

Shuttle DH610

Shuttle XPC Slim DH610 Barebone PC Instruction Manual

Model: DH610

1. INTRODUCTION

This manual provides essential instructions for the setup, operation, maintenance, and troubleshooting of your Shuttle XPC Slim DH610 Barebone PC. The DH610 is a compact and versatile barebone system designed to support Intel 12th and 13th Generation LGA1700 processors, offering robust performance for various applications including office, digital signage, and kiosks.

2. SAFETY INFORMATION

Please read and follow these safety guidelines to prevent damage to the device or injury to yourself:

- Always disconnect the power cord before performing any installation or maintenance.
- Ensure the system is placed on a stable, flat surface with adequate ventilation.
- Do not expose the device to moisture, extreme temperatures, or direct sunlight.
- Only use the power adapter provided or an approved equivalent.
- Refer to qualified service personnel for any repairs not covered in this manual.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Shuttle XPC Slim DH610 Barebone PC Unit
- VESA Mount Kit
- Power Adapter and Cord
- Accessory Pack (screws, cables, etc.)
- Quick Start Guide (if included)

4. SETUP AND INSTALLATION

The Shuttle DH610 is a barebone system, requiring the installation of a CPU, RAM, and storage devices before operation.

4.1. Opening the Chassis

Carefully remove the chassis cover to access the internal components. Typically, this involves unscrewing a few screws on the rear or sides of the unit and sliding the cover off.



Image: The Shuttle XPC Slim DH610 with its top cover removed, showing the internal layout including cooling fans and the motherboard.

4.2. CPU Installation

The DH610 supports Intel 12th/13th Generation Alder Lake-S LGA1700 processors with a maximum TDP of 65W. Ensure your chosen CPU has integrated graphics, as the system does not support F-series processors without integrated graphics or K-series processors.

1. Open the CPU socket lever and remove the protective cover.
2. Carefully align the CPU with the socket, matching the triangular markers.
3. Gently place the CPU into the socket without forcing it.
4. Close the socket lever to secure the CPU.
5. Install the CPU cooler according to its manufacturer's instructions.



Image: A detailed view of the Shuttle DH610 motherboard, highlighting the LGA1700 CPU socket, RAM slots, and other integrated circuits.

Note: For 13th Gen Intel Processors, BIOS Version DH610000.202 or newer is required. Update BIOS if necessary after initial setup with a 12th Gen CPU or via a compatible method.

4.3. RAM Installation

The system features two 260-pin dual-channel DDR4 SODIMM slots, supporting up to 64GB (2x 32GB) at 3200MHz. Dual-channel memory is recommended for optimal performance.

1. Locate the SODIMM slots on the motherboard.
2. Align the notch on the RAM module with the key in the slot.
3. Insert the module at a 45-degree angle and push down until the clips on both sides snap into place.

4.4. Storage Installation

The DH610 supports one 2.5-inch HDD/SSD and one M.2 2280 SSD.

1. **2.5" Drive:** Mount the 2.5" HDD/SSD into the designated bay using the provided screws and connect the SATA data and power cables.
2. **M.2 SSD:** Insert the M.2 2280 SSD into its slot, securing it with the provided screw.

4.5. Connecting Peripherals

After installing internal components, reattach the chassis cover. Connect your peripherals to the available

ports:

- **Display:** Connect your monitor(s) to the HDMI 2.0b port or one of the two DisplayPort outputs. The system supports up to three 4K UHD displays.
- **USB Devices:** Use the four USB 3.2 Gen1 ports (including one Type-C) and four USB 2.0 ports for keyboard, mouse, and other USB devices.
- **Network:** Connect to your network using either of the two Gigabit Ethernet LAN ports (Intel 2.5GbE + Intel 1GbE).
- **Serial Devices:** Utilize the two RS232 COM ports for compatible devices.
- **Audio:** Connect headphones or a microphone to the front audio jacks.

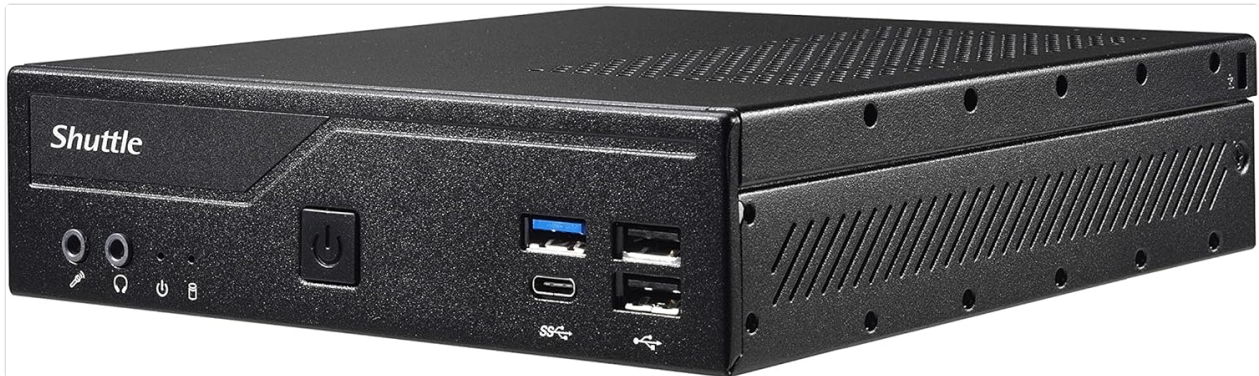


Image: The front panel of the Shuttle DH610, featuring the power button, USB 3.2 Gen1 ports (one Type-C), and audio input/output jacks.



Image: The rear panel of the Shuttle DH610, displaying the DC-IN power input, HDMI, two DisplayPort outputs, two LAN ports, USB ports, and two COM ports.

4.6. Power Connection

Connect the power adapter to the DC-IN port on the rear of the unit, then plug the power cord into an electrical outlet.

5. OPERATING INSTRUCTIONS

5.1. Powering On/Off

- **Power On:** Press the power button located on the front panel.
- **Power Off:** Perform a graceful shutdown through your operating system. Alternatively, press and hold the power button for 4-5 seconds for a forced shutdown (use only when necessary).

5.2. Operating System Installation

The DH610 is compatible with Windows 11/10 (64-bit) and Linux (64-bit) operating systems. Follow the standard installation procedures for your chosen OS. Ensure all necessary drivers are installed for optimal

performance, which can typically be found on the Shuttle support website.

5.3. BIOS/UEFI Access

To access the BIOS/UEFI setup utility, press the **Delete** or **F2** key repeatedly during system startup. This allows configuration of boot options, system settings, and hardware parameters.

6. MAINTENANCE

6.1. Cleaning

Regularly clean the exterior of the unit with a soft, dry cloth. Use compressed air to clear dust from ventilation openings to ensure proper airflow and prevent overheating. Do not use liquid cleaners directly on the device.

6.2. BIOS Updates

Periodically check the Shuttle website for BIOS updates. BIOS updates can improve system stability, add support for new hardware (like 13th Gen Intel CPUs), and fix bugs. Follow the instructions provided with the BIOS update package carefully.

7. TROUBLESHOOTING

If you encounter issues with your DH610, refer to the following common problems and solutions:

- **No Display Output:**
 - Ensure the monitor is powered on and correctly connected to the HDMI or DisplayPort.
 - Verify that the CPU has integrated graphics and that the display cable is connected to the motherboard's video output, not a discrete graphics card (if applicable).
 - Try a different display cable or monitor.
- **System Not Powering On:**
 - Check that the power adapter is securely connected to both the unit and the electrical outlet.
 - Ensure the CPU and RAM are correctly installed and seated.
 - Test the power outlet with another device.
- **13th Gen CPU Not Recognized:**
 - The system requires BIOS Version DH610000.202 or newer for 13th Gen Intel processors. If you have an older BIOS, you may need to install a 12th Gen CPU first to update the BIOS.
- **System Overheating:**
 - Ensure the chassis ventilation holes are not obstructed.
 - Clean any dust accumulation from the internal fans and heatsinks.
 - Verify the CPU cooler is properly installed and making good contact with the CPU.

8. SPECIFICATIONS

Feature	Specification
Brand	Shuttle

Model Name	DH610
CPU Socket	LGA 1700
Supported Processors	Intel 12th/13th Gen Alder Lake-S (65W max, with integrated graphics)
Chipset	Intel H610
RAM Type	DDR4 SODIMM (2x slots)
Max RAM Capacity	64 GB (2x 32GB)
Memory Speed	Up to 3200 MHz
Graphics	Integrated Intel UHD Graphics (CPU dependent)
Video Output	1x HDMI 2.0b, 2x DisplayPort (Supports triple 4K UHD displays)
Storage	1x 2.5" HDD/SSD bay, 1x M.2 2280 slot
USB Ports	4x USB 3.2 Gen1 (1x Type-C), 4x USB 2.0 (Total 8)
LAN	1x Intel 2.5GbE, 1x Intel 1GbE
Serial Ports	2x RS232 (COM)
Operating System Compatibility	Windows 11/10 (64-bit), Linux (64-bit)
Power Consumption	65 Watts (CPU)
Included Components	VESA Mount

9. WARRANTY AND SUPPORT

9.1. Manufacturer's Warranty

The Shuttle XPC Slim DH610 Barebone PC comes with a 3-Year Manufacturer's Warranty. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

9.2. Technical Support

For technical assistance, driver downloads, BIOS updates, or further troubleshooting not covered in this manual, please visit the official Shuttle website or contact Shuttle customer support. Free lifetime technical support is typically provided by the manufacturer.

For more information, visit: www.shuttle.com