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ASRock P55 DELUXE3

ASRock P55 DELUXE3 Motherboard User Manual

Model: P55 DELUXE3

1. Introduction

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the ASRock P55 DELUXE3 motherboard. Please read this manual thoroughly before installing or using your new motherboard to ensure proper setup and optimal performance. This motherboard supports Intel LGA1156 processors and features advanced technologies such as SATA3 and USB 3.0.

2. Product Features

The ASRock P55 DELUXE3 motherboard is designed with the following key features:

- **CPU Support:** Socket 1156 for Intel Core i7/i5/i3 and Pentium G6950 Processors, including Intel Turbo Boost and Hyper-Threading Technology.
- **Chipset:** Intel P55.
- **Memory:** 4x 240-pin DDR3 DIMM slots, supporting up to 16 GB of non-ECC, un-buffered dual-channel memory at speeds up to 2600+(OC)/2133(OC)/1866(OC)/1600/1333/1066 MHz.
- **Expansion Slots:** 2x PCI-Express 2.0 x16 slots (supporting ATI Quad CrossFireX and nVidia Quad SLI Technology), 2x PCI-Express 2.0 x1 slots, and 2x PCI slots.
- **Storage:** 1x ATA-133 channel, 2x SATA3 ports (supporting RAID 0, 1), and 6x SATA2 ports (supporting RAID 0, 1, 5, 10, JBOD).
- **Audio:** VIA VT2020 7.1-Channel Audio CODEC.
- **LAN:** Realtek RTL8111DL PCI-Express x1 Gigabit Ethernet Controller.
- **USB Ports:** 12x USB 2.0 ports (5 rear, 6 by headers, 1 by Powered eSATA3/USB Connector) and 2x USB 3.0 ports.
- **Other Ports:** 1x IEEE 1394 Port, 2x PS/2 Ports, 1x RJ45 LAN Port, 1x Coaxial SPDIF Out Port, 1x Optical SPDIF Out Port, and Audio I/O Jacks.

3. Setup Guide

Follow these steps for the proper installation of your ASRock P55 DELUXE3 motherboard and associated components.

3.1 Unpacking and Inspection

Carefully remove the motherboard from its packaging. Inspect for any visible damage. Ensure all accessories listed in the product packaging are present.

3.2 Component Preparation

1. **CPU Installation:** Open the LGA 1156 CPU socket lever. Align the CPU with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket. Gently place the CPU into the socket without force. Close the lever to secure the CPU.
2. **CPU Cooler Installation:** Apply thermal paste to the CPU if not pre-applied on the cooler. Mount the CPU cooler according to its specific instructions, ensuring it is securely fastened and making good contact with the CPU.
3. **Memory (RAM) Installation:** Open the clips on both ends of the DDR3 DIMM slots. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot. Press down firmly on both ends of the module until the clips snap into place. For dual-channel operation, refer to the motherboard layout for recommended slot pairings.
4. **Graphics Card (Optional):** If installing a dedicated graphics card, open the retention clip on the PCI-Express 2.0 x16 slot. Align the card with the slot and press firmly until it is seated. Secure the card with a screw to the chassis.

3.3 Motherboard Installation into Chassis

Install the I/O shield into the rear opening of your computer case. Carefully place the motherboard into the chassis, aligning the screw holes on the motherboard with the standoffs in the case. Secure the motherboard with screws.

3.4 Connecting Cables

Connect the following cables:

- **Power Connectors:** Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply to the corresponding ports on the motherboard.
- **SATA Data Cables:** Connect your storage devices (HDDs, SSDs, optical drives) to the SATA2 or SATA3 ports on the motherboard.
- **Front Panel Connectors:** Connect the power button, reset button, HDD LED, power LED, and front panel USB/audio headers to their respective pins on the motherboard. Refer to the motherboard diagram for correct pin assignments.
- **Fan Connectors:** Connect CPU fan and chassis fans to the appropriate fan headers.

An image showing the ASRock P55 DELUXE3 motherboard with its various components and ports visible, illustrating the layout for component installation.

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4. Operating Instructions

After physical installation, proceed with the initial boot and software setup.

4.1 First Boot and BIOS Setup

Power on your system. Press the designated key (usually**DEL** or **F2**) during startup to enter the BIOS/UEFI setup utility. In the BIOS, you can configure boot order, system time, and various hardware settings. Ensure your storage devices are detected and set the primary boot device.

4.2 Operating System Installation

Insert your operating system installation media (USB drive or DVD). Follow the on-screen prompts to install your preferred operating system. Ensure the system boots from the installation media.

4.3 Driver Installation

After the operating system is installed, install the necessary drivers for your motherboard. These typically include:

- Chipset Drivers
- Audio Drivers (VIA VT2020)
- LAN Drivers (Realtek RTL8111DL Gigabit Ethernet)
- USB 3.0 Drivers
- SATA/RAID Drivers (if using RAID configuration)

These drivers can usually be found on the ASRock support website for your specific motherboard model.

4.4 Utilizing Advanced Features

The ASRock P55 DELUXE3 supports advanced features:

- **Quad CrossFireX & Quad SLI:** For multi-GPU configurations, ensure your graphics cards are compatible and install the necessary drivers from AMD or NVIDIA.
- **SATA3 (6Gb/s):** Connect compatible SSDs to the SATA3 ports for maximum performance.
- **USB 3.0:** Utilize the blue USB 3.0 ports for high-speed data transfer with compatible devices.

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5. Maintenance

Regular maintenance helps ensure the longevity and stable operation of your motherboard.

- **Dust Cleaning:** Periodically clean dust from inside your computer case, especially around the CPU cooler, chipset heatsinks, and fan vents. Use compressed air for best results. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the ASRock website for BIOS updates. BIOS updates can improve compatibility, stability, and performance. Follow ASRock's specific instructions for BIOS flashing carefully to avoid system damage.
- **Driver Updates:** Keep your motherboard drivers updated to the latest versions available on the ASRock support website. This can resolve issues and improve performance.
- **Cable Management:** Ensure all cables are neatly routed to promote better airflow and prevent interference.

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6. Troubleshooting

This section addresses common issues you might encounter.

6.1 No Power / No Boot

- Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and power supply.
- Ensure the power supply switch is in the 'ON' position.
- Check front panel power button connection to the motherboard.
- Test the power supply with another system or a power supply tester.

6.2 No Display / POST Errors

- Ensure the monitor is connected to the correct graphics output (either integrated or dedicated GPU).
- Reseat the graphics card and memory modules.
- Try booting with only one RAM stick installed, testing each stick individually.
- Clear the CMOS (Complementary Metal-Oxide-Semiconductor) by removing the CMOS battery for a few minutes or using the clear CMOS jumper (refer to motherboard diagram).

- Listen for beep codes from the motherboard speaker, which can indicate specific hardware issues. Consult the ASRock website for beep code interpretations.

6.3 Component Not Detected

- **Storage Drives:** Check SATA data and power cable connections. Verify detection in BIOS. Ensure correct drivers are installed in the operating system.
- **USB Devices:** Try different USB ports. Ensure USB drivers are installed.
- **Network:** Check LAN cable connection. Ensure LAN drivers are installed. Verify network adapter is enabled in BIOS and operating system.

For further assistance, refer to the ASRock support website or contact ASRock technical support.

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7. Specifications

Detailed technical specifications for the ASRock P55 DELUXE3 motherboard:

Category	Specification
Brand	ASRock
Model Number	P55 DELUXE3
CPU Socket	LGA 1156
Compatible Processors	Intel Core i7/i5/i3, Intel Pentium
RAM Memory Technology	DDR3
Memory Slots Available	4
RAM Memory Maximum Size	16 GB
Memory Clock Speed	1066 MHz, 1333 MHz, 1600 MHz, 1866(OC) MHz, 2133(OC) MHz, 2600+ (OC) MHz
Graphics Card Interface	PCI, PCI Express
SATA Ports	2x SATA3 (6Gb/s), 6x SATA2 (3Gb/s)
IDE Ports	1x ATA-133 Channel
USB 2.0 Ports	12 (5 rear, 6 by headers, 1 by Powered eSATA3/USB)
USB 3.0 Ports	2 (rear)
Audio	VIA VT2020 7.1-Channel Audio CODEC
LAN	Realtek RTL8111DL Gigabit Ethernet

Category	Specification
Main Power Connector Type	24-pin ATX, 8-pin CPU
S/PDIF Connector Type	Optical, Coaxial
Form Factor	ATX
ASIN	B003BTX2GG
GTIN	04711140871998

8. Warranty and Support

ASRock provides a limited warranty for its motherboards. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims.
For technical support, driver downloads, BIOS updates, and detailed product information, please visit the official ASRock website:
www.asrock.com
When contacting support, please have your motherboard model (P55 DELUXE3) and serial number ready.

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