kg net, 4.5 kg gross						
OPERATING SYSTEM	This system comes without operating system. It is compatible with: - Windows 11 - 64-bit - Windows 10 - 64-bit - Linux - 64-bit						
TOUCHSCREEN	Capacitive Touch Panel with 10-point multi-touch						
15.6" DISPLAY	39.6 cm / 15.6" LC display, IPS technology Ratio: 16:9 wide-screen panel Native resolution: 1920 x 1080 = 2 Megapixel (Full HD / 1080p) Brightness: 250 cd/sqm						
PROCESSOR	Model: Intel Celeron 7305 Code name: Alder Lake-U (12th generation Intel Core) Performance-cores (P-Cores): 1 core (1 thread), clock rate: 1.1 GHz Efficient-cores (E-Cores): 4 cores (4 threads), clock rate: 0.9 GHz Smart-Cache (L3): 8 MB Base Power (PL1 TDP): max. 15 W Maximum Tjunction Temperature: 100 °C System-on-a-chip architecture (SoC) with integrated memory and graphics controller BGA1700 package - directly soldered onto the mainboard Lithography: Intel 7 process (10 nm Enhanced SuperFin)						
INTEGRATED GRAPHICS	Intel UHD Graphics GPU clock frequency: max. 1100 MHz Execution Units (EUs): 48						
SUPPORTS TRIPLE DISPLAY	Up to three displays simultaneously Two video ports support two additional independent screens: 1) HDMI 2.0b digital audio/video port supports up to 3840 x 2160 pixels resolution at 60 Hz refresh rate (2160p60) 2) VGA / D-Sub analog video port supports 1920 x 1080 pixels resolution at 60 Hz refresh rate (1080p60) Special conditions for operation in Multi-Monitor mode: - Clone mode: all displays show the same content at 1920 x 1080 resolution - Extended mode: all displays show different content						
BIOS	AMI BIOS in 32 MByte EEPROM with SPI interface Supports Power fail resume / always on Supports Wake-on-LAN (WOL) from S3, S4, S5 ACPI states Supports hardware monitoring and Watchdog functionality Supports Firmware TPM v2.0 functionality						
MEMORY SUPPORT	2x S0-DIMM slot with 262 pins Supports DDR5-4800 (PC5-38400) SDRAM at 1.1 V Supports DDR5 memory modules with higher frequency rating Supports Dual Channel mode Supports a maximum of 32 GB per DIMM, maximum total size: 64 GB Supports two unbuffered DIMM modules (no ECC or registered) Two thermal pads for the RAM modules are included						



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	- it supports M - one M.2 SSD	eatures two M.2-228 I.2 cards with a width card with PCle/NVMe	of 22 mm and a interface is supp	ported	(type 2280)		
	 the second M.2 SSD card must have SATA interface the second slot can also be used for the optional WWN04 kit to support a 4G/5G wireless network card The following configurations are supported: 						
TWO M.2 SLOTS FOR	M.2 Slot	Inferfaces	Config 1	Config 2	Config 3		
SSD CARDS	Slot 1 CN6, above	PCIe Gen4 x4 and SATA 3.0	M.2 SSD card (SATA)	M.2 SSD card (PCle/NVMe)	M.2 SSD card (SATA)		
	Slot 2 CN5, below	PCIe Gen4 x4 and USB 3.2 Gen2 *)	M.2 SSD card (PCIe/NVMe)	optional WWNO4 kit	optional WWN04 kit		
		interface can only be ads for the M.2 SSDs		,			
EBCAM	Integrated Ful	l HD webcam (1920 x	1080 pixels)				
IICROPHONE AND	Front panel wi 2x 2 W speake	th integrated Electre rs	t Condenser Micr	ophone and			
INTEGRATED AUDIO	Two analog au 1) Line-out (he 2) Microphone		·	m side:			
WIRED NETWORK	Supports 10 , Supports WA	thernet Controller 7 100 / 1.000 MBit/s KE ON LAN (WOL) fr work boot by Prebo	om S3, S4 mode		L		
WIRELESS NETWORK (WLAN)	WLAN controller Card: Realtek RTL8821CE WLAN antennas: two internal antennas Supports WiFi IEEE 802.11b/g/n/ac on the 2.4 / 5 GHz band, 1T1R Supports 20 / 40 / 80 MHz channel bandwidth Security: supports WPA(-PSK), WPA2(-PSK), WEP 64/128 bit, IEEE 802.11x, IEEE 802.11i Supports Bluetooth 4.2 on the 2.4 GHz band The M.2-2230 Key A+E slot supports PCIe Gen3 x1, USB 2.0 und CNVi						
FRONT LEDs	Power LED (blue) HDD/SSD LED (orange)						
CONNECTORS Left side	Power button 2x USB 3.2 Gen 1 (max. 5 Gbps, blue) Hole with hidden Clear CMOS button (onboard micro switch) 2x perforation for optional external antenna Connectors right side 2x perforation for optional external antenna Hole for optional Kensington lock						
CONNECTORS Bottom side	HDMI 2.0b (supports digital video and digital audio) VGA connector (D-Sub 15 pol., analog video) 2x USB 3.2 Gen 2 (max. 10 Gbps, red) 2x USB 3.2 Gen 1 (max. 5 Gbps, blue) Gigabit Network (LAN, RJ45, Intel i219V) Audio Line-out / head-phones (3.5 mm jack) Microphone input (3.5 mm jack) DC input for external power adapter (5.5 / 2.5 mm) 2x COM/serial D-Sub (1x RS232, 1x RS232/422/485)						
HOLES FOR ANTENNAS	Opening holes for four optional antennas: The chassis features four perforated 6.5 mm holes for optional antennas mounted with an (RP-)SMA connector for wireless network such as WLAN or WWAN (e.g. 4G/5G) (see section "Optional Accessories")						
POWER ADAPTER	External 90 W power adapter (fanless) Input: 100~240 V AC, 50/60 Hz, max. 1.6 A Output: 19 V DC, max. 4.74 A, max. 90 W DC cable length: ca. 170 cm AC cable length: ca. 170 cm (3-pin Micky MM C6 and Schuko earthed safety plug)						

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DC INPUT CONNECTOR	DC Input Connector: 5.5 / 2.5 mm (outer/inner diameter) The DC-input of the computer supports an external power source with either 12V±5% or 19V±5%.
SUPPLIED ACCESSORIES	Multilingual Quick Guide Driver DVD for Windows External Power Adapter (90W / 19V) 3-pin AC Power cord with protective-earth contacts 2x Thermal Pads for SSD M.2 cards: 70 x 20 x 5.25 mm 2x Thermal Pads for RAM modules: 50 x 15 x 2.25 mm and 70 x 20 x 4 mm 3x M3x4 silver screws for mounting M.2 SSD cards
OPTIONAL ACCESSORIES	 1) WLAN kit WLN-M1 (Intel AX200 card + two external antennas) An 802.11ac (1T1R) WLAN function with internal antennas is already pre-installed and can be upgraded to 802.11ax (2T2R) with two external antennas with this kit. 2) 4G/5G kit WWN04 This kit includes an adapter board for the lower M.2-2280 slot (CN5) and four external antennas. For data transmission in the mobile network, the these additional components are required a 4G/LTE card in M.2-3042 format or a 5G card in M.2-3052 format an activated nano SIM card 3) Robust VESA Stand POV21: supports one or two AlO-PCs/Displays with 75x75 or 100x100 mm VESA (max. 21.5" display size and 20 kg total weight).
ENVIRONMENTAL SPECIFICATIONS	Operating temperature: 0~40 °C Humidity: 10~90 %, non-condensing
CERTIFICATIONS / COMPLIANCE	EMI: CE, UKCA, FCC, BSMI, RCM, VCCI Safety: CB (IEC 60950/62368), cTUVus (UL 62368), BSMI Other compliances: RoHS, ErP Lot3, Energy Star v8.0
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 directives: (1) 2014/30/EU relating to electromagnetic compatibility (EMC), (2) 2014/35/EU 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), (4) 2014/53/EU Radio Equipment Directive (RED)

P55U Series - Technical Drawings



P55U Series - Technical Drawings



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