5 Getting started with the DE2i-150 board

Users can reference the document Getting_Started_With_DE2i_150.pdf found in the DE2i-150 System CD User_Manual folder. This guide contains a quick overview of the hardware and software setup including step-by-step procedures from installing the necessary software tools to using the DE2i-150 board. The main topics that this guide covers are listed below:

1. Software Installation: Installing Quartus and the DE2i-150 CD contents.
2. Development Board Setup: Powering on the DE2i-150.
3. USB-Blaster Driver: Installing the embedded USB Blaster circuit driver.
4. Programming the FPGA: Downloading an FPGA SRAM Objective File (.sof).

6 Starting your first FPGA design

Users can reference the document My first FPGA.pdf found in the DE2i-150 System CD manual folder.
This document describes the complete FPGA design flow, including:

1. Creating a new Quartus II project.
2. Adding user logic and utilizing mega-core IPs.
3. Downloading an .sof file to the FPGA to view the result.

7 Getting Help

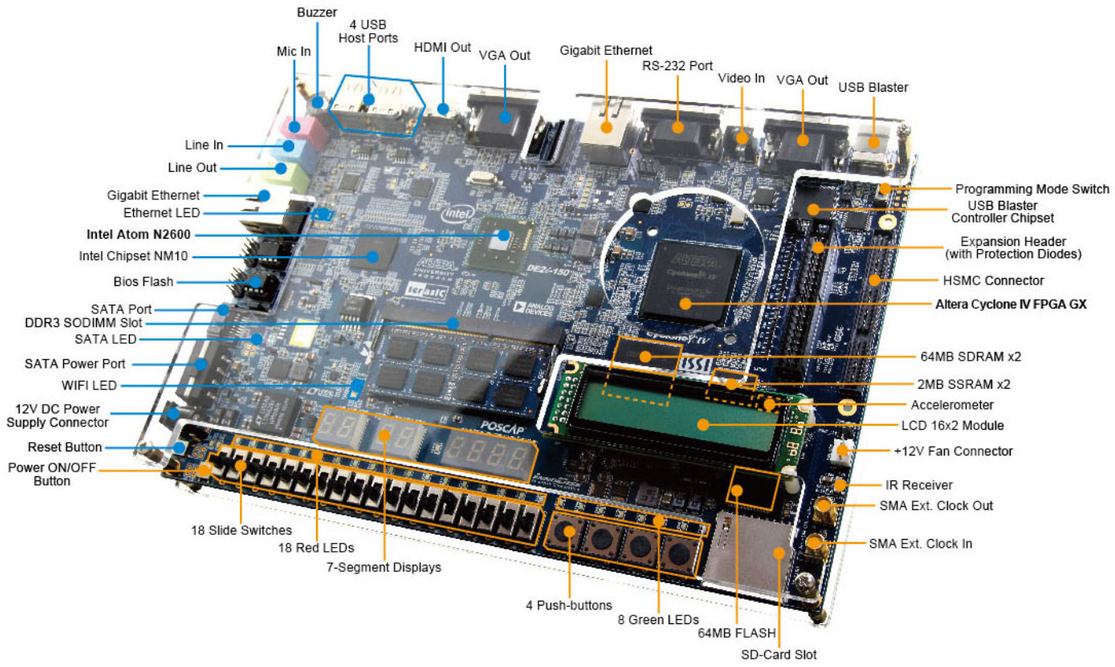
If you encounter any problem, please contact us below:

Email: **support@terasic.com** Tel: **+886-3-5750-880**

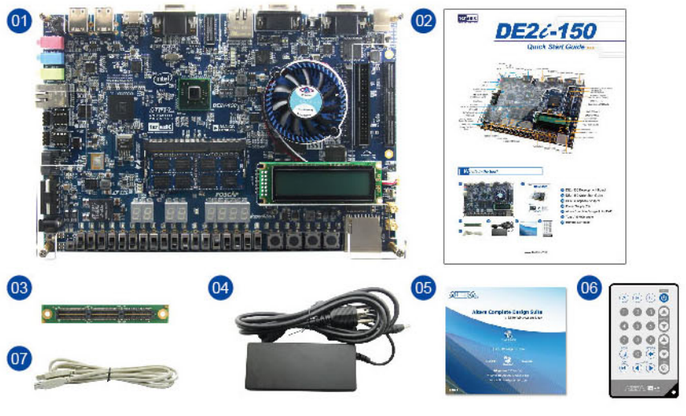
terasIC
www.terasic.com

DE2i-150

Quick Start Guide



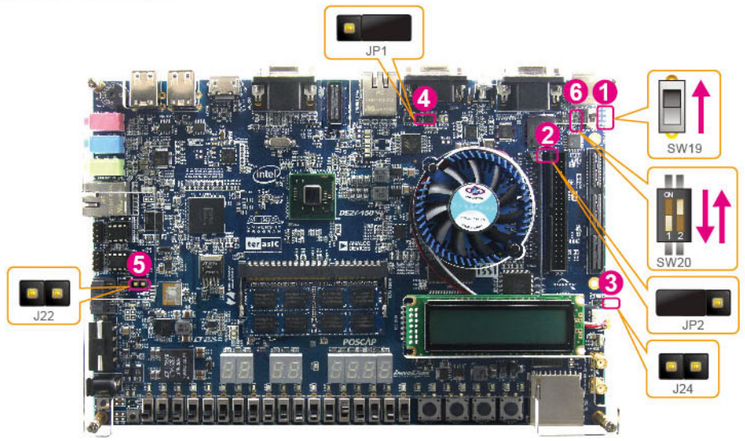
1 What's in the box?



01 DE2i-150 Development Board
02 DE2i-150 Quick Start Guide
03 HSMC Loopback Adapter
04 Power Supply (12V)
05 Altera Complete Design Suite DVD
06 Remote Controller
07 Type A-B USB cable

2 Default Jumper and Switch Settings

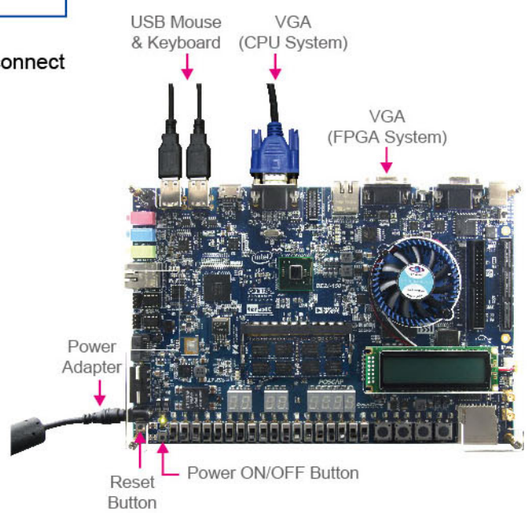
The DE2i-150 requires Quartus II Subscription Edition Software to support the Cyclone IV GX device. The Altera Complete Design Suite DVD from the DE2i-150 kit includes installation files for the Quartus II Subscription Edition Software v12.0 for Windows and Linux.



Item	Component	Function	Setting	Description
1	SW19	FPGA Configuration Mode	Set to RUN Position	FPGA will work in the JTAG interface for programming
2	JP2	HSMC JTAG Control	Short pin 1 and pin 2	Bypass HSMC JTAG interface
3	J24	HSMC 12V Power Control	Set to Open	HSMC connector will not provide 12V power
4	JP1	RGMII/MII Mode for PHY (FPGA System)	Short pin 1 and pin 2	Allow the PHY to operate in RGMII mode
5	J22	BIOS Programming Control	Set to Open	Forbid external flashing of the BIOS
6	SW20	CPU Configuration Mode	Set TIMEOUT to ON Set CPU_DIS to OFF	Enable Time out function and allow the CPU to initiate normally

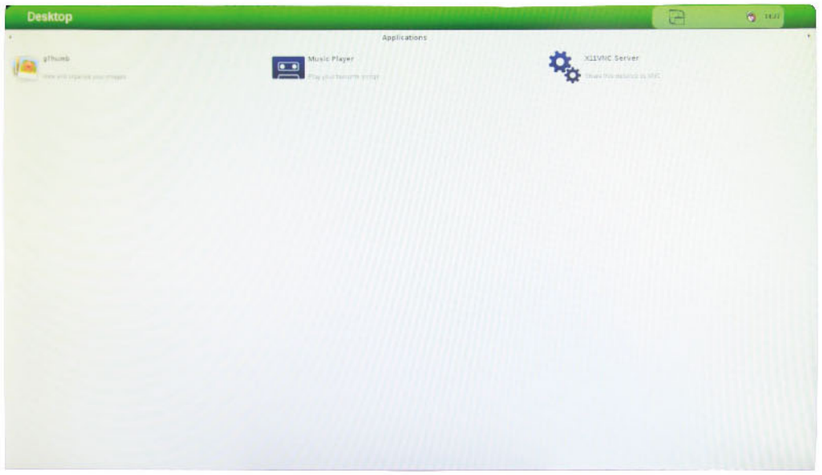
3 Perform Power-on Test

1. To see demos from CPU or FPGA system, you can connect VGA monitors to port J4 (for CPU) or J8 (for FPGA).
2. Connect a USB mouse and a keyboard to USB port on J2 or J3.
3. Make sure DDR3 SODIMM memory and mSATA SSD are plugged into their respective sockets.
4. Connect the power adapter to the power jack of the DE2i-150.
5. Power On/Off button (PB1).
6. You should observe the following:



For CPU System :

a. The DE2i-150 CPU system will boot into the Yocto operating system as shown in below*.
* If you need to change bios seting, please press "F2" when you seen the bios screen.



For FPGA System :

a. All user LEDs are flashing
b. All 7-segment displays are cycling through the numbers 0 to F
c. The LCD display shows “Welcome to the Terasic DE2i-150”
d. The VGA monitor connected to J8 should display an image of the board.

7. Pressing the Reset button (PB2) will warm reset the CPU system.
8. To power down the board, hold on the Power On/Off (PB1) button until the CPU is turned off.

4 Contents of the DE2i-150 system CD

DE2i-150 System CD Contents	
Directory Name	**Contents**
User_Manual	Contains the DE2i-150 documentation
Demonstrations	Contains design examples for DE2i-150 application
Datasheet	Contains the datasheets of the components on the DE2i-150
Schematic	Contains the schematics of DE2i-150
Tools	Contains the design and testing tools for DE2i-150

You can download the latest CD and user manual from : http://de2i-150.terasic.com