

## Fanless 19.5" All-in-one PC for POS applications

The Shuttle POS P900 is a 19.5 inch All-in-One POS Terminal PC with a capacitive touchscreen. It is equipped with Intel Celeron® ULV Processor, 120 GB SSD and 4 GB RAM. This system is suitable for small and medium retailers to serve customers effectively. It offers numerous connectors for typical POS peripherals - two COM ports are also available. In addition, the HDMI and VGA ports can be used to drive two more displays with basic digital signage applications. Thanks to its passive cooling, the system is virtually noiseless, maintenance-free and is approved for 24/7 nonstop operation. Particularly suitable for POS 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. POS P900 offers a high level of reliability and is a lower priced alternative to conventional POS systems.

## XPC all-in-one System POS P900 Black With Intel Celeron ULV CPU



### Feature Highlights

<b>All-in-One Design</b>	<ul style="list-style-type: none"> <li>XPC all-in-one with touchscreen</li> <li>Dimensions: 487 x 321 x 44 mm (WHD)</li> <li>100 mm VESA mount capable</li> <li>IP54 compliant front panel</li> <li>Approved for 24/7 nonstop operation</li> </ul>
<b>Display &amp; Graphics</b>	<ul style="list-style-type: none"> <li>49.5 cm (19.5") LC Display, 1600 x 900 pixel</li> <li>Capacitive 10-point multi-touchscreen</li> <li>Integrated Intel HD 610 graphics</li> <li>HDMI 1.4 + D-Sub/VGA Video output</li> </ul>
<b>CPU &amp; Cooling</b>	<ul style="list-style-type: none"> <li>Intel Celeron 3865U, 1.8 GHz, 15 W TDP</li> <li>Fanless heatpipe cooling system</li> </ul>
<b>RAM &amp; Storage</b>	<ul style="list-style-type: none"> <li>4 GB DDR4 SO-DIMM memory</li> <li>120 GB SSD in 2.5 format</li> <li>Supports one M.2-2280 SSD (SATA / PCIe)</li> <li>Supports internal USB stick (USB 2.0, type A)</li> </ul>
<b>Operating System</b>	<ul style="list-style-type: none"> <li>Operating system is not included</li> <li>Supports Windows 10 (64-bit) &amp; Linux (64-bit)</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>HDMI 1.4, D-Sub/VGA</li> <li>2x USB 3.0, 4x USB 2.0, internal port: 1x USB 2.0</li> <li>2x COM/Serial (D-Sub), 1x LPT/Parallel</li> <li>Microphone input, headphones output</li> <li>Gigabit LAN, Wireless LAN 802.11ac, BT 4.1</li> </ul>
<b>Built-in</b>	<ul style="list-style-type: none"> <li>SD card reader, 2.0 Megapixel FHD webcam</li> <li>2x 2 W speakers</li> <li>Electret Condenser Microphone</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>External fanless power adapter, 65 W / 19 V</li> <li>DC-in supports 12 V and 19 V voltage</li> </ul>
<b>Warranty</b>	<ul style="list-style-type: none"> <li>36 months (2 years Pick-up + 1 year Bring-in)</li> </ul>



19.5" Multitouch



Nonstop operating



Fanless cooling



Front protected: dust & water



Two COM ports



Supports Windows 10 & Linux (64-bit)



WLAN-AC and Intel LAN



2x USB 3.0  
4x USB 2.0



Internal USB-Port

Images for illustration purposes only.



Shuttle XPC all-in-one POS P900 – Overview



- |    |                                     |    |                           |    |                             |
|----|-------------------------------------|----|---------------------------|----|-----------------------------|
| 1  | Stand                               | 8  | SD card reader            | 18 | 2x D-Sub COM port           |
| 1a | Stand mounting plate                | 9  | 4x USB 2.0 port           | 19 | DC-input for power adapter  |
| 1b | VESA cover                          | 10 | Power LED                 | 20 | RJ45 Gigabit LAN port       |
| 1c | 100 x 100 mm VESA mount             | 11 | Hard disk LED             | 21 | 2x USB 3.0                  |
| 2  | Full HD Webcam                      | 12 | 2x speakers (stereo)      | 22 | HDMI video output           |
| 3  | Microphone                          | 13 | Position of optional NFC  | 23 | Audio Line-out (headphones) |
| 4  | Touchscreen LCD display             | 14 | Name plate (rating label) | 24 | Microphone input            |
| 5  | Power Button                        | 15 | Hole for Kensington lock  | 25 | Openings for ventilation    |
| 6  | 2x Performance for external antenna | 16 | D-Sub/VGA video output    |    |                             |
| 7  | Hole for hidden power button        | 17 | LPT Parallel Port         |    |                             |

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## Shuttle XPC all-in-one POS P900 – Special 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 POS P900 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 POI/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
- If a hard disk is installed, this must also be approved for permanent operation by its manufacturer.



### Fanless and quiet

The Shuttle XPC all-in-one POS P900 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 noise-sensitive 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 POS P900 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

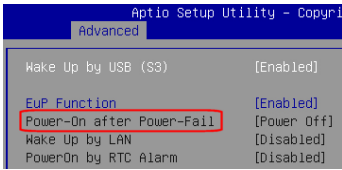
Most of the connectors are now located at the back panel facing down. This leads to an effective cable management making for a clean, tidy appearance on the desk.

On the left side sit those connectors which need to be accessed from the front: the card reader and two USB ports.



### Connects to two external Full HD displays

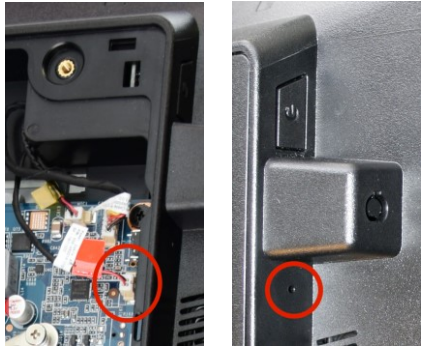
The Shuttle XPC all-in-one POS P900 features two video outputs: One analog D-Sub/VGA connector and one HDMI connector. Two separate Full HD displays can be connected in extended mode. Now add the built-in display of the POS P900 and there are three displays showing different content.



### Power on after Power fail

The BIOS setup provides a "Power-On-after-Power-Fail" function that can be found under "Power Management Configuration" where the PC's behaviour after power failure can be determined.

The Shuttle XPC all-in-one POS P900 also comes with a hardware-based solution. By removing Jumper 7, the system will start unconditionally once power is applied.



### Hidden Power Button

Left picture: The power button can be deactivated to prevent unauthorised use. To do so, disconnect the appropriate connection inside the chassis (see red circle).

Right picture: Still, it can be used with a straightened paper clip as shown on the left.



### VESA mount \*)

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

\*) VESA mount is not included



## Shuttle XPC all-in-one POS P900 – Specifications

<i>Fanless and silent</i>	<p>Passive heatpipe cooling, absolutely no fan noise                  Perfect for noise-sensitive environments                  Fanless, dust-free and thus virtually maintenance-free</p>
<i>24/7 nonstop operation</i>	<p>This device is approved for 24/7 permanent operation. Requirements:</p> <ul style="list-style-type: none"> <li>- Free circulation of air amongst the PC must be guaranteed.</li> <li>- Ventilation holes must be kept clear.</li> <li>- If a hard disk is installed, this must also be approved for permanent operation by its manufacturer.</li> </ul>
<i>IP54 protection</i>	<p>The front panel is dust-protected and protected from splashing of water according to protection class IP54.</p>
<i>Chassis</i>	<p>Colour: black                  Dimensions: 487 x 321 x 44 mm (W x H x D)                  100 mm VESA mountable                  Hole for Kensington lock                  Weight: 4.29 kg net, 5.62 kg gross</p>
<i>Operating system</i>	<p>This system comes without operating system.                  It is compatible with:</p> <ul style="list-style-type: none"> <li>- Windows 10 - 64-bit</li> <li>- Linux - 64-bit</li> </ul>
<i>Touchscreen</i>	<p>Touchscreen function supports fingertip input                  Capacitive Touch Panel with 10-point multi-touch                  Supports input with gloves (PVC, cotton, cotton/linen)                  Stylus pen not supported</p>
<i>49.5 cm display (19.5")</i>	<p>49.5 cm / 19.5" LCD display                  Ratio: 16:9 widescreen panel                  Resolution: 1600 x 900 = 1.44 Megapixel (WSXGA/HD+)</p>
<i>Processor</i>	<p>Model: Intel Celeron 3865U (ULV)                  System-on-a-chip architecture (SoC): no chipset required                  BGA1356 package soldered on the mainboard                  Code name: Kaby Lake-U (7th Generation Intel Core)                  Cores / Threads: 2 / 2                  Clock rate: 1.8 GHz                  L1/L2/L3 Cache: 128 kB / 512 kB / 2048 kB                  Memory controller: DDR4-2133 Dual Channel (1.2 V)                  TDP wattage: 15 W maximum                  Manufacturing process: 14 nm                  Maximum Tjunction Temperature: 100 °C                  Supports 64-bit, VT-x (EPT), VT-d, Enhanced SpeedStep, NX bit, AES-NI, SSE 4.1/4.2                  Integrated graphics engine</p>

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<p><i>Integrated Graphics</i></p>	<p>Intel HD Graphics 610                      GPU clock frequency: 300~900 MHz                      Execution Units (EUs): 12                      Supports DirectX 12                      Supports full H264, H265 8/10 bit, VP8/9, VC-1, AVC hardware decoding                      Supports Quick Sync Video and Clear Video HD technology</p>
<p><i>Up to three displays</i></p>	<p>Two video ports support two additional independent screens:                      1) HDMI 1.4b supports 1920 x 1080 @ 60 Hz or 3840 x 2160 @ 30 Hz                      2) VGA / D-Sub analog video supports 1920 x 1080 @ 60 Hz                      Multi-Monitoring modes as follows:                      Clone mode: All displays show the same content at 1600 x 900.                      Extended mode: All displays show different content.</p>
<p><i>BIOS</i></p>	<p>AMI BIOS in 8 MByte EEPROM with SPI interface                      Supports Power-on-after-power-fail / always on                      Supports Wake-on-LAN (WOL) from S3, S4, S5 ACPI states                      Supports hardware monitoring and Watchdog function                      Supports Firmware TPM v2.0 function</p>
<p><i>Memory</i></p>	<p>4 GB DDR4 SO-DIMM memory with 260 pins                      Supports a maximum of 16 GB DDR4-2133 (PC4-17000) SDRAM per DIMM slot,                      maximum total size: 32 GB</p>
<p><i>SSD storage</i></p>	<p>120 GB SSD drive with SATA interface in 6.35 cm / 2.5" format</p>
<p><i>M.2-2280 Slot</i></p>	<p>The M.2 2280 BM slot provides the following interfaces:                      - PCI-Express Gen. 3.0 X4 with up to 32 Gbps of data transfer speed                      - SATA v3.0 (max. 6 Gbps)                      It 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 SATA SSDs (with B+M key) and M.2 PCIe SSDs (with M key)</p>
<p><i>Card Reader</i></p>	<p>Integrated card reader supports SD, SDHC and SDXC memory flash cards</p>
<p><i>Webcam</i></p>	<p>Integrated Full HD webcam (1920 x 1080 pixels)</p>
<p><i>Microphone and speakers</i></p>	<p>Front panel with integrated Electret Condenser Microphone and                      2x 2 W speakers</p>
<p><i>Integrated Audio</i></p>	<p>Realtek ALC269 Audio Codec                      Two analog audio connectors (3.5 mm) on the bottom side:                      1) Line-out (headphones)                      2) Microphone input                      Digital Audio is supported via HDMI.</p>

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<i>Wired Network</i>	<p>Intel i211 Ethernet Controller with MAC, PHY and PCIe interface</p> <p>Supports 10 / 100 / 1.000 MBit/s operation</p> <p>Supports WAKE ON LAN (WOL) from S3, S4 modes</p> <p>Supports network boot by Preboot eXecution Environment (PXE)</p>
<i>Wireless Network (WLAN)</i>	<p>Model: AzureWave AW-CB209NF</p> <p>Chipset: Realtek RTL8821AE</p> <p>M.2-2230 (NGFF) extension card</p> <p>Connected with two internal antennas (via IPEX4)</p> <p>Supports WiFi IEEE 802.11b/g/n/ac in the 2.4/5 GHz band, 1T1R</p> <p>Max. 72.2 / 150 Mbps using 20 / 40 MHz bandwidth in n-mode</p> <p>Max. 433.3 Mbps using 80 MHz bandwidth in ac-mode</p> <p>Supports Bluetooth 4.1 in the 2.4 GHz band (BT 4.0 under Linux)</p>
<i>Front LEDs</i>	<p>Power LED (blue)</p> <p>Hard disk LED (orange)</p>
<i>Connectors left side</i>	<p>Power button</p> <p>2x USB 2.0</p> <p>SD card reader</p> <p>Hole with power button</p>
<i>Connectors bottom side</i>	<p>HDMI 1.4b (supports digital video and digital audio)</p> <p>2x USB 3.0</p> <p>2x USB 2.0</p> <p>Gigabit Network (LAN, RJ45)</p> <p>Audio Line-out / headphones (3.5 mm jack)</p> <p>Microphone input (3.5 mm jack)</p> <p>DC input for external power adapter (5.5 / 2.5 mm)</p> <p>Perforation for optional TV/3G antenna (diameter: 9 mm)</p>
<i>Connectors rear side</i>	<p>VGA connector (D-Sub 15 pol., analog video)</p> <p>2x COM/serial (D-Sub)</p> <p>1x LPT/parallel</p>
<i>Connectors onboard</i>	<p>Internal USB 2.0 type A connector for a USB stick</p> <p>Serial ATA (6 Gbps)</p> <p>Serial ATA power connector</p> <p>3x USB 2.0 header (all occupied)</p> <p>eDP connector (Embedded DisplayPort) - occupied by the display</p>
<i>Openings for optional antennas</i>	<p>The chassis features two perforated 7 mm holes for optional antennas mounted with an (RP-)SMA connector for wireless network such as WLAN or WWAN (e.g. LTE)</p>
<i>Power adapter</i>	<p>External 65 W power adapter (fanless)</p> <p>Input: 100~240 V AC, 50/60 Hz, max. 1.6 A</p> <p>Output: 19 V DC, max. 3.42 A, max. 65 W</p>

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<p><i>DC Input connector</i></p>	<p>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%.</p>
<p><i>Included Accessories</i></p>	<p>Quick Guide Driver DVD External Power Adapter (65W / 19V) Power cord Screws</p>
<p><i>Environmental criteria</i></p>	<p>Operating temperature: 0~40 °C Humidity: 10~90 %</p>
<p><i>Certification and Compliance</i></p>	<p>EMI: CE, RED, FCC, RCM, VCCI Safety: CB, ETL Other compliances: RoHS, ErP Lot3, Energy Star v7.0</p>
<p><i>Conformity</i></p>	<p>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/EU relating to ecodesign requirements for energy-related products (ErP), (4) 2014/53/EU related to Radio and Telecommunications Terminal Equipment (RED)</p>

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**Shuttle XPC all-in-one Barebones – Comparison**

Note: **POS P900** is a fully configured PC system without operating system, which is based on the Barebone **P90U**.

Touch Display	Model	Processor	Colour	UPC Code
11.6" 1366 x 768 pixels Capacitive	<b>P20U</b>	Intel Celeron 3865U	Black	887993001487
			White	887993001203
15.6" 1366 x 768 pixels Resistive	<b>X50V6</b>	Intel Celeron 3865U	Black	887993001203
			White	887993001227
	<b>X50V6U3</b>	Intel Core i3-7100U	Black	887993001074
			White	887993001098
15.6" 1920 x 1080 pixels Capacitive	<b>P51U</b>	Intel Celeron 4205U	Black	TBA (Sept. 2019)
19.5" 1600 x 900 pixels Capacitive	<b>P90U</b>	Intel Celeron 3865U	Black	887993001661
			White	887993001890
	<b>P90U3</b>	Intel Core i3-7100U	Black	887993001685
			White	887993001906
	<b>P90U5</b>	Intel Core i5-7200U	Black	887993001678

**P20U (11.6")**



**X50V6 (15.6")**



**P51U (15.6")**



**P90U (19.5")**



