

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).

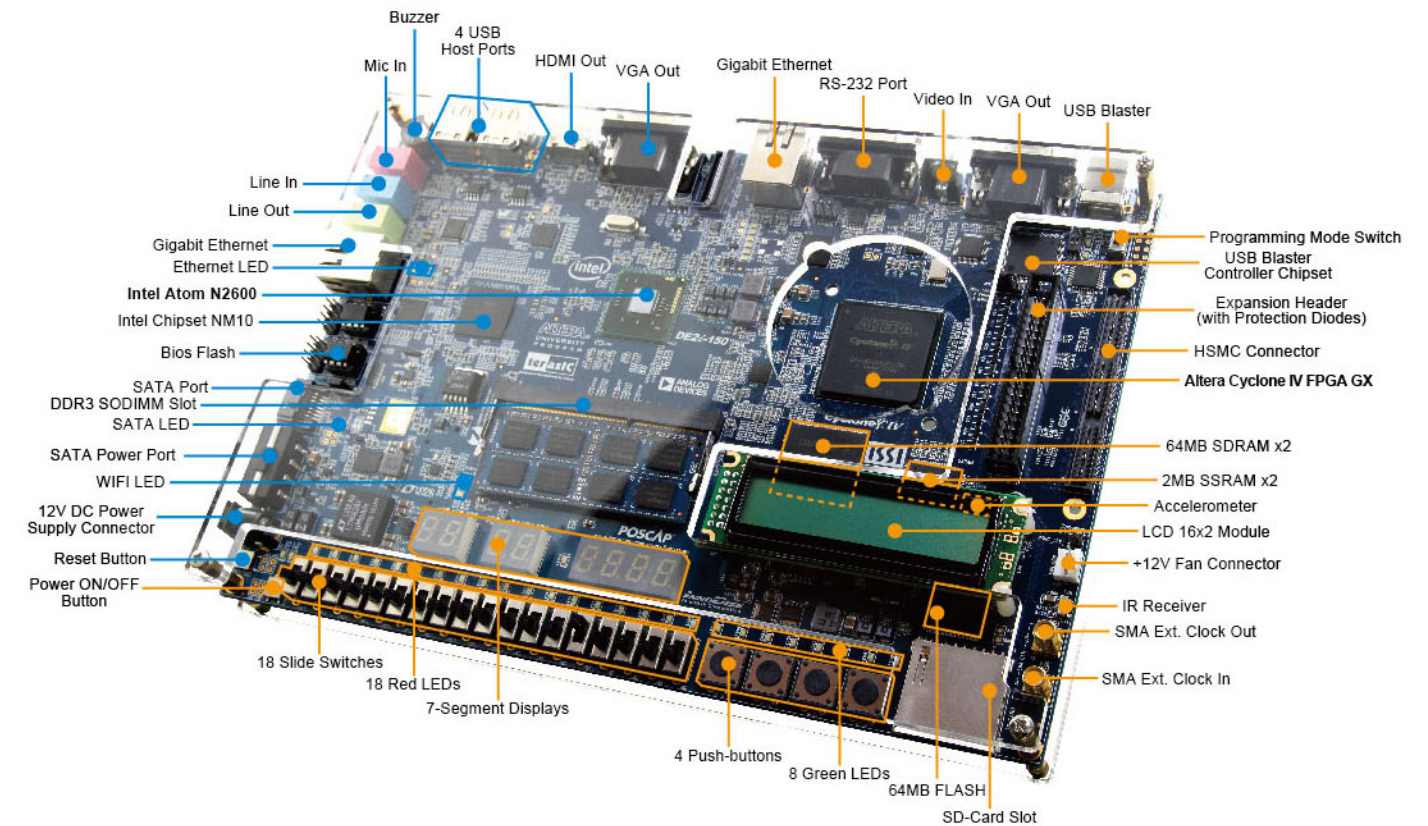
6 Starting your first FPGA design

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:

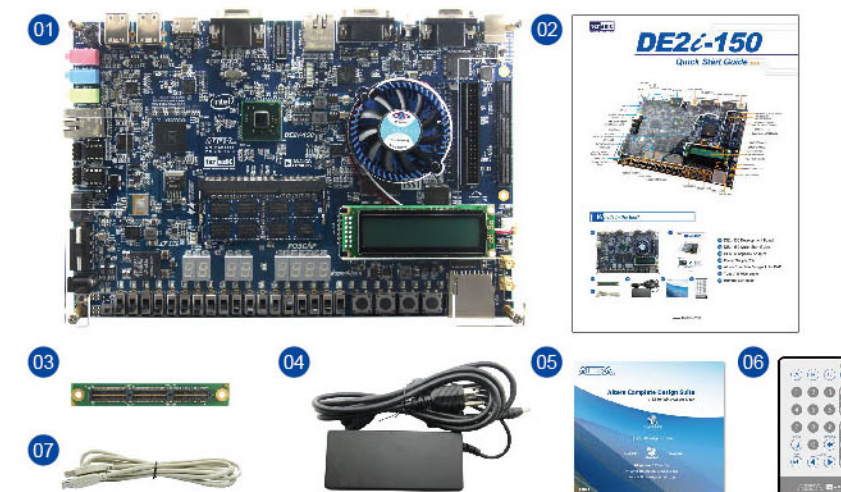
- 1 Creating a new Quartus II project.
- 2 Adding user logic and utilizing mega-core IPs.
- 3 Downloading an .sof file to the FPGA to view the result.

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

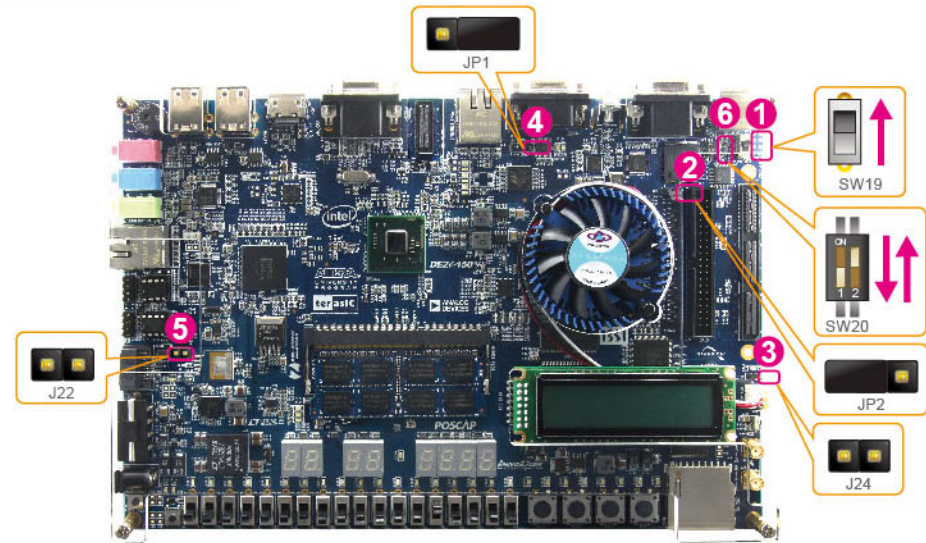
7 Getting Help

If you encounter any problem, please contact us below:

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

2 Default Jumper and Switch Settings

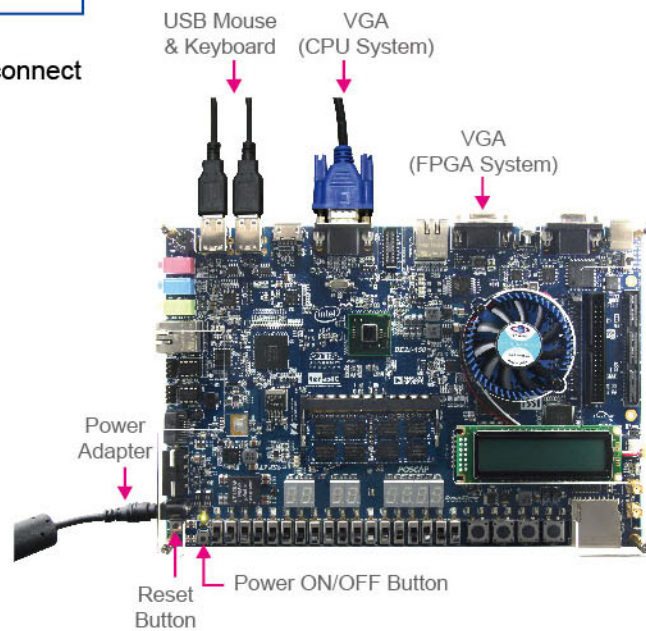
The DE2i-150 requires Quartus II Subscription Edition Software to support the Cyclone IV GX device. The Altera Complete Design Suite DVD from the DE2i-150 kit includes installation files for the Quartus II Subscription Edition Software v12.0 for Windows and Linux.



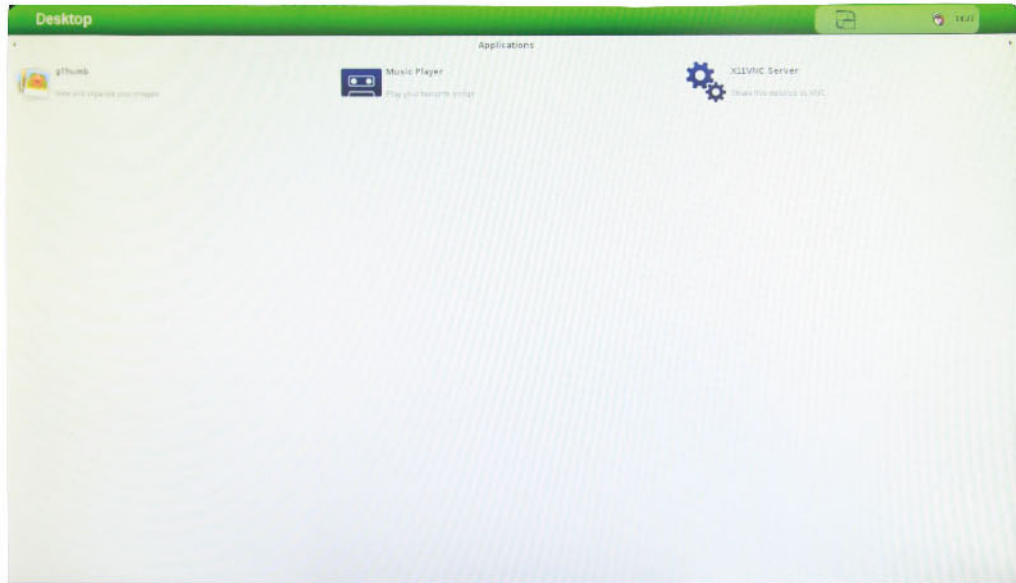
Item	Component	Function	Setting	Description
1	SW19	FPGA Configuration Mode	Set to RUN Position	FPGA will work in the JTAG interface for programming
2	JP2	HSMC JTAG Control	Short pin 1 and pin 2	Bypass HSMC JTAG interface
3	J24	HSMC 12V Power Control	Set to Open	HSMC connector will not provide 12V power
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>