Item no.: 375285

XH610 - XPC slim

from **352,26 EUR**

Item no.: 375285
shipping weight: 3.20 kg
Manufacturer: Shuttle

📄 Product Description

The Shuttle XPC slim Barebone XH610 is a true space miracle - the robust steel case can be equipped with an optical drive, two 2.5" drives and an M.2 SSD. Choose a powerful Intel Core desktop processor with socket LGA1700 *). The built-in heatpipe cooling system ensures quiet and reliable operation. The variety of connections allows a wide range of applications from standard office PCs to industrial applications. The system supports two digital displays with Ultra HD resolution, one VGA display, two Intel network connections (2.5G + 1G), four USB 3.2 Gen 1 and four USB 2.0 ports and up to five COM ports. Who needs a bulky ATX tower PC with all this equipment?*) A BIOS update may be necessary for Intel Core Gen13 and Gen14 (to be carried out with a compatible processor)Case- Flat 3.5 litre case, colour: black- Dimensions: 23.8 x 20 x 7.25 cm (LBH without rubber feet) = approx. 3.5 litres- Height with rubber feet: approx. 7.33 cm- Weight: 2.2 kg net, 3.5 kg gross- Open front - without cover flaps for optical drive and front panel connections- Opening for the Kensington Lock on the rear of the device- Operating position horizontal or vertical with the optional stand PS01Power supply- External 120 W power supply (fanless)- Input: 100-240 V AC, 50/60 Hz- Output: 19 V DC, max. 6.32 A, max. 120 W output power- DC plug: 5.5 / 2.5 mm (outer/inner diameter)- AC cable: 3-pin, approx. 1.8 m long, with C5/C6 cloverleaf plug connection to the power supply unit and CEE-7/7 plug with earthing contact (type E+F) for connection to the socket- Note: The DC input of the computer supports an external power supply with 12V±5% and 19V±5%.Operating system- This system is supplied without an operating system.- It is compatible with Windows 10/11 and Windows XP. It is compatible with Windows 10/11 and Linux (64 bit)Processor support- Processor socket LGA1700- Supports Intel Core i9 / i7 / i5 / i3, Pentium Gold and Celeron processors- Supports the following generations of Intel Core processors:Gen 12 "Alder Lake-S"Gen 13 "Raptor Lake-S" since BIOS version 203 available since Mar'23 *)Gen 14 "Raptor Lake-S Refresh" since BIOS version 206 available since Jan'24 *)- Intel-7 technology (10 nm)- Supports only processors with integrated graphics [5]- Maximum supported processor power dissipation (TDP) = 65 W.- Does not support the unlock function of Intel processors of the K series.- The processor integrates the controllers for PCI Express and memory and the graphics function on the same semiconductor chip(The performance features depend on the processor model.)*) Attention: if a BIOS update is necessary, the PC must first be started with a compatible processor.Download website: https://global.shuttle.com/support/download.- Processor heatpipe cooling Processor heatpipe cooling- Processor cooling with heatpipe technology and two fans (6 cm)Mainboard / Chipset / BIOS- Mainboard in Mini-ITX format 17 x 17 cm- Chipset: Intel® H610- AMI BIOS in 32 MB EEPROM- High-quality solid capacitors- Supports hardware monitoring and watchdog function- Supports the Unified Extensible Firmware Interface (UEFI)- Supports power on after power failure [1]- Supports firmware TPM v2.0 (fTPM) firmwareMemory support- 2x SO-DIMM slot with 260 pins- Supports DDR4-3200/2933/2666/2400/2133 (PC4-25600/23466/21300/19200/17000) SDRAM with 1,2 V- Supports dual-channel mode- Supports a maximum of 32 GB per slot- Maximum total capacity 64 GB- Supports unbuffered DIMM modules (no ECC or registered)Integrated graphics function- The features of the integrated Intel UHD graphics function- depend on the processor type used [5].- The PC offers three video outputs:1x HDMI v2.0b (supports 1080p/60 and 2160p/60)1x DisplayPort v1.4a (supports 1080p/60 and 2160p/60)1x Analogue VGA (15-pin D-Sub, supports 1080p/60)- Supports three independent displays simultaneously via the integrated graphics function.- DisplayPort and HDMI support multi-channel graphics. DisplayPort and HDMI support multi-channel digital audio via the same cable.5.1-channel sound- Audio Realtek® ALC 897/662/888 High-Definition Audio- Three analogue 3.5mm audio connectors on the rear:1) Line-out front (headphones)2) Line-out rear (switchable to microphone input)3) Line-out centre (switchable to line-in)- Digital audio output via HDMI and DisplayPort possibleDual network controller- Two RJ45 network connections, each with two status LEDsyellow LED: Lights up when data transfer is activeGreen LED for speed mode: off at 10 Mbit/s, lights up at 100 Mbit/s and higher- Network chips used:1) Intel 225 supports 100 / 1.000 / 2,500 MBit/s data transfer rate2) Intel 219Lm supports 10 / 100 / 1,000 MBit/s data transfer rate- PCIe interface- Supports WAKE ON LAN (WOL)- Supports booting from the network via Preboot eXecution Environment (PXE)-M.2-2280M SSD slot- The M.2 2280M slot offers the following interfaces:PCI-Express Gen. 3.0 X4 supports NVMeSATA v3.0 (max. 6 Gbit/s)- The M.2 2280M slot used must be 22 mm wide and have the following interfacesplug-in cards used must be 22 mm wide and can have a length of 42, 60 or 80 mm (type 2242, 2260, 2280).- Supports M.2 SSDs with SATA or PCI Express interfaceM.2-2230E slot for WLAN cards- Interfaces: PCI-Express Gen. 2.0 X1 and USB 2.0- Used M.2-2230-plug-in cards used must be 22 mm wide and 30 mm long (type 2230)- Supports WLAN expansion cards- Optional Shuttle accessories: WLN-M / WLN-M1 [4]Connections for drives- 3x Serial ATA connection, max. 6 Gb/s- Supports NCQ and AHCIDrive baysThis system has three drive bays:1) supports an optical drive in 5.25" slimline format with 12.7 mm height - can also be used for a 2.5" drive2) 2.5" slot at the top supports a 2.5" drive with max. 12.5 mm height3) 2.5" slot at the bottom supports a 2.5" drive with max. 9.5 mm heightThe following drive cables are already pre-installed:- 2x power connectors for 2.5" drives (5 volts [6])- 1x SATA cable for one 2.5" drive- 1x combo connector (SATA+power) for optical slimline drive- screws for one optical slimline drive- screws for two 2.5" drivesNote: The system is prepared for one 2.5" drive (hard disk or SSD) and one optical drive in slimline format.Additional SATA cables are required for further 2.5" drives. Four additional M3x4 screws are required for a third 2.5" drive.The optional PHD4 accessory enables the installation of a 3.5" hard drive [8].Front connections- Microphone input- Audio line-out (headphones)- 1x USB 3.2 Gen 1 Type A (max. 5 Gbit/s, blue)- 1x USB 3.2 Gen 1 Type C (max. 5 Gbit/s)- 2x USB 2.0 (black)- On/Off button- Power indicator LED (blue)- Hard drive LED (yellow)Rear connections- 1x DisplayPort 1.4a audio/video output [2]- 1x HDMI 2.0b audio/video output- 1x analogue VGA video output (15-pin D-Sub)- 2x USB 3.2 Gen 1 Type A (max. 5 Gbit/s, blue)- 2x USB 2.0 (black)- 2x RJ45 LAN (1 Gbit/s and 2.5 Gbit/s)- 1x COM (RS232) - on the right side- 1x COM (RS232/422/485) - centre/bottom- 3x audio 3.5mm (line-in, line-out, microphone-in)- 1x DC input for external power supply (supports 12V±5% or 19V±5%)- 1x four-pin connector (2.54 mm pitch) supports:- external power button (see optional accessory CXP01)- Clear CMOS function- 5V DC voltage for external components- 2x perforation for wireless LAN antennas- 1x opening for Kensington lockFurther onboard connections- Jumper JP4 for Power-On-after-Power-Fail (hardware solution) [1]- Front connections for button, LEDs, USBs and audio ports- USB 2.0 connector (4-pin connector)- 4x RS232 COM port connector (2x 5 pins each, 2 mm pitch) - 1x occupied- Two 4-pin fan connectors (one occupied for the CPU cooling system)- Connectors for SATA voltage: 5V (4 pins, occupied) and 12V (3 pins)Supplied accessories- Multilingual installation guide (DE, EN, FR, ES, JP, KR, SC, TC)- DVD with Windows driver software and manuals in PDF format- Pre-installed SATA and power cables for a 2.5" drive and a slimline drive- External power supply unit with approx. 1.8m AC power cable (with earthing contact)- Protective cap for the CPU socket (do not use if heatpipe or cooler are installed)- CPU heatpipe cooling system pre-installed with thermal paste- 2 screws (M3x5, silver) for mounting two M.2plug-in cards- 8 screws (M3x4, black) for mounting two 2.5" drives- 4 screws (M2x2.5, silver) for mounting an optical slimline driveOptional accessories- PS01: Stand for vertical operation- PV02: VESA holder- WLN-M (802.11ac, Wifi 5) or WLN-M1 (802.11ax, Wifi 6): WLAN module [4]- PHD4: 3.5" drive holder [8]- CXP01: Adapter cable for an external power button- PCM31: Adapter for three additional RS232 COM ports [3]- Environmental parameters- Permissible operating temperature range: 0-50°C [7]- Permissible relative humidity: 10-90% (non-condensing)Conformity and certificates- EMC: CE, UKCA, FCC, BSMI, RCM, VCCI- Safety: CB 60950/62368, cTUVus, BSMI- Other: RoHS, Energy Star, ErP- This device is categorised as Class B information technology equipment (ITE) and is primarily intended for use in residential and office environments. The CE mark confirms compliance with the following EU directives:(1) Directive 2014/30/EU on electromagnetic compatibility (EMC)(2) Directive 2014/35/EU on the safety of electrical equipment (LVD)(3) Directive 2009/125/EC on the ecodesign of energy-related products (ErP)[1] Power-On-after-Power-Fail:In the BIOS setup under "Power Management Configuration" there is the function "Power-On-after-Power-Fail", which defines how the PC reacts after a power failure: (1) switch on unconditionally, (2) restore status before the power failure or (3) leave switched off. In principle, however, this function can fail in the event of very short power failures, so that this PC also has a pure hardware solution. If the corresponding jumper JP4 is removed, the PC will always start as soon as the power supply is restored.[2] Convert DisplayPort to HDMI/DVIThe DisplayPort output supports dual-mode (DP++) and can be converted to HDMI or DVI using an inexpensive, passive adapter cable. For example:DELOCK 82590: 1m, DisplayPort (male, 20P) to HDMI-A (male, 19P)DELOCK 82435: 5m, DisplayPort (male, 20P) to DVI-D (male, 24P)The integrated graphics function recognises the characteristics of the connected display and outputs the appropriate electrical signal - either DisplayPort (without adapter) or HDMI/DVI (with adapter). However, DVI/HDMI monitors are only operated in single-link mode, i.e. with max. 1920x1200/60 HzConversely, a monitor with DisplayPort cannot be connected to the HDMI output via a simple, passive adapter.[3] Optional COM port accessory PCM31Add three additional COM ports to the front of this PC, but you will no longer be able to install an optical drive.[4] Optional wireless LAN module: this Slim PC can be optionally upgraded with WLAN/Bluetooth functionality. Shuttle offers the matching accessory kits "WLN-M" and "WLN-M1", consisting of a WLAN card in M.2-2230format and two external antennas with matching antenna cables. [5] Intel processors without integrated graphics function, recognisable by the letter "F" in the processor designation, e.g. Core i7-12700F,are not compatible.[6] 12V power supply for SATA drivesThe supplied power cables for SATA drives provide a 5V line. In rare cases, however, 2.5" hard drives also require a 12V line (e.g. Seagate Constellation® series) - this is not supported as standard (only by means of an adapter, which is included with the PHD4).[7] High ambient temperatureSSD drives are recommended instead of hard drives for high ambient temperatures above 40°C.[8] The optional PHD4 accessory enablesthe installation of a hard drive in 3.5" format. Additional drives (slimline DVD or 2.5" hard disk/SSD) then have no more space.[9] XH610(V)supports Intel Core processors of the 12th/13th/14th generationThe Shuttle XPC cube XH610 / XH610V supports Intel Core desktop processors with Socket LGA1700. Generation 12 (Alder Lake-S) is supported from the start. Generation 13 (Raptor Lake-S) is supported since BIOS version 203. Generation 14 (Raptor Lake-S Refresh) has been supported since BIOS version 206. Attention: if a BIOS update is necessary, the PC must first be started with a compatible processor. Download website: https://global.shuttle.com/support/download.

📄 Specifications