6 System Builder

This tool allows users to create customizable Quartus II projects depending on their requirements. The top-level design file, pin assignments, and I/O standard settings for the MAX 10 NEEK will be generated automatically from this tool. This tool can be found in the "Tools" folder of System CD.

MAX 10 NEEK V1.0.0
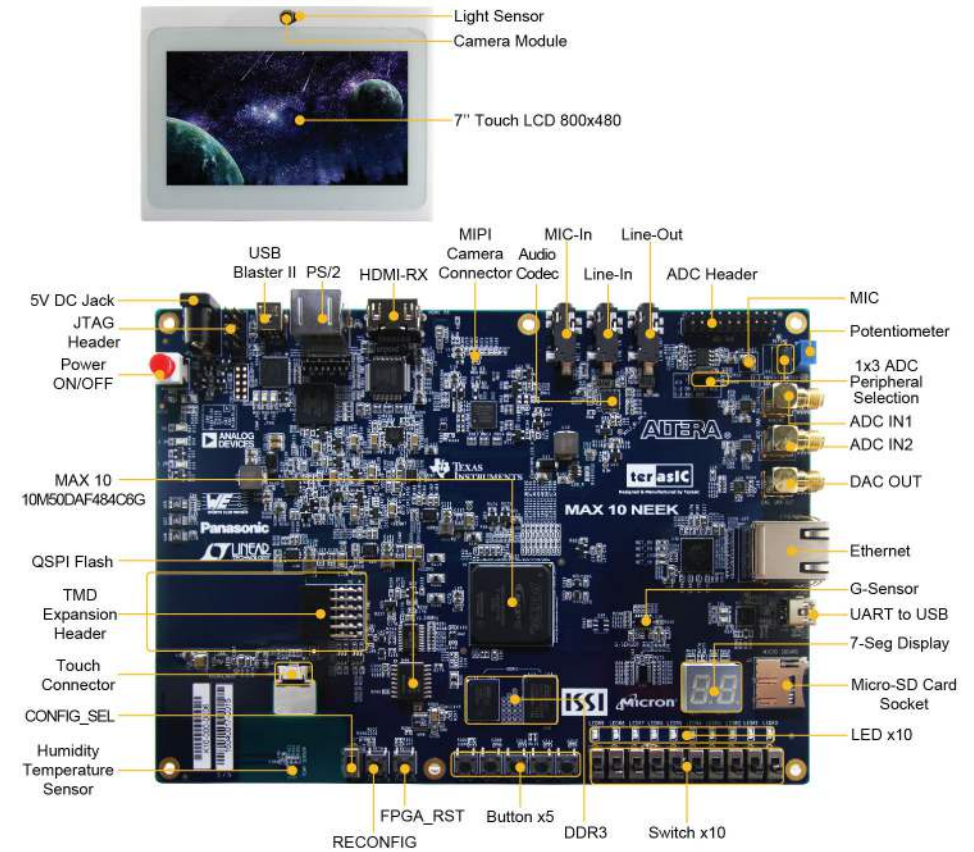
MAX 10 NEEK FPGA Board

System Configuration

Project Name:
MAX10

- ☑ CLOCK
- ☑ LED x 10
- ☑ 7-Segment x2
- ☑ G-sensor
- ☑ Light Sensor
- ☑ HDMI RX
- ☑ PS2
- ☑ QSPI Flash
- ☑ DDR3 SDRAM
- ☑ MIPI CS2 Camera
- ☑ Button x 5
- ☑ Switch x 10
- ☑ Power Monitor
- ☑ Humidity Sensor
- ☑ Audio Codec
- ☑ microSD Card
- ☑ DAC
- ☑ UART to USB
- ☑ Ethernet
- ☑ LCD Touch Panel

Default Setting | Save Setting | Generate | Load Setting | Exit

TMD 2x6 GPIO Header
TMD Bluetooth SPP
Prefix Name:

7 Getting Help

For further discussion, support, and resources, please go to:

http://max10.terasic.com

If you encounter any problem, please contact us below

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

- Light Sensor
- Camera Module
- 7" Touch LCD 800x480

- USB Blaster II
- PS/2
- HDMI-RX
- MIPI Camera Connector
- Audio Codec
- MIC-In
- Line-In
- Line-Out
- ADC Header
- 5V DC Jack
- JTAG Header
- Power ON/OFF
- MAX 10 10M50DAF484C6G
- QSPI Flash
- TMD Expansion Header
- Touch Connector
- CONFIG_SEL
- Humidity Temperature Sensor
- RECONFIG
- FPGA_RST
- Button x5
- DDR3
- Switch x10
- MIC
- Potentiometer
- 1x3 ADC Peripheral Selection
- ADC IN1
- ADC IN2
- DAC OUT
- Ethernet
- G-Sensor
- UART to USB
- 7-Seg Display
- Micro-SD Card Socket
- LED x10

1 What's in the Box?

- ❶ MAX 10 NEEK Board
- ❷ MAX 10 NEEK Quick Start Guide
- ❸ Type A to Mini-B USB Cable
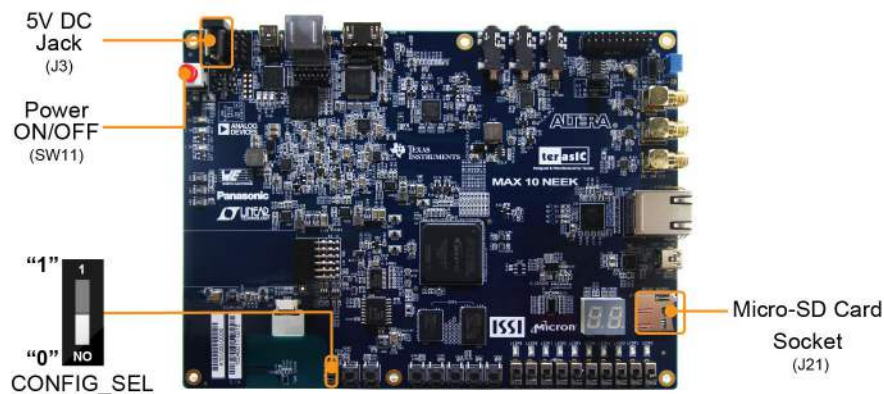- ❹ Power Adapter (5V/3A)
- ❺ Micro-SD Card

CPT-3251-00

www.terasic.com

2 Perform Power-on Test

5V DC Jack (J3)

Power ON/OFF (SW11)

"1"

"0" NO

CONFIG_SEL

Micro-SD Card Socket (J21)

1. Insert the provided Micro-SD card to the Micro-SD card socket.
2. The CONFIG_SEL switch is set to "0".
3. Connect the power adapter to the power jack (J3) on the MAX 10 NEEK.
4. Turn on the development board by pressing the red power button (SW11).
5. The GUI of Applicaiton Selector utility will appear on the LCD.
6. Scroll to select a demonstration using the side-bar.
7. Tap on the Load button to run a demonstration

Application Selector

1. painter
2. camera
3. hdmi_rx
4. humidility_temperature
5. g_sensor

Load

3 Contents of the MAX 10 NEEK System CD

Users can download the MAX 10 NEEK System CD from this link:

http://cd-max10.terasic.com

MAX 10 NEEK System CD Contents

Directory Name	Contents
Datasheet	Contains the datasheets of the components on the MAX 10 NEEK
Demonstrations	Contains design examples for MAX 10 NEEK application
Factory_Recovery	Contains the default code of Application Selector and recovery procedure
Schematic	Contains the schematics of MAX 10 NEEK
Tool	Contains the design tools for MAX 10 NEEK
UserManual	Contains the manuals of MAX 10 NEEK

4 Start Your First FPGA Design

Users can refer to the document My_First_FPGA.pdf found in the MAX 10 NEEK System CD manual folder.

This document describes the complete FPGA design flow, including:

1. Create a new Quartus II project.
2. Add user logic and utilize MegaCore IPs.
3. Download .sof file to the FPGA to view the result.

5 Start Your First Nios II Design

Users can refer to the documnet My_First_Nios II.pdf found in the MAX 10 NEEK system CD manual folder.

This document describes the complete Nios II design flow, including:

1. Creating a new Quartus II project.
2. Creating a new Qsys system including Nios II processor and other peripherals onboard.
3. Creating a new Nios II project for hello program.
4. Download .sof and .elf files to the FPGA to view the result.