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FRONTECH H61/1155 SOCKET DDR3

FRONTECH H61 Motherboard

User Manual

1. Product Overview

The FRONTECH H61 Motherboard is designed to provide a stable and efficient foundation for your desktop computer system. Featuring the Intel H61 Express Chipset, it supports LGA1155 socket processors, including Intel Core i3, i5, and i7 series, offering robust performance for various computing needs. This motherboard is equipped with dual DDR3 memory slots, supporting up to 16GB of RAM for smooth multitasking. It also includes essential connectivity options such as USB 2.0, VGA, HDMI, and LAN ports, along with expansion slots like PCI Express x16 and NVMe/NGFF for future upgrades.

Figure 1.1: Front view of the FRONTECH H61 Motherboard, showcasing its layout and components.

2. Setup Guide

2.1 Package Contents

Before beginning installation, ensure all components are present in the package:

- FRONTECH H61 Motherboard
- I/O Shield
- SATA Data Cable
- Driver CD (for system drivers and utilities)

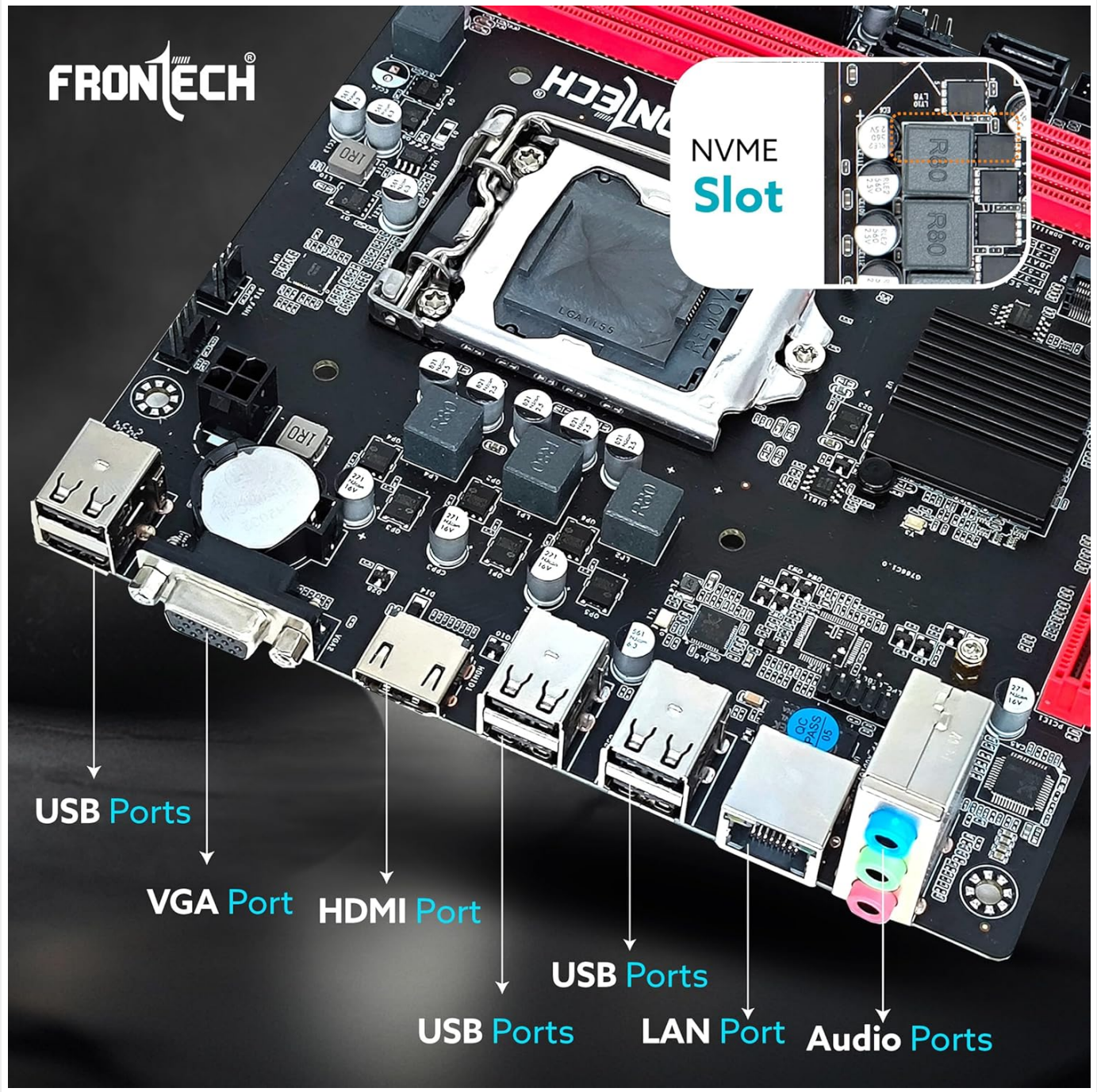

Figure 2.1: Contents of the FRONTECH H61 Motherboard retail package, including the motherboard, driver disc, and SATA cable.

2.2 Installation Steps

Follow these steps for proper installation of the motherboard and its components:

1. **Prepare the PC Case:** Install the I/O shield into the rear opening of your PC case. Ensure standoffs are correctly aligned for the motherboard.
2. **Install the Motherboard:** Carefully place the motherboard into the case, aligning it with the standoffs and I/O shield. Secure it with screws.
3. **Install the CPU:** Open the CPU socket lever. Align the triangular mark on the Intel LGA1155 CPU with the mark on the socket. Gently place the CPU into the socket and close the lever to secure it.
4. **Install the CPU Cooler:** Apply thermal paste (if not pre-applied) and install the CPU cooler according to its manufacturer's instructions. Connect the CPU fan cable to the CPU_FAN header on the motherboard.
5. **Install RAM:** Open the clips on the DDR3 memory slots. Align the notch on the DDR3 RAM module with the key in the slot. Press firmly on both ends until the clips snap into place. For dual-channel performance, install modules in

matching colored slots if available.

6. **Install Storage Devices:** Connect SATA data cables from your hard drives or SSDs to the SATA 2.0 ports on the motherboard. For NVMe SSDs, insert the drive into the NVMe/NGFF slot and secure it with the provided screw.
7. **Install Expansion Cards:** Insert your graphics card or other PCI Express cards into the appropriate PCI Express x16 or x1 slots. Secure them with the case's retention mechanism.
8. **Connect Power Supply:** Connect the 24-pin ATX power connector and the 4-pin CPU power connector from your power supply unit (PSU) to the corresponding ports on the motherboard. Connect power to SATA devices.
9. **Connect Front Panel Cables:** Connect the power button, reset button, HDD LED, power LED, and front USB/audio cables from your PC case to the corresponding headers on the motherboard. Refer to your case manual for specific pin assignments.

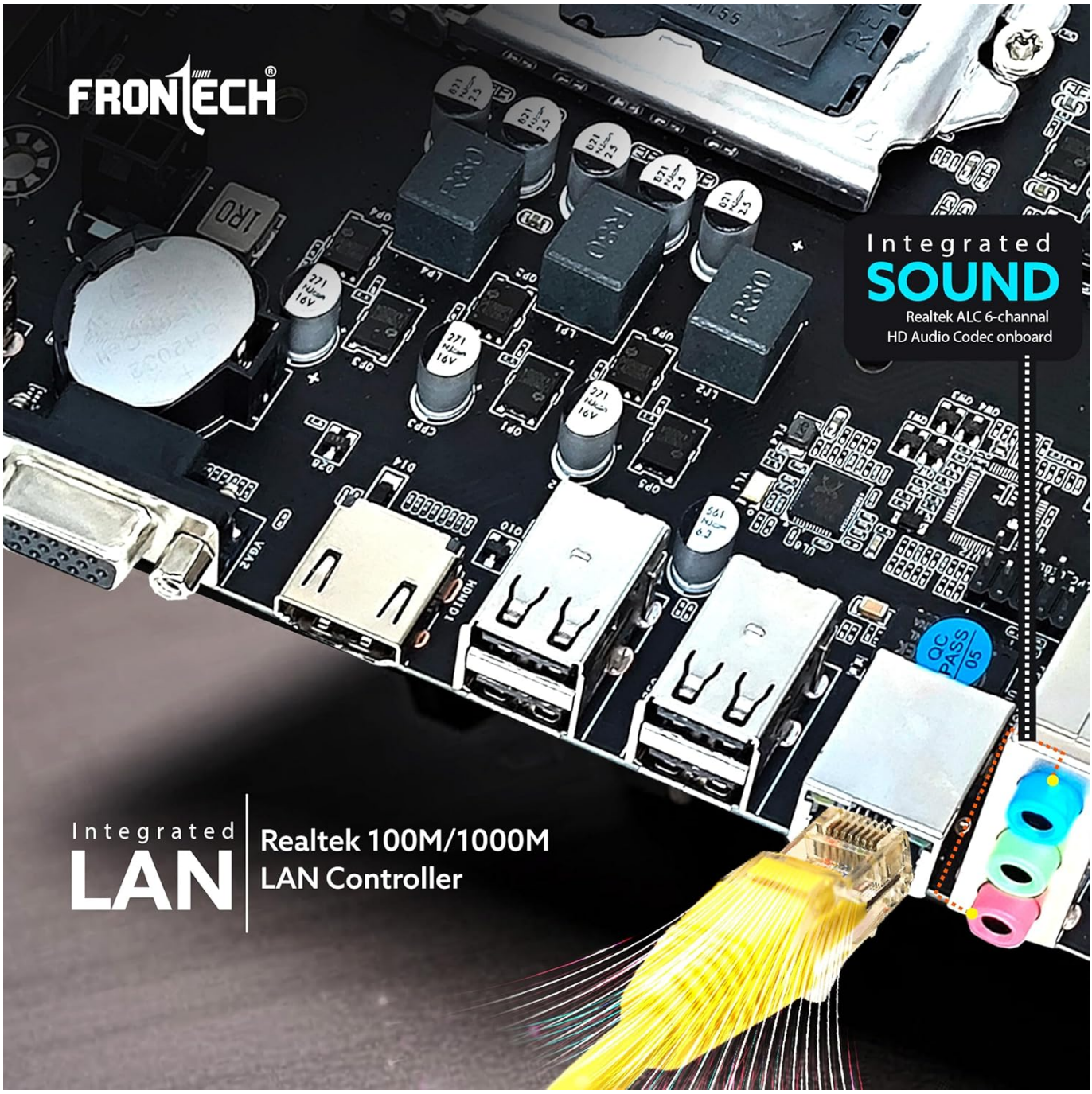

Figure 2.2: Detailed view of the Intel H61 Express Chipset, LGA1155 CPU socket, and SATA 2.0 ports on the motherboard.

Figure 2.3: The FRONTECH H61 Motherboard installed within a computer case, showing its integration with other system components.

3. Operating Instructions

3.1 First Boot and BIOS Setup

After assembling your system, connect a monitor, keyboard, and mouse. Power on the system. During the initial boot sequence, press the designated key (commonly DEL, F2, or F10) to enter the BIOS/UEFI setup utility. Here you can configure boot order, system time, and other hardware settings. Save changes and exit to proceed with operating system installation.

3.2 Driver Installation

Once the operating system is installed, install the necessary drivers for the motherboard's components. Use the provided driver CD or download the latest drivers from the FRONTECH official website. Key drivers include chipset drivers, audio drivers, LAN drivers, and graphics drivers (if using integrated graphics or a dedicated GPU).

3.3 Connecting Peripherals

The FRONTECH H61 Motherboard offers various ports for connecting external devices:

- **USB 2.0 Ports:** Connect keyboards, mice, USB drives, and other USB peripherals.
- **VGA Port:** Connect to older monitors or projectors.
- **HDMI Port:** Connect to modern displays for high-definition video and audio output.
- **RJ45 LAN Port:** Connect an Ethernet cable for wired network access.
- **Audio Ports:** Connect speakers, headphones, and microphones.

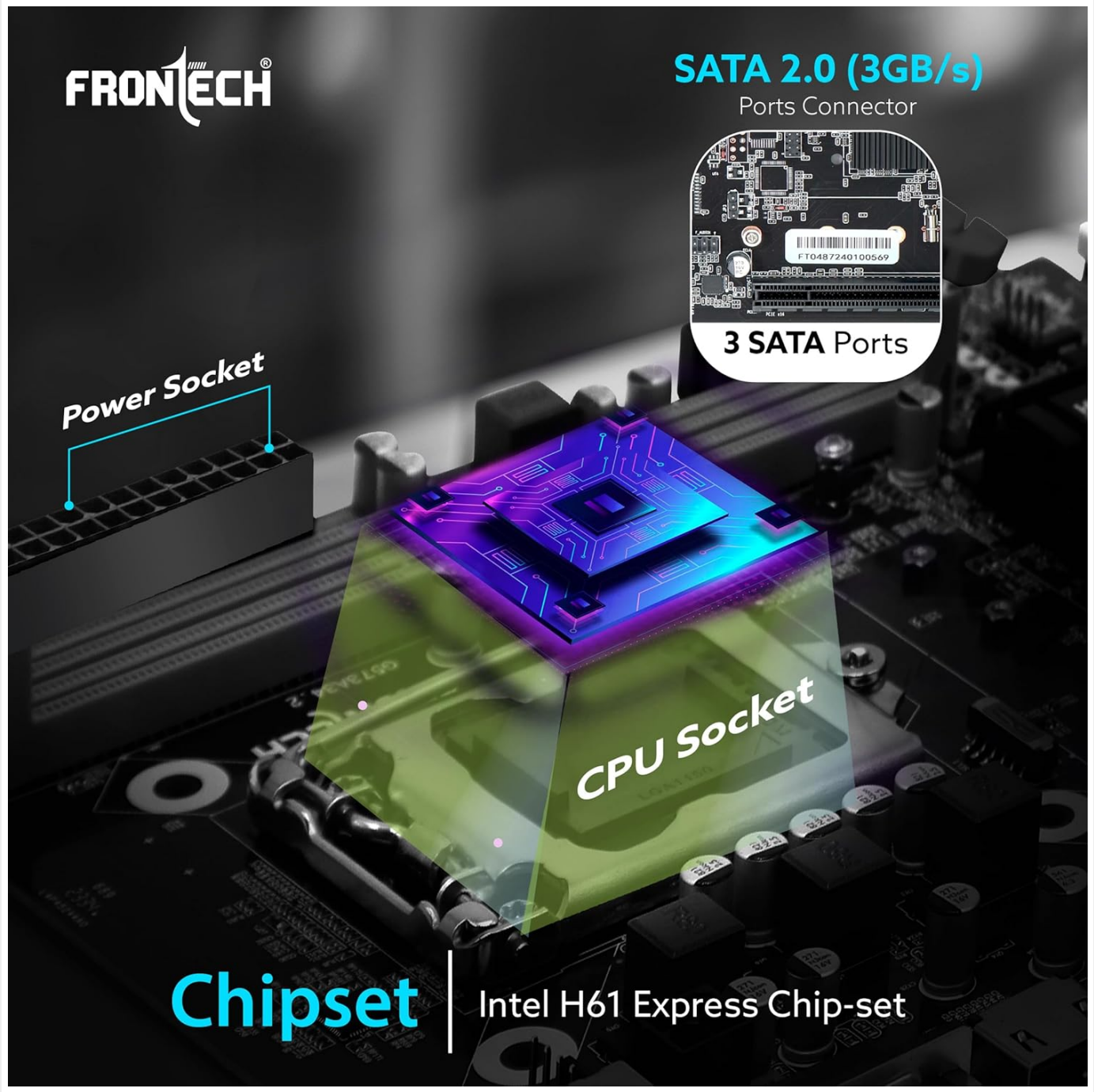

Figure 3.1: Rear I/O panel of the FRONTECH H61 Motherboard, highlighting the various connectivity ports and the NVMe slot.

4. Maintenance and Care

Proper maintenance ensures the longevity and optimal performance of your motherboard:

- **Dust Prevention:** Regularly clean the inside of your PC case to prevent dust buildup on the motherboard and

components. Use compressed air to gently remove dust from heatsinks and fan blades.

- **Temperature Monitoring:** Ensure adequate airflow within your PC case to maintain optimal operating temperatures. Overheating can reduce component lifespan.
- **Firmware Updates:** Periodically check the FRONTECH website for BIOS/UEFI updates. These updates can improve stability, compatibility, and performance.
- **Handle with Care:** When handling the motherboard, always hold it by its edges and avoid touching sensitive components or pins. Use an anti-static wrist strap to prevent electrostatic discharge (ESD).

5. Troubleshooting

This section provides solutions to common issues you might encounter:

Problem	Possible Cause	Solution
System does not power on.	Loose power connections, faulty PSU, incorrect front panel wiring.	Check 24-pin and 4-pin power connectors. Verify PSU functionality. Recheck front panel power switch connection.
No display on monitor.	Monitor not connected, faulty GPU/integrated graphics, RAM not seated correctly.	Ensure monitor cable is securely connected. Reseat RAM modules. Test with a known-good GPU if applicable.
System boots but no OS detected.	Incorrect boot order in BIOS, faulty storage drive, loose SATA cable.	Check BIOS boot order. Verify SATA/NVMe cable connections. Test storage drive on another system.
Peripherals (USB, Audio, LAN) not working.	Missing or incorrect drivers, faulty port.	Install/update relevant drivers from the FRONTECH driver CD or website. Test with different peripherals.

6. Technical Specifications

Detailed specifications for the FRONTECH H61 Motherboard (Model FT-0491):

Feature	Specification
Chipset	Intel H61 Express Chipset
CPU Socket	LGA 1155
Supported Processors	Intel Core i3, i5, i7 series (LGA1155)
Memory Slots	2 x DDR3 DIMM slots
Max. Memory Capacity	16GB
Memory Type	DDR3 1066/1333/1600 MHz (Dual Channel)
Storage	3 x SATA 2.0 ports (3GB/s)
Expansion Slots	1 x PCI Express x16, 1 x NVMe/NGFF slot

Feature	Specification
Audio	Integrated 6-channel HD Audio Codec
LAN	Integrated Realtek 100M/1000M LAN Controller
USB Ports	6 x USB 2.0 ports (4 rear, 2 internal header)
Video Output	1 x VGA, 1 x HDMI
Dimensions	17 x 17 x 4 cm
Item Weight	231 g

7. Warranty and Support

7.1 Limited Warranty

The FRONTECH H61 Motherboard comes with a **2-Year Limited Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by accident, misuse, abuse, unauthorized modification, or improper installation.

7.2 Technical Support

For technical assistance, troubleshooting, or warranty claims, please contact FRONTECH customer support. Have your product model number and purchase details ready when contacting support. You can also visit the official FRONTECH website for FAQs, driver downloads, and additional support resources.

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