

Experience the possibilities of zero-power CPLDs firsthand

MAX IIZ demo board

**Maximize your advantage.
Minimize power, space, and cost.**

With zero standby power, ultra-small packages, and an innovative architecture based on the industry's lowest cost CPLDs, Altera's new zero-power MAX® IIZ devices are ideal for any portable or handset application. To help you quickly and easily evaluate these devices and their low power consumption, try out our new MAX IIZ demo board.

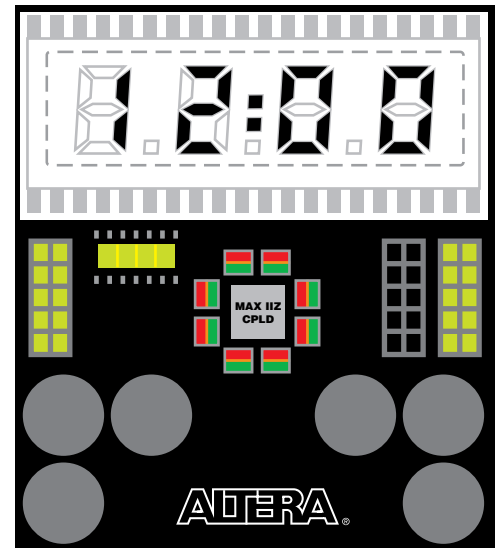
Our MAX IIZ demo board lets you experience how easy it is to design with these zero-power CPLDs. The board comes with built-in design examples for functions such as voltage-level shifting, activating LEDs, and driving displays. Each demo board undergoes thorough prototype and production testing, so you can be assured of a smooth evaluation process.

Key board features

The demo board is based on the MAX IIZ EPM240Z device in a 100-pin Micro FineLine BGA (MBGA) package. This device features 240 logic elements (LEs) and 80 user I/O pins. Other board components include:

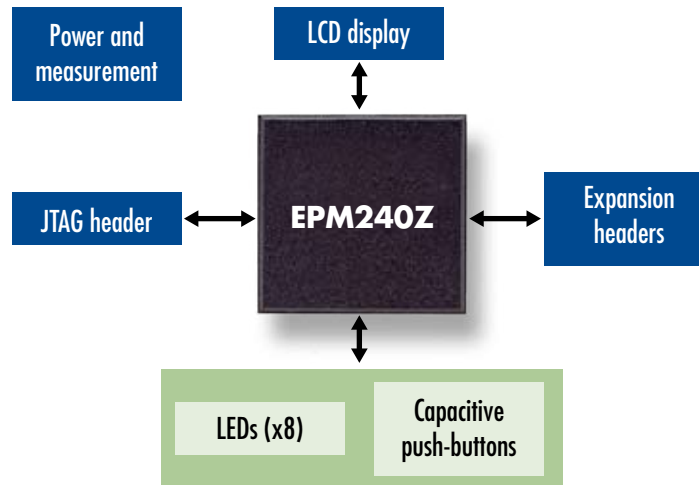
- **User interface:** A four-digit, seven-segment LCD, eight capacitive buttons, and eight bi-color LEDs
- **General I/O:** Capacitive switches to show touch-screen decoding possibilities, a single mechanical switch to interrupt standby or low-power modes, and several LEDs
- **Clocks:** 32.768-kHz crystal oscillator for implementing a real-time clock and other low-frequency logic
- **Configuration, status, and setup elements:** includes JTAG header for device programming
- **Off-board interface:** 2x5 male 0.1" pitch header and 2x5 female 0.1" pitch header to support more significant development efforts and more varied demonstrations—for example, you can connect two MAX IIZ boards together and also connect one MAX IIZ board to a host platform featuring a high-speed mezzanine connector (HSMC) through the breakout/debug HSMC.
- **Power:** Coin-cell battery generating one 1.8V core rail and two adjustable I/O rails, adjustable I/O voltage, and I/O and core power monitoring, plus AAA battery pack option

A top-down view of the board



Demo board system diagram

Zero-power MAX IIZ CPLDs are ideal for space-constrained, power- and cost-sensitive applications such as smart phones, personal media players, mobile computing, and wireless customer premises equipment (CPE). Our MAX IIZ demo board will show you how the performance and low-power advantages of these CPLDs can benefit portable and handheld applications.



Power measurement design examples

The board allows you to evaluate the low power consumption of MAX IIZ CPLDs using design examples in three different modes of operation:

- Standby
- Low-speed applications
- High-speed applications

These design examples are provided as ready-to-use programming files, without requiring Altera® Quartus® II design software project files.

Testing, testing

Before we release each demo board, we verify the connectivity of all of the hardware features as well as the power consumption circuit numbers. We also confirm the power consumption numbers associated with each of the provided power supply options. With these measures in place, you can be assured that your demo board will provide the functionality you'll need to evaluate the performance and low-power advantages of MAX IIZ CPLDs.

Questions and answers

How can I build up my own circuits, since there isn't any prototyping area on the demo board?

In order to minimize the size and cost of this demo board, we did not include a prototyping area. However, you connect a prototyping board via either of the 2x5, 0.1" pitch headers.

What is the difference between this demo board and the MAX II development kit on your website?

The MAX II development kit shown on our website is built around a 3.3V MAX II device, whereas this demo board uses our new zero-power 1.8V MAX IIZ device.

Ready to get started?

To try out a MAX IIZ demo board or get more information, contact your local Altera sales representative or FAE, or visit www.altera.com/max2. To start designing with MAX IIZ CPLDs today, download Quartus II design software from www.altera.com/download.

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