

- 5 Set the POWER_ON switch (SW7) to the 'ON' position. As power is supplied to the board, 12 LEDs (D1 ~ D12) illuminate to indicate the board has power from the HSMC VCCIO set, respectively.

CAUTION: Before powering on the TR4 board with a daughter card, please check to see if there is a short circuit between the power pins and FPGA I/O.

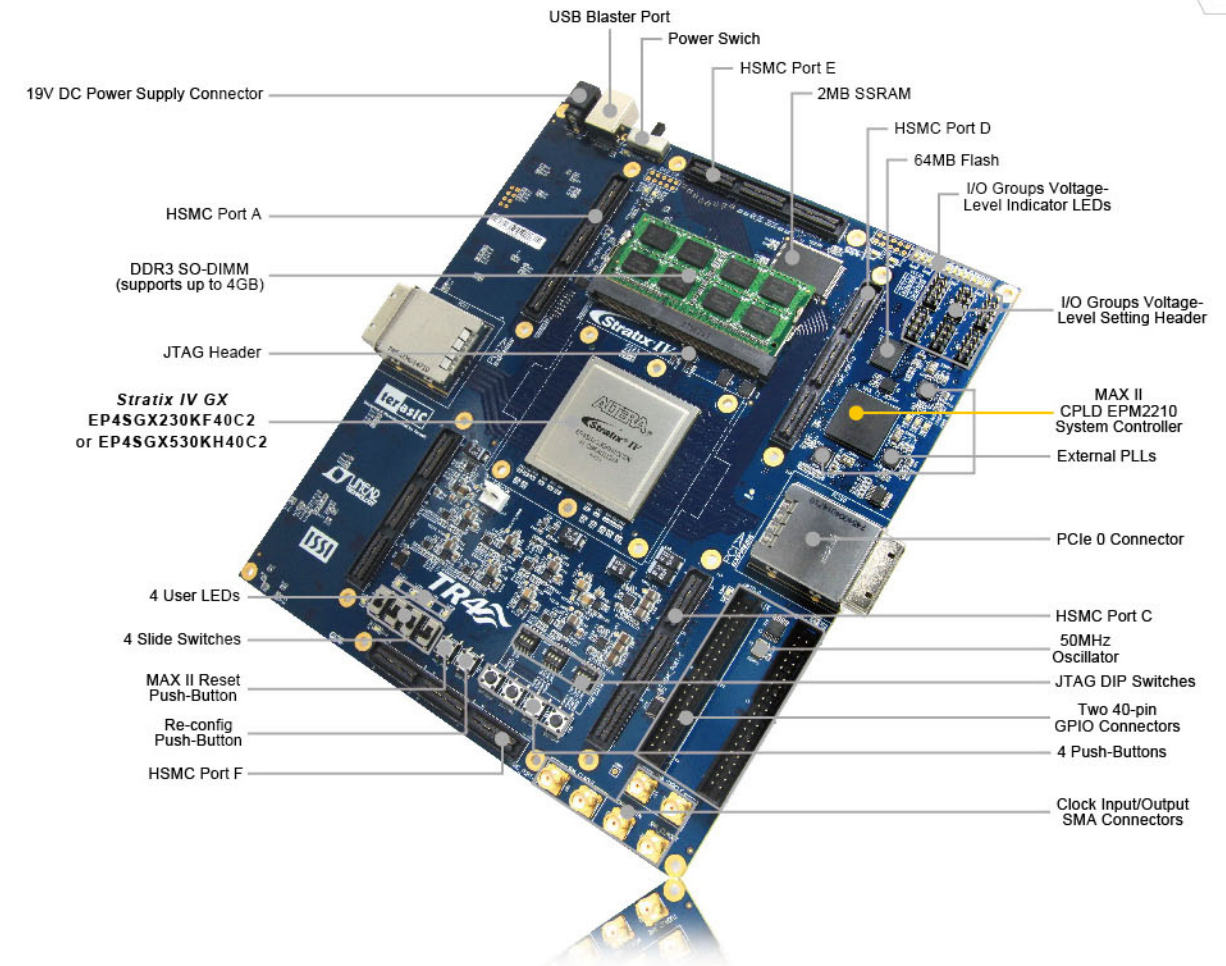
- 6 You should observe the following once the default bit stream is loaded:

- User LEDs (LED0 to LED3) flash in sequential pattern.
- Fan turns on. Note it is important the fan is rotating after the TR4 is turned-on to prevent the Stratix IV GX device from overheating. In case the fan stops rotation, turn-off the TR4 board immediately from further damage.

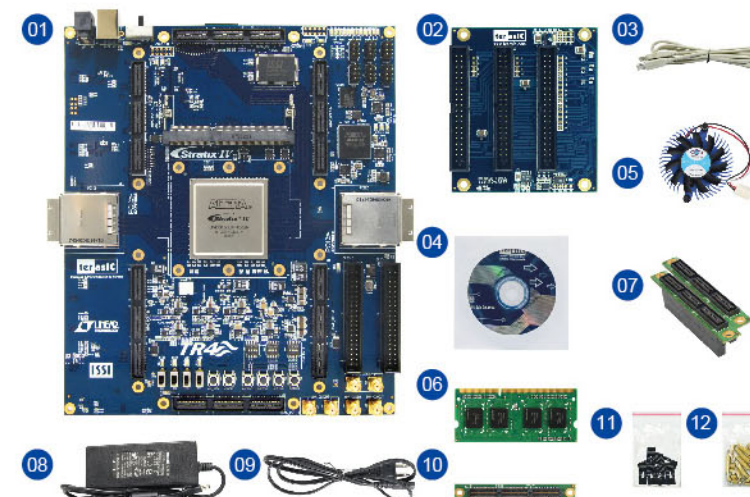
For more details on the TR4 hardware and configuration setup, please refer to the TR4 Getting Started Guide on the TR4 system CD.

TR4

Quick Start Guide



1 What's in the box?



9 Getting Help

If you encounter any problem, please contact us below:

Email: support@terasic.com Tel: +886-3-575-0880

2 Before Powering up the TR4 Board

Before you attempt to power up the TR4 board, there are drivers and design software that must be installed. Please refer to the "TR4 Getting Started Guide.pdf" found in the directory "UserManual" folder on the TR4 system CD.

The document describes the following:

- Introduction to TR4 Development Kit Contents
- TR4 Development Kit Contents
- Key Features
- Before You Begin
- Software Installation
- Development Board Setup
- Programming the Stratix IV GX Device on the TR4 Board
- Programming through the Flash Memory device3

3 Software Requirements

The TR4 requires Quartus II Subscription Edition Software v11.1 to support the Stratix IV GX device.

Users can download Quartus 11.1 from Altera's Download Center :

<https://www.altera.com/download/software/quartus-ii-se/11.1>

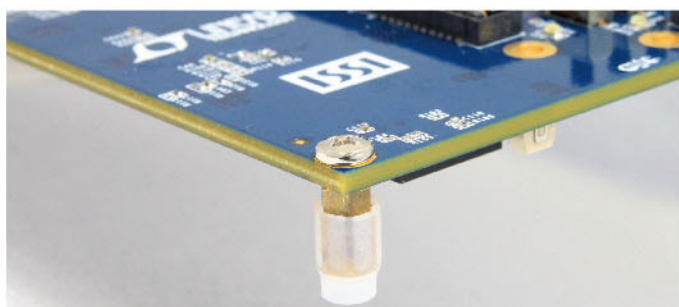
4 Contents of the TR4 System CD

The TR4 System CD contains a 'TR4_Install.exe' executable file. Run the executable file and all the associated TR4 contents listed in the table below are extracted to your desired location. Please make sure at least 2GB of space is available in the specified location of your hard disk.

TR4 System CD Contents	
Directory Name	Contents
User_Manual	Contains the TR4 documentations
Demonstrations	Contains design examples for TR4 application
Datasheet	Contains the datasheets of the components on the TR4
Schematic	Contains the schematics of TR4
Tools	Contains the design and testing tools for TR4

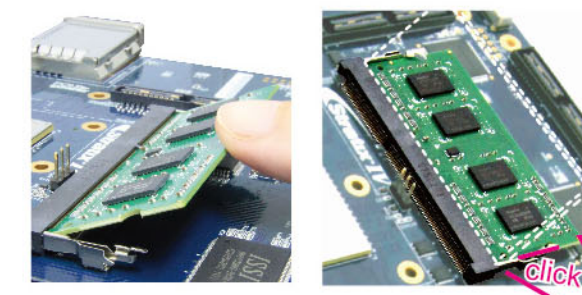
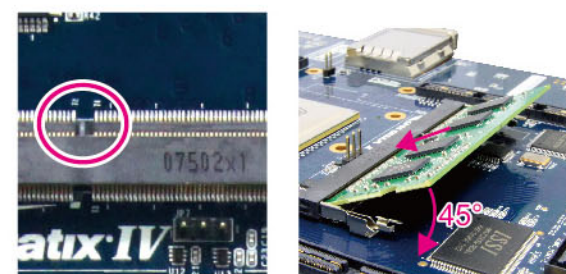
5 Attach Rubber Foot Stands

- 1 Attach the included rubber (silicon) covers, as shown in below to each of the four copper stands on the TR4 board.



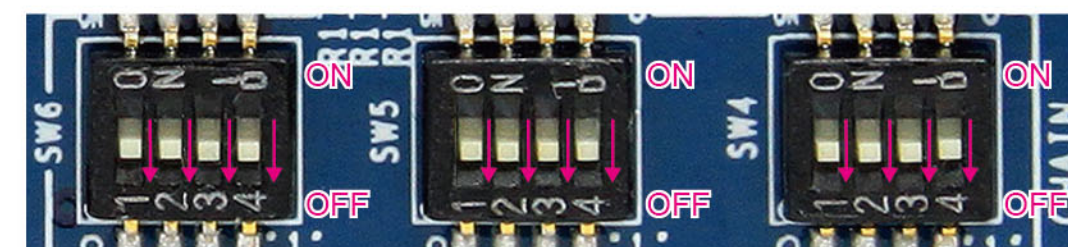
6 DDR3 SO-DIMM Module Installation

- 1 Fully insert the DDR3 SO-DIMM module at a 45 degree angle into the DDR3 SO-DIMM socket.
- 2 Snap the DDR3 SO-DIMM module downwards in the direction of the board until a 'click' sound is made.



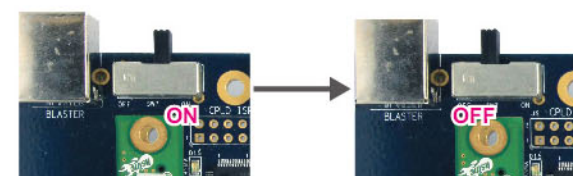
7 JTAG DIP Switches Default Settings

- 1 The default setting of the DIP switch allows JTAG chain to be detected through Quartus II software. In case the settings are altered, the JTAG chain may not be detected. For more details on the JTAG DIP switch setting, please refer to the TR4 User Manual.



8 Perform Power-on Test

- 1 Ensure the POWER_ON switch (SW7) is in the 'OFF' position.
- 2 Locate the TR4 power cable and the power supply in the box contents.



- 3 Connect the AC power cord to the power supply.
- 4 Connect the supplied TR4 power cable from the connector of the power supply to the power connector (J1) on the TR4 board. LED (D33) illuminates to indicate the board has power from the 19V DC input.

