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› Qotom Barebone System Mini PC Q20322G9-S10 Instruction Manual

Qotom Q20322G9-S10

Qotom Barebone System Mini PC

MODEL: Q20322G9-S10 INSTRUCTION MANUAL

1. Product Overview

The Qotom Barebone System Mini PC, Model Q20322G9-S10, is a compact and versatile computing solution designed for various applications, including network routing, firewall, and general-purpose computing. It features an Intel Atom C3558 Quad Core Processor, advanced networking capabilities with 10G SFP+, 1G SFP, and 2.5G LAN ports, and flexible storage options.

Key Features:

- **Processor:** Intel Atom C3558 Quad Core Processor 2.2 GHz, 8M Cache, supporting AES-NI, VT-x, VT-d.
- **Network Interfaces:** 2 x 10G SFP+, 2 x 1G SFP, 5 x Intel i226V B3 2.5 Gigabit LAN ports.
- **Memory:** 2 x DDR4 SO-DIMM Sockets, supporting up to 64GB RAM (not included in barebone configuration).
- **Storage:** 2 x M.2 slots for SSD, 1 x 2.5-inch bay for HDD/SSD (storage devices not included in barebone configuration).
- **Cooling:** Fan-less design with an aluminum alloy case for heat dissipation, includes a removable internal fan for enhanced cooling.
- **Operating System:** Pre-installed with inactive Windows 10 for testing purposes. Users are required to install their preferred operating system.

2. Setup Guide

2.1 Unboxing and Package Contents

Carefully unpack the Mini PC and its accessories. Verify that all components are present according to the packing list. The standard package includes the Mini PC unit, power adapter, power cord, and mounting screws.

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Video 2.1.1: Unboxing and overview of the Qotom Mini PC and its components. This video demonstrates the standard carton packing and included accessories.

2.2 Component Installation (RAM & Storage)

This is a barebone system, requiring the installation of RAM and storage devices. Ensure the device is powered off and disconnected from the power source before proceeding.

1. **Accessing the Interior:** Unscrew the bottom panel of the Mini PC to expose the motherboard.
2. **RAM Installation:** Locate the two DDR4 SO-DIMM slots. Gently insert the RAM modules into the slots, ensuring they are correctly oriented and firmly seated until the side clips lock them into place.
3. **M.2 SSD Installation:** Identify the M.2 slots on the motherboard. Insert the M.2 SSD at an angle, then push it down and secure it with the provided screw.
4. **2.5-inch SATA SSD/HDD Installation:** If installing a 2.5-inch drive, connect it to the SATA data and power connectors (cables may be included or purchased separately). Secure the drive within the designated bay. Note that the internal fan may need to be removed to accommodate two 2.5-inch drives.
5. **Reassembly:** Carefully replace the bottom panel and secure it with screws.



Figure 2.2.1: Internal view of the motherboard, showing various components and expansion slots.



Figure 2.2.2: A closer look at the DDR4 SO-DIMM memory slots and M.2 NVMe SSD slots for component installation.

2.3 External Connections

Connect peripherals and network cables to the appropriate ports.

- **Power:** Connect the power adapter to the DC 12V input port.
- **Display:** Connect a monitor to the VGA port.
- **USB Devices:** Connect keyboards, mice, or other USB devices to the available USB 2.0 and USB 3.0 ports.
- **Network:** Connect Ethernet cables to the 2.5G LAN ports (Intel i226V B3). For high-speed networking, insert SFP+ modules into the 10G SFP+ ports and SFP modules into the 1G SFP ports.
- **Console:** The console port can be used for serial communication for system configuration.



Figure 2.3.1: Front and rear panels of the Mini PC, illustrating all available ports and connectors.



Figure 2.3.2: Detailed rear view showing the 10G SFP+, 1G SFP, and 2.5G LAN ports, along with USB and power input.

3. Operating Instructions

3.1 Powering On/Off

- **Power On:** Press the power button located on the front panel.
- **Power Off:** Perform a proper shutdown through your operating system. Alternatively, press and hold the power button for 5 seconds to force a shutdown.

3.2 BIOS Configuration

To access the BIOS setup, press the DEL or F2 key repeatedly during startup. Important BIOS settings include:

- **Boot Order:** Configure the boot sequence for your operating system installation media.
- **State After G3:** To enable automatic power-on after AC power is restored, navigate to *IntelRCSetup > South Bridge Chipset Configuration > State After G3* and set it to 'Power On'.

3.3 Operating System Installation

The unit comes with an inactive Windows 10 for initial testing. It is recommended to re-install your preferred operating system (e.g., pfSense, OPNsense, Linux distributions, or a licensed Windows version) for optimal performance and security. Ensure you have the necessary drivers for the Intel i226V LAN ports, as some operating systems may require manual driver installation.

4. Maintenance

4.1 Cleaning

Regularly clean the exterior of the Mini PC with a soft, dry cloth. Avoid using liquid cleaners directly on the device. For internal cleaning, especially if the optional fan is installed, use compressed air to remove dust from vents and components. Ensure the device is powered off and unplugged before cleaning.

4.2 Fan Management

The S20 Mini PC features a fan-less design for silent operation, relying on its aluminum alloy case for heat dissipation. A small internal fan is included by default to enhance cooling, potentially lowering temperatures by approximately 10 degrees Celsius. This fan is removable if not desired or if additional space is needed for storage devices.

5. Troubleshooting

This section addresses common issues you might encounter.

- **No Power:**
 - Ensure the power adapter is securely connected to both the Mini PC and a working power outlet.
 - Verify the power outlet is functional.
- **No Display:**
 - Check the VGA cable connection to both the Mini PC and the monitor.
 - Ensure the monitor is powered on and set to the correct input source.
 - If RAM was recently installed, ensure it is properly seated.
- **Network Connectivity Issues:**
 - Verify Ethernet cables are securely connected to the LAN ports.
 - Check network settings within your operating system.
 - Ensure correct drivers for the Intel i226V LAN ports are installed.
 - For SFP/SFP+ ports, ensure compatible modules are used and properly inserted.
- **System Instability/Freezing:**
 - Ensure RAM and SSD/HDD are correctly installed.
 - Check for overheating. While fanless, ensure adequate airflow around the device.
 - Verify operating system integrity and driver compatibility.

If issues persist, consult the Qotom support website or contact customer service for further assistance.

6. Specifications

Feature	Specification
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Feature	Specification
Processor	Intel Atom C3558 Quad Core Processor 2.2 GHz
Graphics Coprocessor	ASPEED AST2400
LAN Ports	2 x 10G SFP+, 2 x 1G SFP, 5 x Intel i226V B3 2.5 Gigabit LAN
Memory Type	DDR4 SO-DIMM (2 slots, up to 64GB)
Storage Interface	2 x M.2 for SSD, 1 x 2.5-inch HDD/SSD bay
USB Ports	1 x USB 2.0, 1 x USB 3.0
Video Output	VGA
Cooling	Fanless design with aluminum alloy case, removable internal fan
Dimensions (LxWxH)	8.7 x 4.76 x 2.44 inches (221 x 121 x 62mm)
Item Weight	5.5 pounds
Power Source	DC
Operating Temperature	-10°C 50°C

7. Warranty and Support

Qotom products typically come with a manufacturer's warranty covering defects in materials and workmanship. Please refer to your purchase documentation or the official Qotom website for specific warranty terms and duration. For technical support, driver downloads, or further assistance, please visit the Qotom official support channels or contact your vendor.

Manufacturer: ShenZhen Qotom Technology CO., LTD