CoolRunner-II CPLD Starter Kit

CPLD Evaluation Platform for Low Power, High Volume Applications

CPLD Design Challenges

- Designers need a quick and effective way to evaluate CPLDs and their advanced features for power management, security, chip-to-chip integration, synchronous communication and system interfacing.

- After they choose a device, designers then need easy-to-use design tools, a well-stocked IP library and detailed reference designs to help them build next-generation systems.

Efficient CPLD Evaluation with the CoolRunner-II Starter Kit

- The CoolRunner™-II Starter Kit includes everything designers need to evaluate and implement designs with the industry's lowest powered CPLDs.

The CoolRunner-II Starter Kit provides a complete tool box to help designers develop CPLD designs targeting a broad range of functions – remote monitoring, wireless interfacing, signal multiplexing – across any number of industries.

The Xilinx CoolRunner-II CPLD Device Advantage

The CoolRunner-II CPLD family combines high performance with ultra-low-power consumption plus advanced system features in a single cost-optimized CPLD solution.

Unique features such as DataGATE™ and CoolCLOCK allow designers to reduce power consumption to as low as 28uW of standby power, which is critical in extending battery life for the latest handheld consumer electronics as well as commercial level remote devices. With up to 323 MHz performance, the industry's highest I/O count per macrocell and superior clock management, designers no longer have to make drastic trade-offs between low power and high performance.

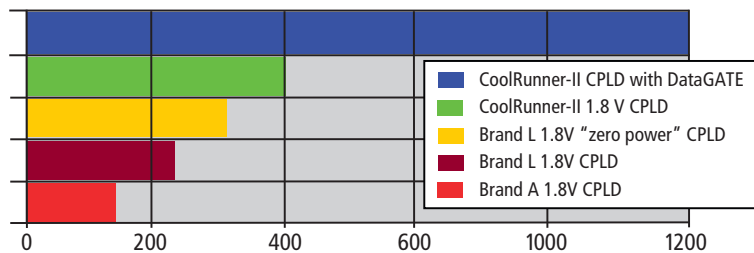### Get Started Quickly with the CoolRunner-II CPLD Starter Kit

The CoolRunner-II Starter Kit contains everything designers need to evaluate CoolRunner-II CPLDs. The Kit's evaluation board has a high-speed USB interface for power and programming, several features for easy prototyping, expansion slots, and an optional SPI ROM pad for memory interfacing. The kit also includes a 16x2 LCD display, USB cable, and reference designs for easy evaluation.

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Utility Window Provides Easy Set-up and Monitoring

The CoolRunner-II Starter Kit now includes a new Utility Window to help users monitor and set-up the evaluation board. The board has a multi-channel A/D circuit that continuously measures the current consumed by the CPLD core and by both of the CPLD's I/O banks as well as ambient temperature. The board relays measurement data to the designer's PC and continuously updates a real-time current meter display in the CoolRunner-II Utility Window. The meter includes 16-bit sigma-delta converter, so as the current meter reads data from the evaluation board, it stores the data in a buffer file and displays current and temperature data at 2Hz per channel.

Ultimate Low-Power with DataGATE

The CoolRunner-II CPLD includes DataGATE, a unique feature which dramatically extends battery life up to four times longer than competitive solutions. This makes the CoolRunner-II ideal for portable handheld applications including MP3 players, smart phones, and PDAs, as well as commercial remote monitoring devices.

Legend:
- CoolRunner-II CPLD with DataGATE
- CoolRunner-II 1.8 V CPLD
- Brand L 1.8V "zero power" CPLD
- Brand L 1.8V CPLD
- Brand A 1.8V CPLD

Hours of Dynamic Operation
Note: 256 macrocell devices at 100% duty cycle with 2 AA batteries,
Populated with 16 bit counters at 20 MHz.

Complete Out-of-the Box Evaluation

Xilinx Starter Kits come with an "Out of the Box Guarantee," which provides customers with a complete development environment and all the hardware and software tools necessary for evaluation.

The CoolRunner-II Starter Kit includes:

- CoolRunner-II CPLD evaluation board with an XC2C256-TQ144 device
- USB 2.0 cable for power, programming and data transfer
- 16x2 character LCD
- 9V battery connector for optional battery power
- QuickStart Guide
- ISE WebPack Software
- Resource CD

TAKE THE
NEXT STEP

To learn more about the CoolRunner-II Starter Kit or to receive your kit today,

visit us at: *http://www.xilinx.com/cr2starter*

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