

# MAX 10 Nios II Embedded Evaluation Kit

## *Get in Touch with Your Inner NEEK*

The MAX<sup>®</sup>10 NEEK from Terasic is a full featured embedded evaluation kit based upon the MAX10 family of FPGAs. It offers a comprehensive design environment with everything embedded developers need to create a processing based system. The MAX 10 NEEK delivers an integrated platform that includes hardware, design tools, intellectual property and reference designs for developing a wide range of applications.

The fully integrated kit allows developers to rapidly customize their processor and IP to suit their specific needs, rather than constraining their software around the fixed feature set of the processor. The all in one embedded solution that is the MAX 10 NEEK, combines a LCD touch panel and digital image module that provides developers the ideal platform for multimedia applications, making best use of the parallel nature of FPGAs.

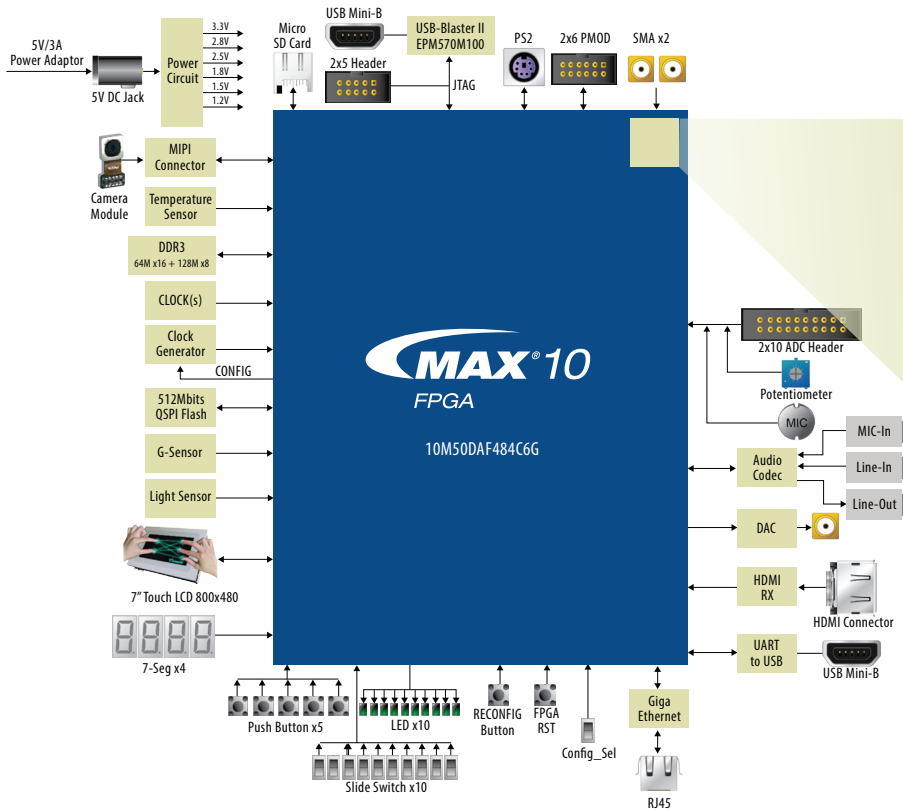
### **Demonstration designs spanning a variety of applications including :**

- Robotic spider control via Bluetooth module (not included)
- MIPI camera
- G sensor
- Five-point painter
- Humidity and temperature sensor display
- LCD - HDMI monitor
- Ethernet socket server
- Music player
- USB - UART interface
- Audio music and many more

Visit [www.altera.com/neek](http://www.altera.com/neek) for more details about NEEK and a full list of precompiled designs in the Altera Design Store.



**terasIC** Terasic Inc.



**Nios II: A Processor for Life**

**Nios II Embedded Processor Features**

- 32 bit Nios II RISC processor
- Flexible configuration
- Custom instructions
- Floating-point support
- Wide operating system (OS) support—Linux, uC/OS-II, and many more
- Free Development Tools

## MAX 10 FPGA and Board Features

### MAX 10 FPGA

- Up to 50K logic elements (LEs)
  - Non-volatile instant-on architecture
- 2X 12 bit SAR analog-to-digital converter (ADC)
- On chip temperature sensor
- Dual-configuration flash memory
- Embedded user flash memory
- Embedded SRAM
- DSP Blocks
- External DDR3 x24 memory support
- Embedded Nios® II processor support
- Fail safe remote system update
- Single or dual-core supply options

### Board Features

- Gigabit Ethernet I/F
- 16 bit digital-to-analog converter (DAC) output
- 800x480 5-point multitouch LCD
- 8MP MIPI CSI-2 camera
- Ambient light sensor
- High-definition multimedia interface (HDMI) receiver
- 24 bit audio codec
- PS2 interface
- Micro SD interface
- G sensor
- Digilent Pmod™ Compatible connector
- 512 Mb quad SPI flash memory