

BAREBONE XPC all-in-one P25N Black

COMPACT ALL-IN-ONE PC FOR POS AND CONTROL APPLICATIONS

The Shuttle XPC all-in-one P25N with an 11.6" multi-touch display is positioned as a space-saving POS system or control device for media playback or automation. The adjustable stand allows for flexible viewing and operation angles, while it can also be VESA-mounted to appropriate 75x75 mm stands or walls. The front panel is protected from splashing of water and dust according to the IP54 rating. A cable collector box on the back side helps avoid clutter. Thanks to its passive cooling, the system is virtually noise-less, maintenance-free and approved for 24/7 nonstop operation.



TOUCH SCREEN



SUPPORTS 16 GB DDR5



HDMI 2.0b and VGA Ports



Full-HD WEBCAM



NVMe SSD SUPPORT



2.5" BAY



INTEL 2.5G LAN



DUAL COM PORTS



75x75 mm VESA MOUNT



IP54 Front



Max. 40 °C



24/7 SUPPORT

COMMON FEATURES

- IP54 compliant front panel ■ Dimensions: 299 x 207 x 59 mm (WHD)
- Supports 24/7 Nonstop Operation ■ 75x75 mm VESA mount capable
- Operating temperature: 0~40 °C ■ Fanless heatpipe cooling system

DISPLAY & GRAPHICS

- 29.5 cm (11.6") LC Display, 1366 x 768 pixel, 250 Nits ■ Capacitive 10-point multitouch screen ■ Integrated graphics ■ HDMI 2.0b & VGA

OPERATING SYSTEM

- An operating system is not included
- Supports Windows 10/11 (64-bit) and Linux (64-bit)

PROCESSOR

- Intel N100, Quad Core, clock rate: 3.4 GHz, 6 MB Cache
- Intel Generation 12 "Alder Lake-N" TDP: 6 W

STORAGE (not included)

- Supports max. 1x 16 GB DDR5-4800 SO-DIMM with 262-pins
- Supports one M.2-2280 SSD, supports SATA or PCIe/ NVMe
- Supports one 2.5" SATA hard disk/SSD, max. 9 mm in height

CONNECTIVITY

- HDMI 2.0b ■ D-Sub/VGA ■ 2x USB 3.2 Gen 2 (10 Gbps) ■ 4x USB 3.2 Gen 1 (5 Gbps) ■ Gigabit 2.5G LAN (Intel 226LM) ■ 2x RS232 COM ports
- 2x Audio (Mic & Headphones) ■ Power Button ■ Power and HDD LED
- Hole with Clear CMOS Button ■ DC-in (2.5/5.5 mm, supports 12&19V)
- Onboard: Jumper JP1 „Power-on-after-power-fail“

NETWORK

- 2.5 Gbps LAN, Intel 226LM Ethernet Controller
- Built-in: M.2 WLAN card RTL8821CE supports WLAN 802.11ac (WiFi 5) und BT 4.2 with 2 internal antennas

BUILT-IN

- 1080p (2 MP) Full-HD webcam
- 2 W speaker ■ Electret Condenser Microphone

POWER SUPPLY

- External 65W / 19V power adapter

OPTIONAL ACCESSORIES

- **WLN-M1:** WLAN Upgrade Kit with WLAN card Intel AX200 supports WLAN 802.11ax (Wi-Fi 6) & BT 5.2 with two external antennas

MODELS OF THE P25N SERIES



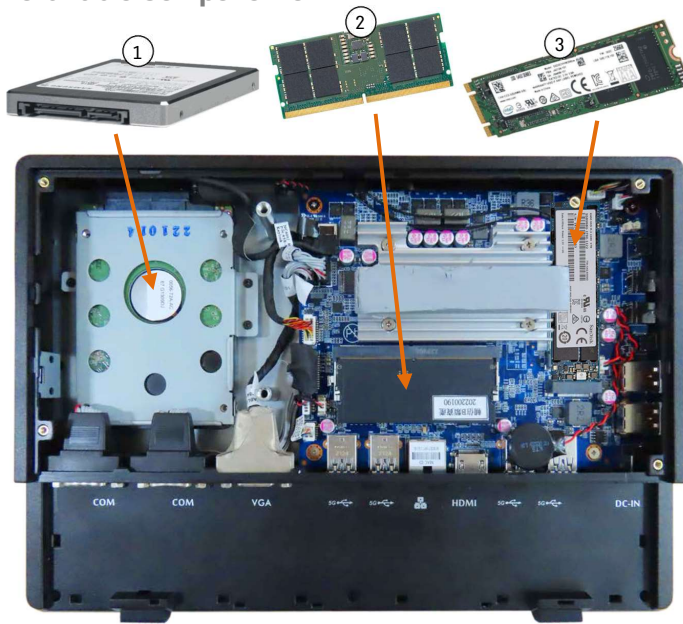
| Product | Processor | Cores/Threads | Turbo Clock | Cache | TDP | Graphics clock | EUs | UPC Code | Remark |
|--------------|--------------------|---------------|--------------|-------|-----|----------------|-----|--------------|--------------------|
| P25N | Intel N100 | 4 / 4 | max. 3.4 GHz | 6 MB | 6 W | max. 750 MHz | 24 | 887993006536 | available |
| P25N2 | Intel N200 | 4 / 4 | max. 3.7 GHz | 6 MB | 6 W | max. 750 MHz | 32 | 887993006543 | Project order only |
| P25N3 | Intel Core i3-N300 | 8 / 8 | max. 3.8 GHz | 6 MB | 7 W | max. 1250 MHz | 32 | 887993006550 | Project order only |

Front and Back Panel



- | | | |
|---|---|---------------------------------------|
| 1. 2x Perforation for optional antennas | 11. Power-on button | 20. 2x serial COM port (D-Sub, RS232) |
| 2. Hole for Kensington lock | 12. Microphone input | 21. D-Sub/VGA video output |
| 3. Line Collector Box | 13. Audio Line-out (headphones) | 22. 4x USB 3.2 Gen 1 (5 Gbps, blue) |
| 4. Detachable stand | 14. Hole with Clear CMOS button | 23. 2.5G LAN port (RJ45) |
| 5. Webcam | 15. 2x USB 3.2 Gen 2 (10 Gbps, red) | 24. HDMI video output |
| 6. LED Indicator for Webcam | 16. Detachable chassis cover | 25. DC-input for power adapter |
| 7. Multi-touch LCD display | 17. Detachable VESA cover | 26. 2x rubber foot |
| 8. Microphone | 18. Mono speaker (2 W) | |
| 9. Power-on LED | 19. Screw holes according to the 75x75 mm VESA mount standard | |
| 10. Hard disk LED | | |

Installable Components



1. **2.5" SATA Drive**
Hard disk or SSD, max. 9.5 mm in height
2. **DDR5 SO-DIMM memory**
max. 1x 16 GB DDR5-4800 (or higher speed) SO-DIMM RAM module
3. **M.2-2280 SSD Card**
SATA or PCIe/NVMe interface

Optional Shuttle Accessories



4. **WLAN Accessory WLN-M1**
Intel AX200 WLAN module in M.2-2230 format supports WLAN-ax (Wi-Fi 6) and Bluetooth with two external antennas



Note: a WLAN-ac (Wi-Fi 5) module with two internal antennas is already pre-installed by default.

Operating Positions

Included Stand



⇒ Variable installation angle

VESA Arm / VESA Stand *)



VESA Wall-Mounted *)



*) VESA mount is not included

Shuttle Product Comparison: P25N versus predecessor P22U/P20U

| MODEL | P25N | P22U | P20U |
|------------------------------|---|--|--|
| Processor | Intel Core Gen 12, TDP=6W Code name: "Alder Lake-N" Intel N100 (max. 3.4 GHz) | Intel Core Gen 10, TDP=15W Code name: "Comet Lake-U" Celeron 5205U (1.9 GHz) | Intel Core Gen 7, TDP=15W Code name: "Kaby Lake-U" Celeron 3865U (1.8 GHz) |
| Operation 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 10 – 64-bit Linux – 64-bit |
| RAM memory (max.) | Max. 1x 16 GB DDR5-4800 SO-DIMM | Max. 2x 32 GB DDR4-2400 SO-DIMM | Max. 2x 16 GB DDR4-2133 SO-DIMM |
| M.2-2280 Slot | M.2-2280 M-key Slot supports PCIe x2 Gen 3 and SATA | M.2-2280 M-key Slot supports PCIe x4 and SATA | M.2-2280/2260/2242 M-key Slot supports PCIe x4 and SATA |
| 2.5" Bay | Supports one 2,5" hard disk or SSD max. height: 9.5 mm | Supports one 2,5" hard disk or SSD max. height: 9.5 mm | Supports one 2,5" hard disk or SSD max. height: 9.5 mm |
| LAN | Intel i226LM 2.5G LAN | Intel i219 Gigabit LAN | Intel i211 Gigabit LAN |
| WLAN | WLAN-ac + Bluetooth 4.2 2x internal antennas included 2x perforation for external antennas | Prepared for M.2-2230 WLAN card 2x internal antennas included 2x perforation for external antennas | WLAN-n + Bluetooth 4.1 2x internal antennas included 2x perforation for external antennas |
| Audio | Realtek ALC888S (HD Audio) | C-Media CM6542 (USB) or Realtek ALC269 (HD audio) | Realtek ALC269 (HD Audio) |
| Buttons & LEDs | Power Button Power LED (blue) HDD/SSD LED (orange) Clear CMOS Button | Power Button Power LED (blue) HDD/SSD LED (orange) Clear CMOS Button | Power Button Power LED (blue) HDD/SSD LED (orange) Clear CMOS Button |
| Connectors | HDMI 2.0b D-Sub VGA 2x USB 3.2 Gen 2 (10 Gbps) 4x USB 3.2 Gen 1 (5 Gbps) 2.5G LAN 2x COM Ports (RS232) Audio Line-out Microphone input DC input (12V and 19V) | HDMI 1.4b D-Sub VGA 4x USB 3.2 Gen 1 (5 Gbps) 2x USB 2.0 Internal USB port (type A) Gigabit LAN 2x COM Ports (RS232) Audio Line-out Microphone input SD Card Reader DC input (12V and 19V) | HDMI 1.4b D-Sub VGA 2x USB 3.2 Gen 1 (5 Gbps) 4x USB 2.0 Internal USB port (type A) Gigabit LAN 2x COM Ports (RS232) Audio Line-out Microphone input SD Card Reader DC input (12V and 19V) |
| Integrated Components | Full-HD Webcam Speaker (2W) Microphone | Full-HD Webcam Speaker (2W) Microphone | Full-HD Webcam Speaker (2W) Microphone |
| Power Adapter | 65W / 19V 3-pin AC cable (with PE) | 65W / 19V 3-pin AC cable (with PE) | 65W / 19V 2-pin AC cable (Euro) |
| TPM | Firmware TPM v2.0 | Firmware TPM v2.0 | Firmware TPM v2.0 |
| Optional Shuttle Accessories | WLN-M1 (Intel AX200 WLAN-AX module with external antennas) | PCP11 (1x COM) PCP21 (2x COM) | PNFC01 (NFC module) PCP11 (1x COM) PCP21 (2x COM) |
| UPC Code | 887993006536 | 887993004648 | 887993001487 887993003122 |

Product Comparison: Shuttle XPC All-in-One Models

| Chassis | Display Pixel / Type | CPU Type | Product Name by Intel processor-generations | | | | Chassis Colour |
|---|---|--------------------|--|-------------------------------|-----------------------|-----------------------|-------------------------|
| | | | Gen. 7 Kaby Lake | Gen. 8 Whiskey Lake | Gen. 10 Comet Lake | Gen. 12 Alder Lake | |
|  | 11.6" 1366 x 768 Capacitive Multitouch | Celeron or N100 | P20U | — | P22U | P25N | Black |
|  | 15.6" 1366 x 768 Resistive Singletouch | Celeron | X50V6 | X50V7 X50V7L *) | X50V8 | X50V9 | Black, White |
| | | Core i3 | X50V6U3 | X50V7U3 X50V7U3L *) | X50V8U3 | X50V9U3 | Black, White |
|  | 15.6" 1920 x 1080 Capacitive Multitouch | Celeron | — | P51U | P52U | TBA | Black |
| | | Core i3 | — | P51U3 | P52U3 | TBA | Black |
|  | 19.5" 1600 x 900 Capacitive Multitouch | Celeron | P90U | — | P92U | — | Black, White |
| | | Core i3 | P90U3 | — | P92U3 | — | Black, White |
| | | Core i5 | P90U5 | — | P92U5 | — | Black |

X50V7L and **X50V7U3L** are model variants without WLAN module

SHUTTLE XPC all-in-one BAREBONE P25N – SPECIFICATIONS

| | |
|--------------------------------|---|
| FANLESS AND SILENT | <p>Passive heatpipe cooling, absolutely no fan noise</p> <p>Perfect for noise-sensitive environments</p> <p>Fanless, dust-free and thus virtually maintenance-free</p> |
| 24/7 NONSTOP OPERATION | <p>This device is approved for 24/7 permanent operation. Requirements:</p> <ul style="list-style-type: none"> - 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. |
| IP54 PROTECTED | <p>The front panel is dust-protected and protected from splashing of water according to protection class IP54.</p> |
| CHASSIS | <p>Colour: black</p> <p>Dimensions: 29.9 x 20.7 x 5.9 cm (W x H x D)</p> <p>75x75 mm VESA mount capable</p> <p>Mounting hole for Kensington lock</p> <p>Weight: 1.95 kg net, 3.14 kg gross</p> |
| OPERATING SYSTEM | <p>This system comes without operating system.</p> <p>It is compatible with:</p> <ul style="list-style-type: none"> - Windows 10/11 - 64-bit - Linux - 64-bit |
| TOUCHSCREEN | <p>Touchscreen function supports fingertip input</p> <p>Capacitive Touch Panel with 10-point multi-touch</p> <p>Supports input with gloves (PVC, cotton, cotton/linen)</p> <p>Stylus pen not supported</p> |
| 11.6" DISPLAY | <p>29.5 cm / 11.6" LCD TN display</p> <p>Aspect ratio: 16:9 widescreen</p> <p>Resolution: 1366 x 768 = 1.05 Megapixel</p> <p>Backlight unit: LED, Luminance: 250 cd/sqm (typ.)</p> <p>Glass thickness: 3 mm</p> |
| PROCESSOR | <p>Model: Intel N100</p> <p>System-on-a-chip architecture (SoC): no chipset required</p> <p>FCBGA1264 package - directly soldered onto the mainboard</p> <p>Code name: Alder Lake-N (12th Generation Intel Core)</p> <p>Cores / Threads: 4 / 4</p> <p>Turbo clock rate: max. 3.4 GHz</p> <p>Smart Cache: 6 MB</p> <p>TDP wattage: 6 W</p> <p>Manufacturing process: Intel 7</p> <p>Maximum Tjunction Temperature: 105 °C</p> |
| INTEGRATED GRAPHICS | <p>Intel UHD Graphics</p> <p>GPU clock frequency: max. 750 MHz</p> <p>Execution Units (EUs): 24</p> <p>Supports DirectX 12.1</p> |
| SUPPORTS TRIPLE DISPLAY | <p>Two video ports support two additional independent screens:</p> <ol style="list-style-type: none"> 1) HDMI 2.0b supports 3840 x 2160 @ 60 Hz 2) VGA / D-Sub analog video supports 1920 x 1080 @ 60 Hz <p>Special conditions for operation in Multi-Monitor mode:</p> <ol style="list-style-type: none"> 1) Clone mode: all displays show the same content at 1366x768 resolution 2) Extended mode: all displays show different content |
| BIOS | <p>AMI BIOS in 32 MByte EEPROM with SPI interface</p> <p>Supports Power fail resume / always on</p> <p>Supports Wake-on-LAN (WOL) from S3, S4, S5 ACPI states</p> <p>Supports hardware monitoring and Watchdog functionality</p> <p>Supports Firmware TPM v2.0 functionality</p> |
| MEMORY SUPPORT | <p>1x SO-DIMM slot with 262 pins</p> <p>Supports DDR5-4800 (PC5-38400) SDRAM at 1.1 V</p> <p>or DDR5 memory with higher clock rate</p> <p>Supports a maximum capacity of 16 GB</p> |

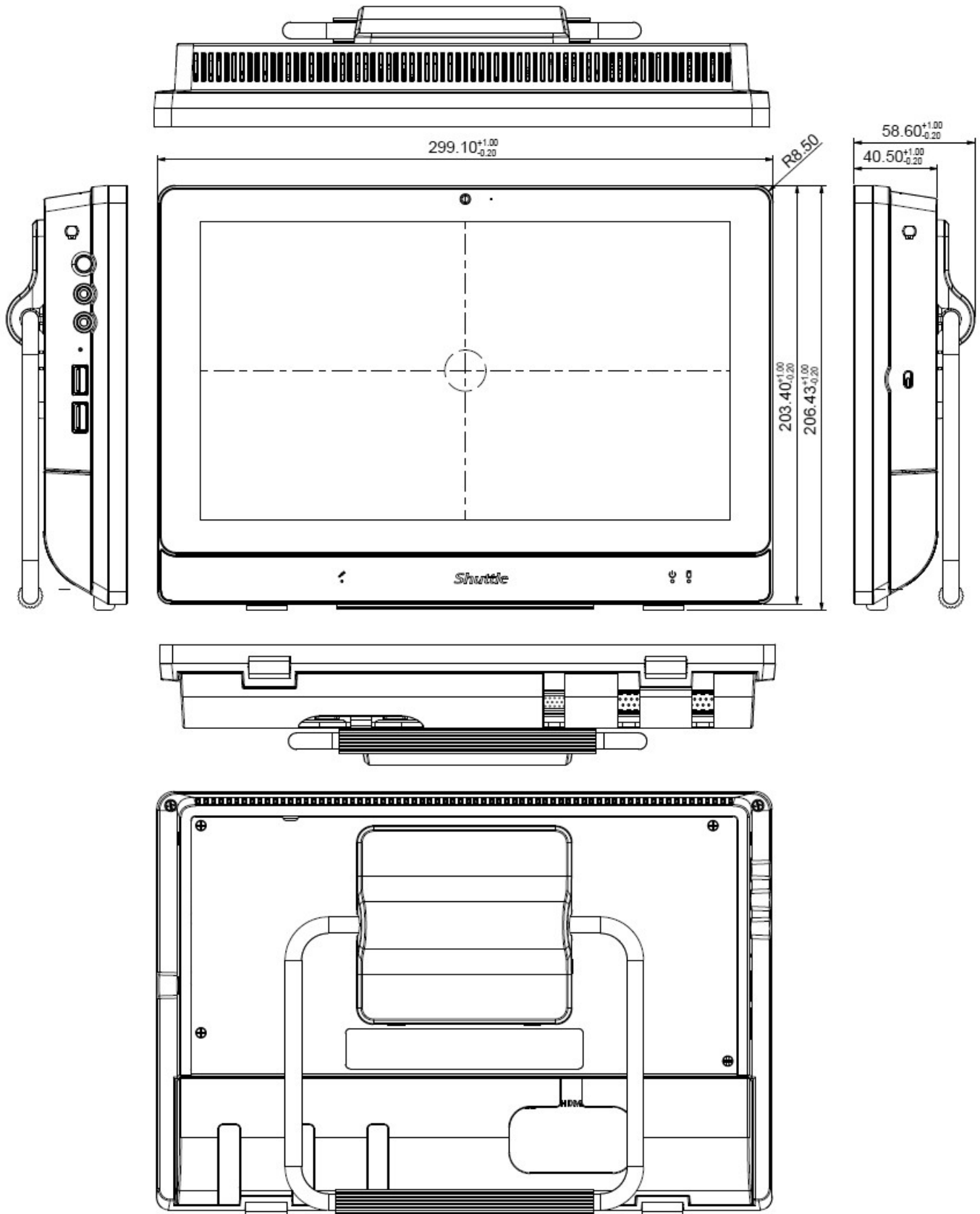
| | |
|------------------------------------|---|
| 2.5" BAY FOR HDD/SSD | Supports one SATA hard disk or one SATA SSD drive in 6.35 cm / 2.5" format The SATA 3.0 interface supports up to 600MB/s data transfer speed (6 Gbit/s) Supports one drive with up to 9.5 mm in height SATA cable pre-installed |
| M.2-2280M SSD SLOT | The M.2 2280 M slot provides the following interfaces: - PCI-Express Gen. 3.0 X2 - SATA v3.0 (max. 6 Gbps) It supports M.2 cards with a width of 22 mm and a length of 80 mm (type 2280). Supports M.2 SATA SSDs (with B+M key) and M.2 PCIe SSDs (with M key) |
| WEBCAM | Integrated Full HD webcam (1920 x 1080 pixels = 2 MP) |
| MICROPHONE AND SPEAKERS | With integrated Electret Condenser Microphone and 2 W speaker |
| INTEGRATED AUDIO | Realtek ALC888S (HD-Audio) Two analog audio connectors (3.5 mm) on the left side: 1) Line-out (head-phones) 2) Microphone input Digital multi-channel audio output is supported via HDMI. |
| WIRED NETWORK | Intel i226LM Ethernet Controller Supports 10 / 100 / 1.000 / 2500 Mbps operation Supports WAKE ON LAN (WOL) from S3/S4/S5 modes Supports network boot by Preboot eXecution Environment (PXE) |
| WIRELESS NETWORK (WLAN) | Built-in M.2-2230-E WLAN card with two internal antennas WLAN Controller Realtek RTL8821CE 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 |
| HOLES FOR OPTIONAL ANTENNAS | The chassis features two perforated 6.5 mm holes for optional antennas mounted with an (RP-)SMA connector for wireless network such as WLAN |
| FRONT LEDs | Power LED (blue) Hard disk LED (orange) |
| CONNECTORS LEFT SIDE | Power button 2x USB 3.2 Gen 2 (type A, red, max. 10 Gbps) Audio Line-out / headphones (3.5 mm jack) Microphone input (3.5 mm jack) Hole with Clear CMOS button |
| CONNECTORS RIGHT SIDE | Mounting hole for Kensington lock |
| CONNECTORS BOTTOM SIDE | HDMI 2.0b (supports digital video and digital audio) VGA connector (D-Sub 15 pol., analog video) 4x USB 3.2 Gen 2 (type A, blue, max. 5 Gbps) 2.5G Network (LAN, RJ45) 2x COM port (RS232) DC input for external power adapter (5.5 / 2.5 mm) |
| JUMPER CONFIGURATION | Jumper JP1 for power-on-after-power-fail (hardware solution) [1] |
| POWER ADAPTER | External 65 W power adapter (fanless) Input: 100~240 V AC, 50/60 Hz, max. 1.6 A Output: 19 V DC, max. 3.42 A, max. 65 W DC cable, ca. 170cm, 5.5 / 2.5 mm plug AC cable, ca. 170 cm, 3-pin Micky MM C6 and Schuko earthed safety plug |
| 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 | Quick Installation Guide Windows 10/11 Driver DVD External Power Adapter (65W / 19V) with 3-pin AC cable |
| OPTIONAL ACCESSORIES | WLN-M1: WLAN kit with Intel AX200 WLAN card (supports WLAN-ax / Wi-Fi 6) and two external antennas <u>Note:</u> a WLAN-ac / Wi-Fi 5 module with two internal antennas is already pre-installed by default. |
| ENVIRONMENTAL SPECIFICATIONS | Operating temperature: 0~40 °C Humidity: 10~90 % |
| CERTIFICATIONS / COMPLIANCE | EMI: CE, UKCA, FCC, BSMI, RCM, VCCI Safety: CB (IEC 60950/62368), cTUVus (UL 62368-1:2014), 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 ecodesign requirements for energy-related products (ErP) (4) 2014/53/EU Radio Equipment Directive (RED) |

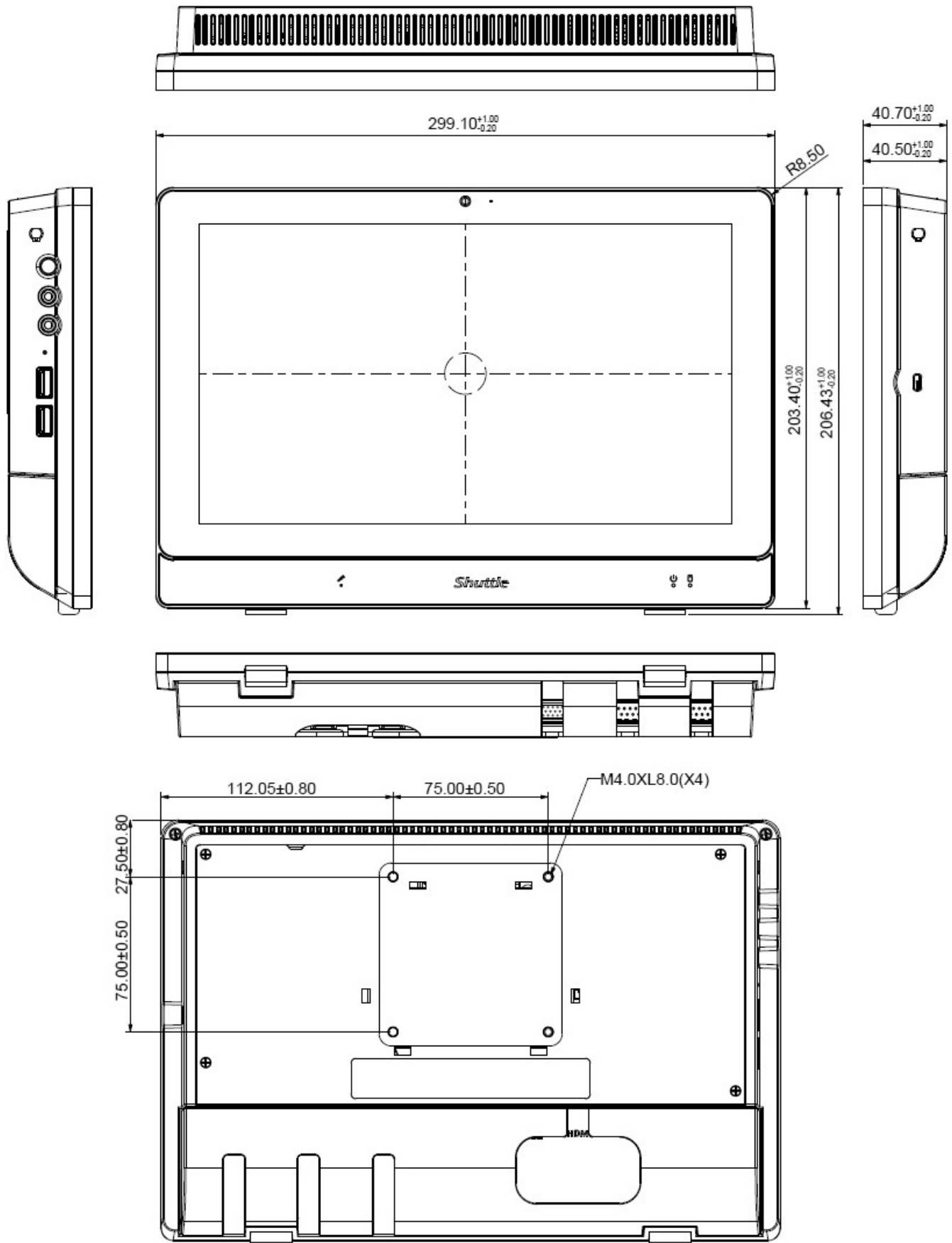
[1] Power-on-after-power-fail

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 this PC also comes with a hardware-based solution. By removing Jumper JP1 (on the mainboard near the power button) the system will start unconditionally once power is supplied.

P25N Drawings with stand



P25N Drawings without stand



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