

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

MODELS OF THE P25N SERIES

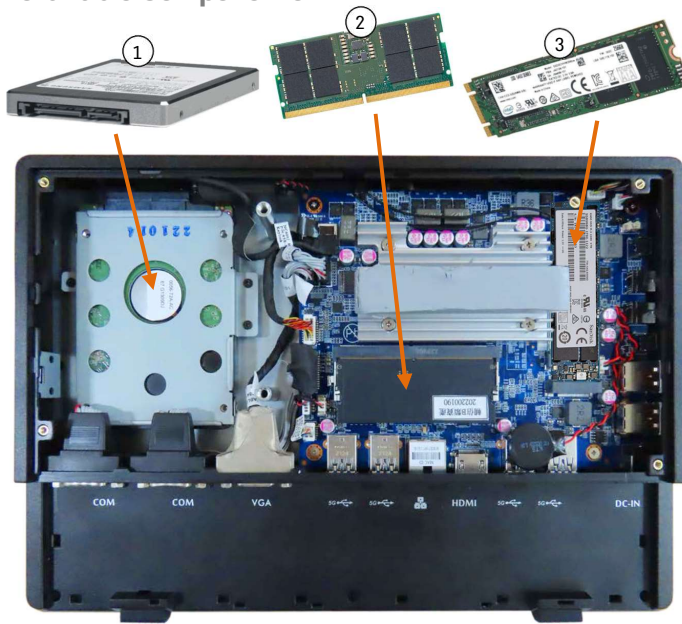
Product	Processor	Cores/Threads	Turbo Clock	Cache	TDP	Graphics clock	EUs	UPC Code	Remark
P25N	Intel N100	4 / 4	max. 3.4 GHz	6 MB	6 W	max. 750 MHz	24	887993006536	available
P25N2	Intel N200	4 / 4	max. 3.7 GHz	6 MB	6 W	max. 750 MHz	32	887993006543	Project order only
P25N3	Intel Core i3-N300	8 / 8	max. 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 SODIMM memory**
max. 1x 16 GB DDR5-4800 (or higher speed) SODIMM 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.

5. **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.



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) POV21 (Robust VESA Stand)	PCP11 (1x COM) PCP21 (2x COM) POV21 (Robust VESA Stand)	PNFC01 (NFC module) PCP11 (1x COM) PCP21 (2x COM) POV21 (Robust VESA Stand)
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	Passive heatpipe cooling, absolutely no fan noise Perfect for 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. - If a hard disk is installed, this must also be approved for permanent operation by its manufacturer.
IP54 PROTECTED	The front panel is dust-protected and protected from splashing of water according to protection class IP54.
CHASSIS	Colour: black Dimensions: 29.9 x 20.7 x 5.9 cm (W x H x D) 75x75 mm VESA mount capable Mounting hole for Kensington lock Weight: 1.95 kg net, 3.14 kg gross
OPERATING SYSTEM	This system comes without operating system. It is compatible with: - Windows 10/11 - 64-bit - Linux - 64-bit
TOUCHSCREEN	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
11.6" DISPLAY	29.5 cm / 11.6" LCD TN display Aspect ratio: 16:9 widescreen Resolution: 1366 x 768 = 1.05 Megapixel Backlight unit: LED, Luminance: 250 cd/sqm (typ.) Glass thickness: 3 mm
PROCESSOR	Model: Intel N100 System-on-a-chip architecture (SoC): no chipset required FCBGA1264 package - directly soldered onto the mainboard Code name: Alder Lake-N (12th Generation Intel Core) Cores / Threads: 4 / 4 Turbo clock rate: max. 3.4 GHz Smart Cache: 6 MB TDP wattage: 6 W Manufacturing process: Intel 7 Maximum Tjunction Temperature: 105 °C
INTEGRATED GRAPHICS	Intel UHD Graphics GPU clock frequency: max. 750 MHz Execution Units (EUs): 24 Supports DirectX 12.1
SUPPORTS TRIPLE DISPLAY	Two video ports support two additional independent screens: 1) HDMI 2.0b supports 3840 x 2160 @ 60 Hz 2) VGA / D-Sub analog video supports 1920 x 1080 @ 60 Hz Special conditions for operation in Multi-Monitor mode: 1) Clone mode: all displays show the same content at 1366x768 resolution 2) 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	1x SO-DIMM slot with 262 pins Supports DDR5-4800 (PC5-38400) SDRAM at 1.1 V or DDR5 memory with higher clock rate Supports a maximum capacity of 16 GB

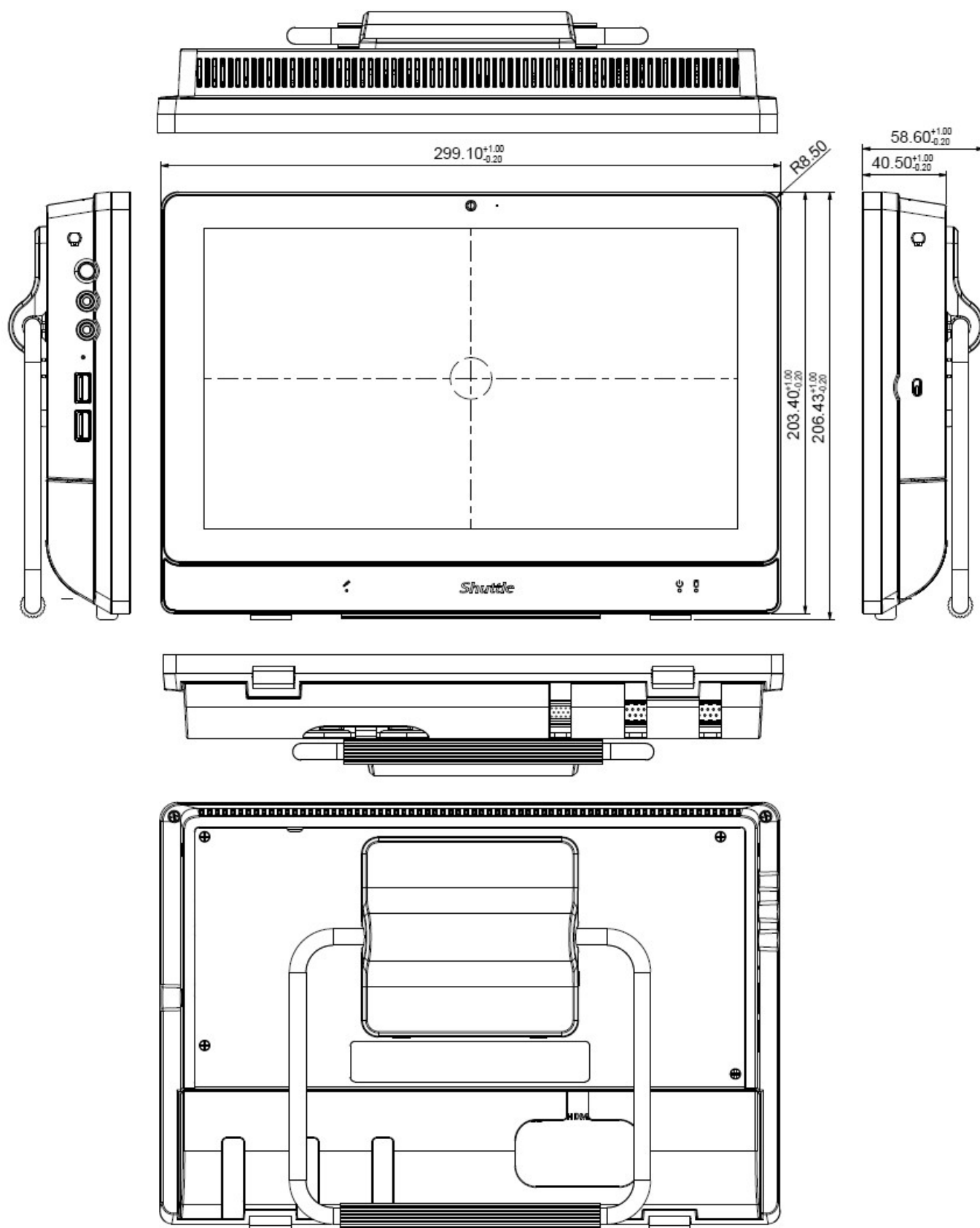
2.5" BAY FOR HDD/SSD	Supports one SATA hard disk or one SATA SSD drive in 6.35 cm / 2.5" format The SATA 3.0 interface supports up to 600MB/s data transfer speed (6 Gbit/s) Supports one drive with up to 9.5 mm in height SATA cable pre-installed
M.2-2280M SSD SLOT	The M.2 2280 M slot provides the following 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	- WLAN Kit WLN-M1: this WLAN upgrade kit includes one 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. - Robust VESA Stand POV21: supports one or two AIO-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 %
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

