Fanless 1-litre PC suitable for 24/7 operation

The Shuttle XPC slim DL1000XA is a fanless Slim PC system with an energy-efficient Intel Celeron J4005 "Gemini Lake" processor. The integrated graphics is based on Intel's powerful Intel UHD Graphics 600 (9th gen) that supports hardware acceleration for 4K video encoding/decoding with H.265 and VP9 thanks to the DisplayPort. This PC works virtually noiseless and is therefore perfectly suited for noise-sensitive environments. Additiony, it is approved for 24/7 permanent operation.

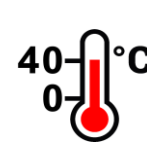*Shuttle XPC slim System*
Office DL1000XA
without operation system

Feature Highlights

Chassis	• Black 1.35-litre chassis • Dimensions (LWH): 19 x 16.5 x 4.3 cm • Hole for the Kensington Lock • Including VESA75/100 mounting kit • Operating temperature max. 40 °C • Approved for 24/7 non-stop operation
Operating System	• Without operating system • Compatible with Windows 10 (64-bit) and Linux (64-bit)
CPU	• Intel® Celeron® J4005 "Gemini Lake" 2.0~2.7 GHz Dual Core 10 W SoC • Noiseless, fanless cooling system
Graphics	• Integrated Intel UHD Graphics 600 (Gen 9)
Memory	• 4 GB DDR4 SO-DIMM module (260-pin) supports max. 8 GB DDR4-2400 (1x 8 GB or 2x 4 GB)
Storage	• 120 GB SSD drive (2.5" format, SATA) • M.2-2280 slot (PCIe and SATA 6G) • With SD card reader (SD/SDHC/SDXC)
Connectors and WLAN	• HDMI 1.4b, DisplayPort 1.2, D-Sub/VGA (*) • 2x USB 3.0, 4x USB 2.0, 2x COM (serial) • 2x Audio (mic, headphones) • Intel Gigabit-LAN, WLAN 802.11n (1T1R) • Connector for external power button
Power Supply	• External 40 W fanless power adapter
Optional Accessories	• Vertical stand (**PS02**), 2U plate (**PRM01**) • Cable for external power button (**CXP01**) • Adapter for LTE module and SIM card (**WWN01**)
Applications	• Office, Home Media, Digital Signage

Images for illustration purposes only. The WLAN antenna and VESA mounting kit are included in the scope of delivery.
(*) the D-Sub/VGA port does not support Hotplug

intel CELERON inside™

nonstop 24/7

(intel) LAN

Dual COM

40 °C 0

Triple Monitor Support

4K 2160p ULTRA HD 3840 x 2160

Optional: **Internal LTE module**

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Shuttle XPC slim System DL1000XA – Front and Back Panel

Front View

1 Microphone input
2 Headphones output
3 Power LED
4 Hard disk / SSD LED
5 Power Button
6 SD Card Reader
7 2x USB 3.0

Rear View
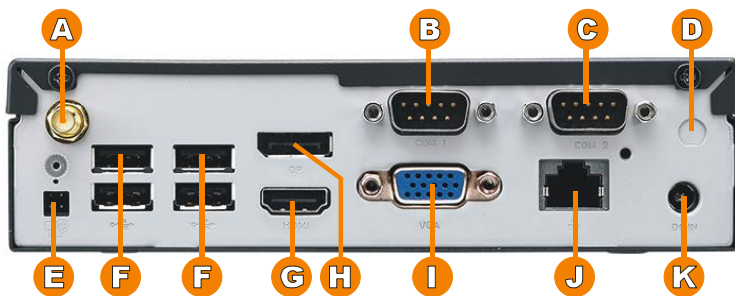
A Connector for the included WLAN antenna
B COM 1 port (supports RS232/RS422/RS485)
C COM 2 port (supports RS232)
D Perforation for antenna
E Connector for external power button, Clear CMOS and 5 V DC voltage (four pins, 2.54 mm pitch)
F 4x USB 2.0
G HDMI 1.4b video output
H DisplayPort (DP 1.2) video output
I D-Sub/VGA video output
J RJ45 Gigabit LAN port
K DC power input
L 2x hole for Kensington Lock
M VESA mount (two parts)

Right Side

Front — Rear

Left Side

Rear — Front

Product Comparison

Name	Type	Basis	RAM	Storage	Operating System	UPC/EAN Code
DL10J	Barebone	DL10J	—	—	—	887993001418
DL1000XA	System	DL10J	4 GB	120 GB SSD (2.5")	—	4046047103379
DL1000EP	System	DL10J	4 GB	32 GB SSD (M.2)	Windows 10 Pro	4046047103386

Shuttle XPC slim System DL1000XA – Optional Accessories

Stand for vertical operation (PS02)

Adapter cable for external power button (CXP01)

2U rack mount front plate for two Shuttle XPC slim (PRM01)

Adapter for LTE module and SIM card incl. 2 antennas & cables (WWN01) [2]

Shuttle XPC slim System DL1000XA - Specifications

Fanless and silent	Completely fanless, virtualy noiseless Passive cooling through convective heat transfer Perfect to be used in noise-sensitive environments Fanless means less dust and thus virtually no maintenance required
Energy Efficient	Power consumption in idle mode: 4.6 W Power consumption under full load: 11.3 W / 17.6 W (CPU / CPU+graphics) (measured with 1x 4 GB DDR4-2400 SO-DIMMs and 120 GB 2.5" SSD under Windows 10 64-bit)
Chassis	Slim PC with black chassis made of steel Dimensions: 190 x 165 x 43 mm (LWH) = 1.35-litre Weight: 1.3 kg net and 2.1 kg gross Two holes for Kensington Lock and numerous threaded holes (M3) at both sides of the chassis
Operation Position	1) Horizontal 2) Vertical with mounted feet. These feet can be purchased as optional accessory PS02. 3) Vertical (e.g. VESA-mounted behind an appropriate monitor) In vertical position, the front USB ports should point upward. Ventilation holes must not be blocked to ensure sufficient cooling.
Operating System	This system comes without operating system. It is compatible with: - Windows 10 (64-bit) - Linux (64-bit) Note: Windows 7, 8 and 8.1 are not supported
Processor	Intel® Celeron® Processor J4005, Dual Core CPU clock frequency: 2.0 GHz, max. Turbo frequency: 2.7 GHz Gemini Lake Core, Goldmont Plus microarchitecture 14 nm structure, FCBGA1090 package (soldered) CPU cores / Threads: 2 / 2 L2 Cache: 4 MB Thermal Design Power (TDP): 10 W Supports x86-64, AES-NI, VT-x (EPT), VT-d System-on-Chip processor (SoC) with integrated graphics processor, no chipset required

w w w . s h u t t l e . e u

Integrated Graphics	The Graphics Processing Unit (GPU) is integrated in the processor Intel® UHD Graphics 600 (9th Gen), graphics frequency: 250~700 MHz Supports DirectX 12, OpenGL 4.3, OpenCL 1.2, OpenGL ES 3.0, Intel Quick Sync Video, Intel Clear Video (HD) Execution Units (EU): 12 Triple Display Support via three video outputs: - HDMI 1.4b: max. 4096 x 2160 @ 30 Hz or 1920 x 1200 @ 60 Hz - DisplayPort 1.2: max. 4096 x 2160 @ 60 Hz - D-Sub (VGA): max. 1920 x 1200 resolution @ 60 Hz Supports two digital displays and one analog display simultaneously. The D-Sub/VGA connector does not support the Hot Plug feature.
UEFI Firmware	16 MB Flash ROM with AMI's Aptio UEFI BIOS Firmware Based on the Unified Extensible Firmware Interface (UEFI) [1] Supports Power fail resume / AC power on state / always on / always off [3] Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states Supports boot up from external flash memory cards With embedded Firmware TPM v2.0 (fTPM)
Memory	4 GB DDR4-2400 SO-DIMM memory module with 260 pins Maximum total size: 8 GB (either 1x 8 GB or 2x 4 GB) Supports DDR4-2400 (PC4-19200U) SDRAM at 1.2V Supports two unbuffered DIMM modules (no ECC)
2.5" SSD storage	120 GB SSD storage drive in 6.35 cm / 2.5" format Serial ATA III Interface with up to 600 MB/s transfer speed Supports Unified Extensible Firmware Interface (UEFI)
M.2 Slot for SSD card	M.2 2280 BM slot Interfaces: PCI-Express Gen. 2.0 X2 and SATA v3.0 (max. 6 Gbit/s) Supports M.2 cards with a width of 22 mm and a length of 42, 60 or 80 mm (type 2242, 2260, 2280) Supports SATA SSDs (BM-Key) or NVMe PCIe SSDs (M-Key)
Integrated Audio	Realtek ALC269 Audio Codec Two analog audio connectors (3.5 mm): 1) Line out (headphones) 2) Microphone input Onboard connector for 2x 2 Watt speakers Digital multi-channel audio output: via HDMI and DisplayPort
Card Reader	Integrated card reader supports standard SD, SDHC and SDXC memory flash cards Supports boot from SD card Controller: Realtek RTS5170 Media Processor
Wired Network	RJ45 connector supports Gigabit LAN at 10/100/1000 Mbit/s Intel i211 Ethernet Controller with MAC, PHY and PCIe interface Supports Wake-on-LAN

Wireless Network	M.2-2230 WLAN card with Realtek RTL8188EE Controller Supports IEEE 802.11b/g/n Max. 150Mbps up-/downstream (1T1R) at 2.4 GHz One external antenna supplied
LEDs and Buttons	Power button Power LED (blue) HDD LED (yellow)
Front Panel Connectors	2x USB 3.0 SD card reader Audio line-out (headphones) Mic-in
Back Panel Connectors	HDMI 1.4b digital video and audio output DisplayPort 1.2 digital video and audio output D-Sub/ VGA analog video output (15-pin) - no hot plug 4x USB 2.0 Gigabit network (LAN, RJ45) 2x RS232 serial port, 9-pin D-Sub (support of an auxiliary voltage of 5 / /12 V, the left port is switchable to RS422 / RS485) [6] DC input for the external power adapter 4-pin connector (2.54 mm pitch) supports - external power on button - Clear CMOS function - +5V DC voltage for external components External WLAN antenna (perforation for second antenna available)
Other Onboard Connectors	Connector SPK1 (4-pin) supports two 2 W speakers Connectors COM1/COM2 for serial ports (occupied) Connector CN9 for supplied CMOS battery (type CR2032) Jumper JP2 for power-on-after-power-fail (hardware solution) [3]
Power Supply	External 40 W AC/DC power adapter (fanless) AC Input: 100~240 V AC, 50~60 Hz DC Output: 19 V / 2.1 A Automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH)
DC Input connector	DC Connector: 5.5 /2.5 mm (outer/inner diameter) The DC-input of the computer supports an external power source with either 12 V ±5% or 19 V ±5%.

Supplied Accessories	Multi-language user guide (EN, DE, FR, ES, JP, KR, SC, TC) VESA mount for 75 / 100 mm standard (two metal brackets) Four thumbscrews M3 x 5 mm (screws together VESA mount and PC) Four screws M4 x 10 mm (to affix VESA mount on the PC) Four screws M3 x 4 mm (to mount a 2.5" storage into the bay) Driver DVD (Windows 64-bit) External 40 W power adapter with power cord
Optional Accessories	- **PS02:** optional stand for vertical operation - **CXP01:** adapter cable for external power button - **PRM01:** 2U rackmount front plate for two Shuttle XPC slim PCs - **WWN01:** adapter plus 2 antennas & cables supports one M.2 LTE module and one SIM card **[2]**
24/7 Nonstop Operation	This device is approved for 24/7 permanent operation. Requirements: - Free air circulation around the PC must be guaranteed. - Ventilation holes must be kept clear. - Any installed disk must also be approved for permanent operation by its manufacturer
Environ-mental spec.	Operating temperature range: 0 ~ 40 °C Relative humidity range: 10 ~ 90 % (non-condensing)
Certification and Compliance	EMI: FCC, CE, BSMI, RCM, VCCI, RED Safety: CB, BSMI, ETL Other: RoHS, Energy Star, ErP 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) 2004/108/EC relating to electromagnetic compatibility (EMC), (2) 2006/95/EC 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) 1999/5/EC related to Radio and Telecommunications Terminal Equipment (R&TTE)

[1] UEFI-Firmware (versus BIOS)

Just as with many modern PCs, the Shuttle XPC slim System DL1000XA does away completely with a BIOS, but uses a pure UEFI firmware instead. The terms UEFI firmware and BIOS are widely used synonymously, but hardware initialising is now performed by the UEFI. Users might not even notice, but the operating system must be installed and executed in UEFI mode. UEFI creates a GUID Partition Table (GPT) on the system partition instead of a Master Boot Record (MBR). A PC running pure UEFI firmware alone must have a 64-bit operating system installed.

[2] Optional LTE support

Shuttle provides the optional "Shuttle Accessory WWN01" which consists of an adapter card, two antennas plus 20 cm antenna cables. The adapter card replaces the standard WLAN card in the M.2-2230 slot and works as a riser card for a 3G/LTE card and a SIM card. The 3G/LTE card must have M.2-3042 Key B format with MHF IV (I-PEX4) connectors for the antenna. In addition, it supports one Nano-SIM card (Mini and Micro format is not supported). The required 3G/LTE card and SIM card are not included in WWN01.

[3] 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 the Shuttle XPC slim System DL1000XA also comes with a hardware-based solution. By removing Jumper JP1 (on the mainboard behind the D-Sub/VGA port) the system will start unconditionally once power is supplied.

[4] HDMI output supports DVI-D with optional adapter

[5] How to convert DisplayPort into HDMI/DVI

The DisplayPort output can be converted to HDMI or DVI by an additional, passive adapter cable. For example:
DELOCK 82590: 1 m, DisplayPort (male, 20p) to HDMI-A (male, 19p)
DELOCK 82435: 5 m, DisplayPort (male, 20p) to DVI-D (male, 24p)
The integrated graphics automatically detects the connected display and puts out the appropriate electric signal - either through DisplayPort (without an adapter) or HDMI/DVI (with an adapter).
However, a monitor with a DisplayPort connector cannot be connected to the HDMI port with a simple, passive adapter.

[6] Serial Ports

This PC features two serial RS232 ports with 9-pin D-Sub connectors on the back panel. The left COM port (COM1) can also be configured as RS422 and RS485 in the BIOS setup.
Pin 9 of the D-Sub COM-Port is a multi-functional signal. Based on the Jumper JP2 configuration on the mainboard, it can be configured as Ring Indicator (RI) or external power supply with a voltage level of either 5 V or 12 V. Each COM port can be configured separately. The maximum current is 500 mA per connector.