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› Blackview DE10-Nano Kit Instruction Manual

Blackview P0496

Blackview DE10-Nano Kit Instruction Manual

Model: P0496

1. INTRODUCTION

The Blackview DE10-Nano Kit is a compact and powerful Nano ITX motherboard designed for various computing and development applications. Featuring an ARM Cortex A9 Processor and 1GB DDR3 RAM, it provides a robust Linux platform for both server and personal computer uses. This manual provides essential information for setting up, operating, and maintaining your DE10-Nano Kit.

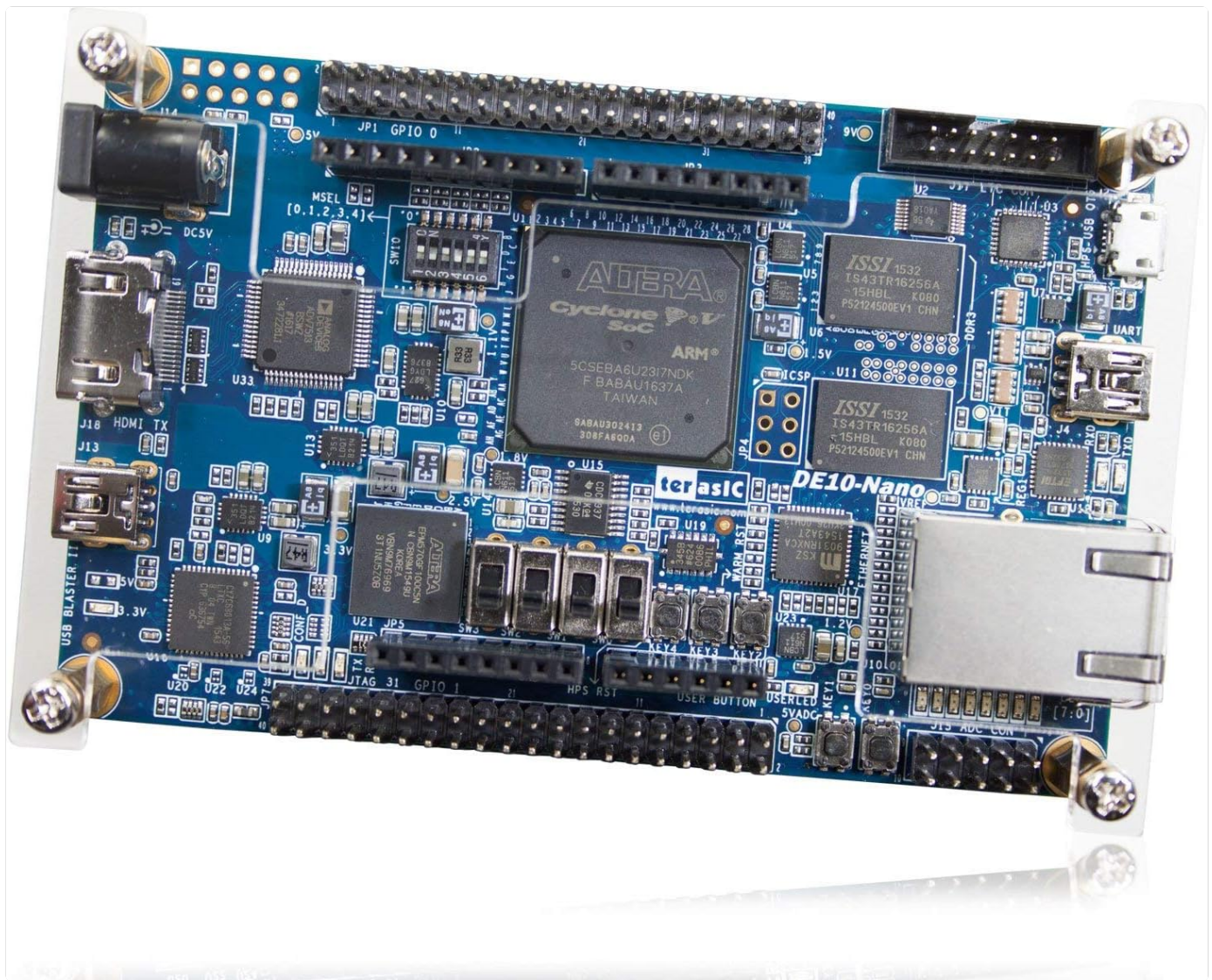


Figure 1: Blackview DE10-Nano Kit Motherboard (Top View)

This image displays the top view of the Blackview DE10-Nano Kit motherboard, highlighting its compact Nano ITX form factor and key components such as the ARM Cortex A9 processor and DDR3 RAM modules.

2. KEY FEATURES

- **Processor:** 800MHz Dual-core ARM Cortex-A9 Process
- **Memory:** 1GB DDR3 SDRAM with a 32-bit Data Bus
- **FPGA:** 110K Logic Elements (LEs), 5570 Kbits Embedded Memory, 6 PLLs, 2 Hard Memory Controllers
- **Connectivity:** 1 Gigabit Ethernet PHY, USB Micro-AB Connector
- **Storage:** Micro SD Card Socket
- **Platform Compatibility:** Linux

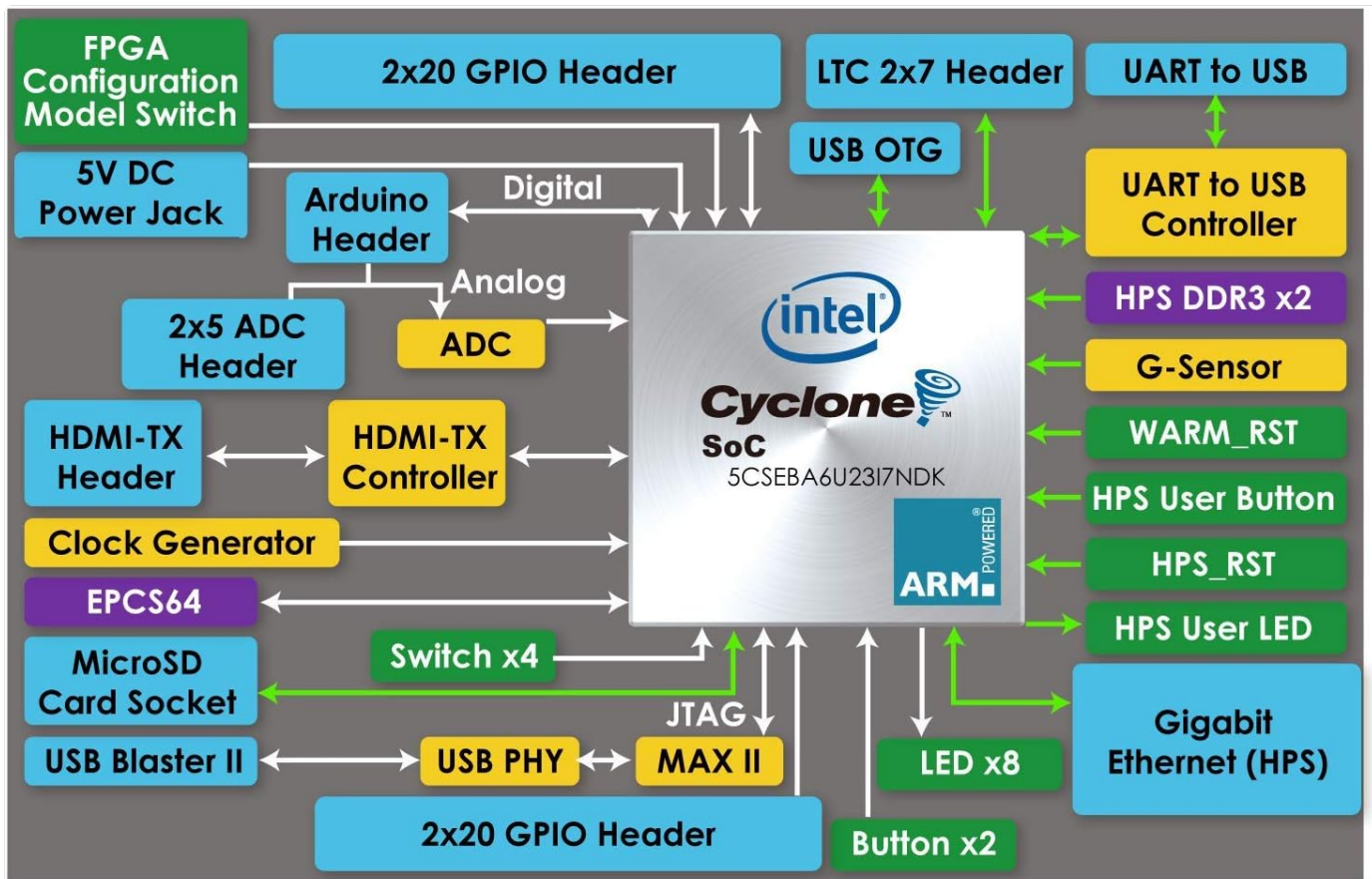


Figure 2: Blackview DE10-Nano Kit System Block Diagram

This diagram illustrates the internal architecture and connectivity of the DE10-Nano Kit, showing the integration of the Intel Cyclone V SoC with various peripherals and interfaces.

3. SETUP GUIDE

3.1 Package Contents

Before beginning, ensure all components are present:

- Blackview DE10-Nano Motherboard (Model: P0496)
- Power Adapter (5V DC)
- USB Micro-AB Cable
- Ethernet Cable
- Quick Start Guide

3.2 Initial Connection

1. Insert a compatible Micro SD Card (not included) with your desired Linux distribution into the Micro SD Card Socket.
2. Connect the Ethernet cable to the Gigabit Ethernet PHY port and to your network.
3. Connect the USB Micro-AB cable to the board's USB Micro-AB port for host communication or peripheral connection.
4. Connect the 5V DC power adapter to the power jack. The board should power on automatically.

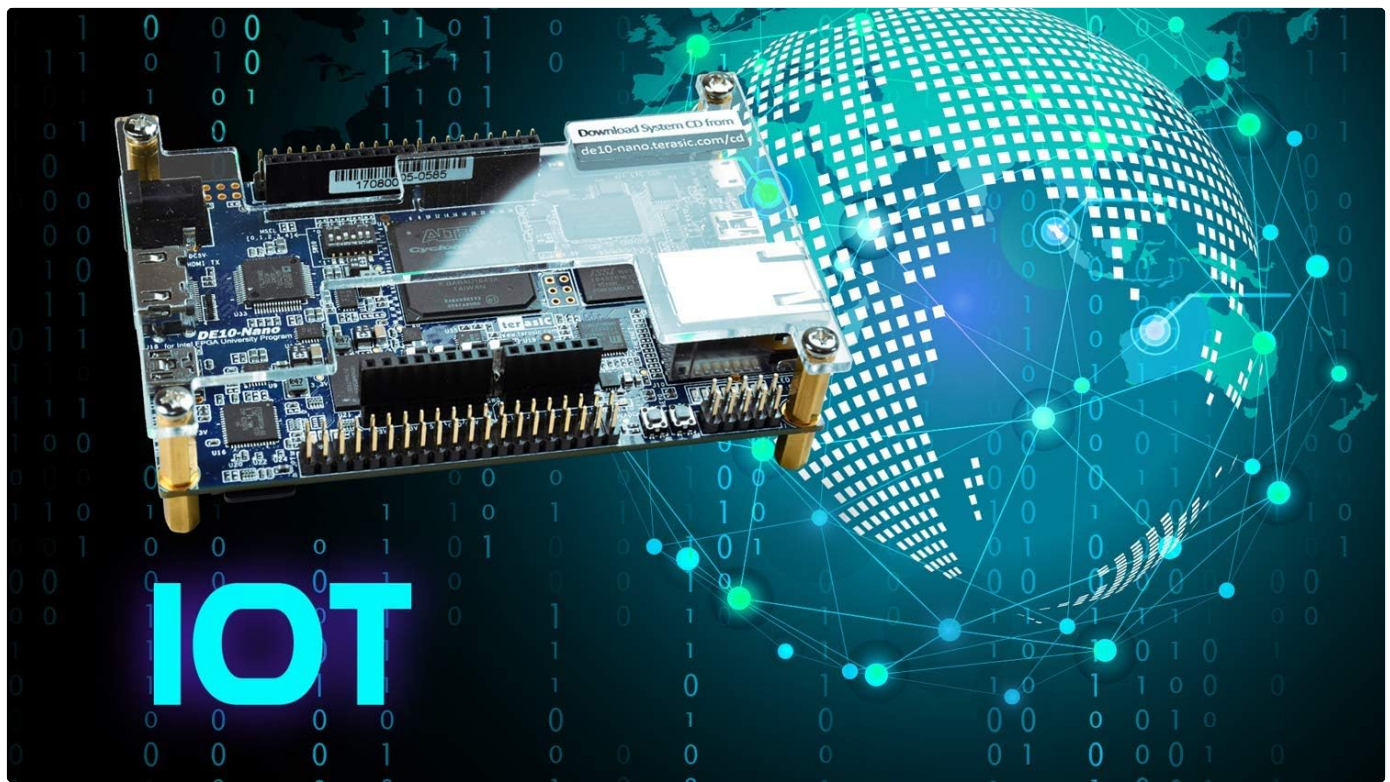


Figure 3: DE10-Nano Kit with essential connections

This image shows the DE10-Nano Kit connected to power, Ethernet, and a USB device, illustrating a typical initial setup.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

The DE10-Nano powers on automatically when connected to a power source. To power off, perform a proper system shutdown through the operating system to prevent data corruption. Disconnect the power adapter only after the system has fully shut down.

4.2 Software Environment

The DE10-Nano Kit is designed to run Linux. Users can install various Linux distributions compatible with ARM Cortex-A9 processors. Refer to the official Blackview support website for recommended distributions and installation guides.

For advanced users, the FPGA can be programmed for custom applications. Development tools and resources are available from Terasic, the manufacturer.

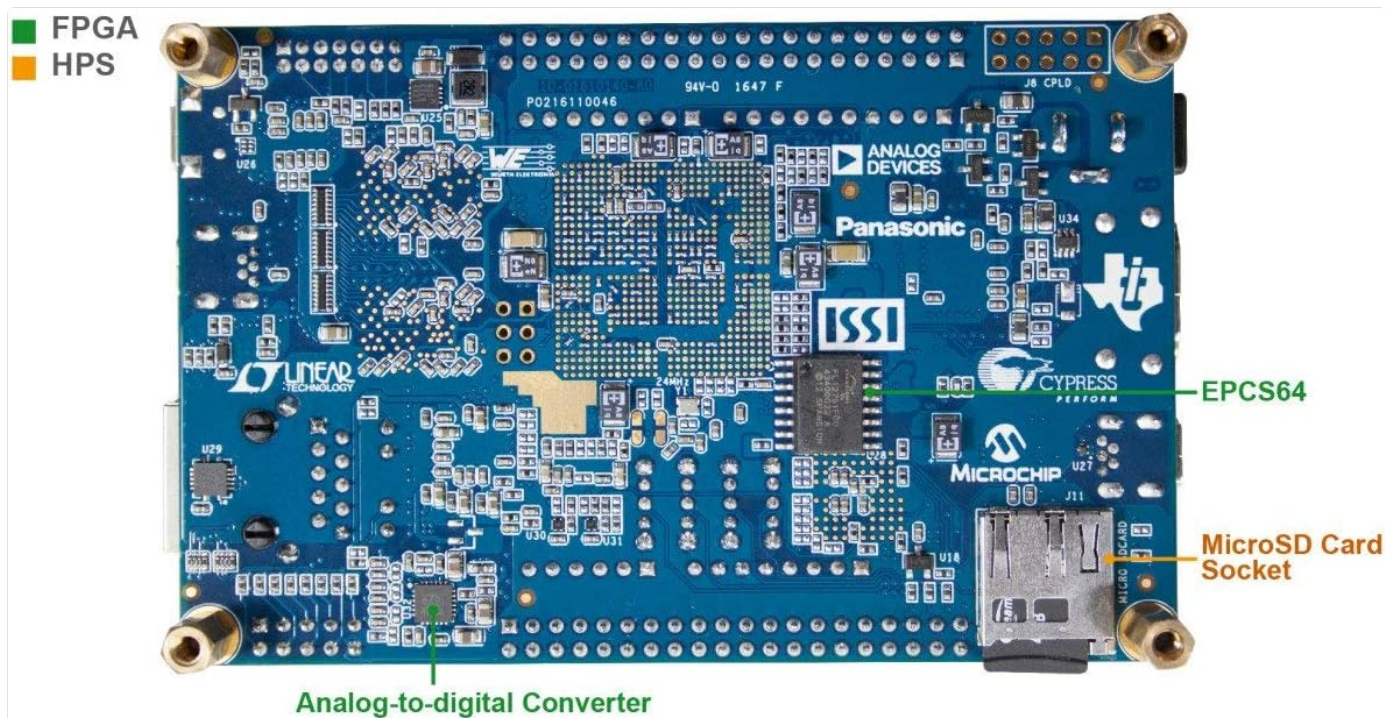


Figure 4: DE10-Nano Kit with various expansion boards

This image showcases the versatility of the DE10-Nano Kit, demonstrating its compatibility with various expansion boards for extended functionality.

5. MAINTENANCE

5.1 Cleaning

To clean the board, disconnect all power and cables. Use a soft, dry cloth to gently wipe the surfaces. Avoid using liquid cleaners or abrasive materials.

5.2 Environmental Considerations

Operate the DE10-Nano Kit in a well-ventilated area to prevent overheating. Avoid exposing the board to extreme temperatures, humidity, or direct sunlight.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Board does not power on.	Incorrect power adapter or connection.	Ensure 5V DC power adapter is correctly connected and functional.
Operating system fails to boot.	Corrupted Micro SD Card or incorrect image.	Re-flash the Micro SD Card with a verified operating system image. Check card for corruption.
Network connectivity issues.	Loose Ethernet cable or network configuration error.	Verify Ethernet cable connection. Check network settings within the operating system.

7. SPECIFICATIONS

- **Model Number:** P0496
- **Package Dimensions:** 10.5 x 7.8 x 1.9 inches
- **Item Weight:** 0.16 ounces
- **CPU Socket:** BGA 1023
- **Compatible Devices:** Server, Personal Computer
- **RAM Memory Technology:** DDR3
- **Compatible Processors:** ARM Cortex A9
- **Memory Clock Speed:** 800 MHz
- **Platform:** Linux
- **Memory Storage Capacity:** 1 GB
- **RAM Memory Maximum Size:** 1 GB

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Blackview support channels or the documentation included with your product. Online resources and FAQs may also be available on the manufacturer's website.

Manufacturer: Terasic

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