Intel BOXDQ57TM

Intel DQ57TM Executive Series Motherboard User Manual

Model: BOXDQ57TM

1. Introduction

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the Intel DQ57TM Executive Series micro-ATX Desktop Motherboard. This motherboard is designed to support Intel Core i7, i5, and i3 processors with an LGA1156 socket, offering a robust platform for business and personal computing.

Figure 1: Intel DQ57TM Executive Series Motherboard Overview

2. Setup and Installation

Follow these steps for proper installation of components onto your Intel DQ57TM motherboard.

2.1. CPU Installation

1. **Prepare the Socket:** Gently lift the load lever on the LGA1156 CPU socket. Open the metal load plate.
2. **Align the CPU:** Carefully align the Intel Core i7/i5/i3 processor with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket. Do not force the CPU into the socket.
3. **Secure the CPU:** Close the load plate and press down the load lever until it locks into place.
4. **Apply Thermal Paste and Install Cooler:** Apply a thin, even layer of thermal paste to the CPU surface. Install the compatible CPU cooler, ensuring it is securely fastened and the fan is connected to the CPU_FAN header (labeled "FRONT FAN F FAN1" near the top left of the motherboard in Figure 1).

2.2. Memory (RAM) Installation

The motherboard supports up to 16GB of DDR3 1333/1066 MHz memory across four 240-pin DIMM slots (labeled "DIMM 0" and "DIMM 1" in Figure 1, with two blue and two black slots). For dual-channel operation, install memory modules in matching colored slots.

1. **Open DIMM Latches:** Push open the white retention clips at both ends of the DIMM slot.
2. **Align Memory Module:** Align the notch on the DDR3 memory module with the key in the DIMM slot.
3. **Insert Module:** Press down firmly on both ends of the memory module until the retention clips snap into place.

2.3. Storage Device Connection

The motherboard features four SATA2 ports (labeled "SATA 0" to "SATA 3" in Figure 1, located near the top right) for internal storage devices and two eSATA ports (one rear, one via header) for external storage. These ports support RAID 0, 1, 5, and 10 configurations.

1. **Connect SATA Data Cable:** Connect one end of the SATA data cable to a SATA port on the motherboard and the other end to your SATA hard drive or SSD.
2. **Connect Power Cable:** Connect a SATA power cable from your power supply unit (PSU) to the storage device.

2.4. Expansion Card Installation

The motherboard includes one PCI Express x16 slot (blue, labeled "PCIe x16" in Figure 1), two PCI Express x1 slots (black, labeled "PCIE X1" in Figure 1), and one PCI slot (white, labeled "PCI" in Figure 1) for expansion cards.

1. **Select Slot:** Choose an appropriate expansion slot for your card (e.g., graphics card in PCIe x16, network card in PCIe x1).
2. **Insert Card:** Align the card with the slot and press down firmly until it is fully seated. Secure the card with a screw to the chassis.

2.5. Front Panel Connections

Connect the front panel cables from your computer case to the corresponding headers on the motherboard. Refer to your case manual for specific cable identification.

- **HDD LED:** Connect the hard disk drive activity indicator.
- **POWER LED:** Connect the system power indicator.
- **RESET SW:** Connect the system reset button.
- **POWER SW:** Connect the system power button.
- **FP USB:** Connect front panel USB ports to the USB headers (e.g., "FP USB 1", "FP USB 2", "FP USB 3" in Figure 1).
- **FP AUDIO:** Connect front panel audio jacks to the audio header (labeled "FP AUDIO" in Figure 1).

2.6. Power Supply Connection

Connect the 24-pin ATX main power connector and the 4-pin ATX 12V CPU power connector from your power supply unit to

the corresponding sockets on the motherboard (24-pin near the top right, 4-pin labeled "ATX CPU" near the CPU socket in Figure 1).

3. Operating Instructions

This section outlines general operating procedures and features of the Intel DQ57TM motherboard.

3.1. Initial Boot-up and BIOS Access

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 for Intel boards) to enter the BIOS (Basic Input/Output System) setup utility. Here you can configure boot order, system time, and other hardware settings.

3.2. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components. These typically include chipset drivers, integrated graphics drivers (if using Intel HD Graphics), audio drivers, and LAN drivers. Drivers can usually be found on the Intel support website for your specific motherboard model.

3.3. Integrated Graphics and Video Outputs

The DQ57TM supports Intel HD Graphics when paired with compatible Intel Core processors. It provides dual DVI-D ports (labeled "DVI VGA" in Figure 1, near the bottom left) and one DisplayPort (labeled "DP" in Figure 1, near the bottom left) for video output. This allows for multi-monitor setups. For enhanced 3D performance, a discrete graphics card can be installed in the PCI Express 2.0 x16 slot.

3.4. Audio and Network Connectivity

The motherboard features integrated 6-channel Intel High Definition Audio, providing sound output through the rear audio jacks (labeled "AUDIO" in Figure 1, near the bottom left). An Intel Gigabit Ethernet controller provides high-speed network connectivity via the RJ45 LAN port (labeled "LAN" in Figure 1, near the bottom left).

3.5. Intel vPro Technology and Remote Management

The Intel DQ57TM supports Intel vPro technology, which includes Intel Active Management Technology (AMT). This feature allows for remote management, inventory, troubleshooting, and system restores, even when the system is powered off or the operating system is unresponsive. Consult Intel's documentation for detailed configuration and usage of vPro/AMT.

4. Maintenance

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

4.1. Cleaning

Periodically clean dust from the motherboard and CPU cooler using compressed air. Ensure the system is powered off and unplugged before cleaning. Avoid using liquids or abrasive materials.

4.2. BIOS Updates

Intel may release BIOS updates to improve system stability, add new features, or support new hardware. Check the official Intel support website for the latest BIOS versions and follow their instructions carefully for updating. Incorrect BIOS updates can render the motherboard inoperable.

4.3. CMOS Battery Replacement

The motherboard uses a CR2032 coin cell battery (labeled "BATTERY" in Figure 1, near the center right) to retain BIOS settings and the system clock when the computer is powered off. If you experience incorrect system time or lost BIOS settings, the CMOS battery may need replacement. Ensure the system is powered off and unplugged before replacing the battery.

5. Troubleshooting

This section provides solutions for common issues you might encounter.

- **No Power/System Does Not Boot:**
  - Verify all power cables (24-pin ATX, 4-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 switch connection to the motherboard.
  - Reseat the CPU and RAM modules.
- **No Display on Monitor:**
  - Ensure the monitor is connected to the correct video output (DVI-D or DisplayPort) on the motherboard or discrete graphics card.
  - Verify the monitor is powered on and set to the correct input source.
  - Reseat the graphics card (if installed) and memory modules.
  - If using a discrete graphics card, ensure the necessary PCIe power connectors are attached.
- **No Audio:**
  - Check speaker/headphone connections to the correct audio jacks.
  - Ensure audio drivers are correctly installed.
  - Verify audio settings in the operating system.
- **No Network Connectivity:**
  - Check the Ethernet cable connection to the RJ45 port and your network device (router/modem).
  - Ensure LAN drivers are correctly installed.
  - Verify network settings in the operating system.
- **System Instability/Crashes:**
  - Ensure all drivers are up to date.
  - Check for proper cooling of the CPU and other components.
  - Test memory modules for errors using diagnostic tools.
  - Verify power supply stability.

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

6. Specifications

Feature	Description
CPU Socket	LGA 1156
Compatible Processors	Intel Core i7, Intel Core i5, Intel Core i3, Intel Pentium (LGA1156)
Chipset	Intel Q57 Express Chipset

Feature	Description
Memory	4x 240-pin DDR3 DIMM slots, Dual Channel, Non-ECC, Max 16GB, 1333/1066 MHz
Expansion Slots	1x PCI-Express x16, 2x PCI-Express x1, 1x PCI
Storage	4x SATA2 Ports (RAID 0, 1, 5, 10 support), 2x eSATA Ports (1 rear, 1 via header)
Audio	6-channel Intel High Definition Audio
LAN	Intel Gigabit Ethernet Controller (10/100/1000 Mbps)
USB Ports	14x USB 2.0 Ports (6 rear, 8 via headers)
Video Outputs	2x DVI-D Ports, 1x DisplayPort (supports Intel HD Graphics)
Form Factor	Micro-ATX
Dimensions	10.5 x 10.5 x 2.5 inches
Weight	2.25 pounds
Special Features	Intel vPro Technology, Intel Active Management Technology, Trusted Platform Module (TPM)

7. Warranty and Support

7.1. Limited Warranty

The Intel Desktop Board DQ57TM is backed by a three-year limited warranty. For specific terms and conditions, please refer to the warranty documentation included with your product or visit the official Intel support website.

7.2. Technical Support

For technical assistance, driver downloads, BIOS updates, and additional product information, please visit the official Intel support website. You can also contact Intel customer service for direct support.