CoolRunner™-II

The pressure is on. You have to create a new product, you're already behind schedule, and everyone is counting on you. You have no time to waste; you have no time to make mistakes; you have no time. You can use all the help you can get; only there isn't any. Sound familiar? While we can't fix your schedules, or your staffing problems, we can offer you the next best thing – free reference designs that will let you sleep at night. It's like having a few extra engineers on staff – and these engineers don't make mistakes. You can quickly implement these HDL designs in our high-performance, low-power CoolRunner-II CPLDs – they won't let you down and they'll help you get to market as quickly as possible. The pressure is off.

CoolRunner Reference Designs
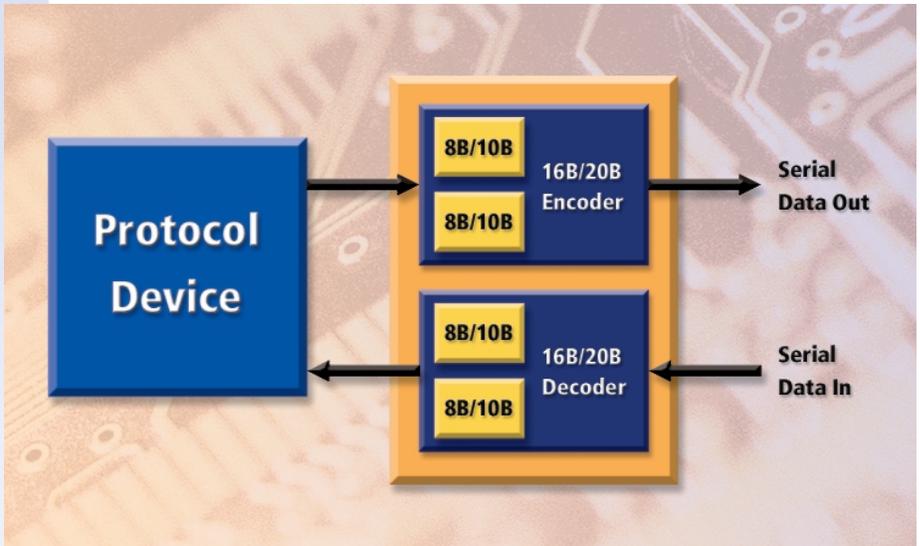
Faster Designs...FREE

With good reference designs you can focus your efforts where they count the most, on the unique value of your new product. Our reference designs solve many common design problems, and they're developed by experts who fully understand the CoolRunner-II architecture. Along with the reference designs, you get:

- **Complete HDL Source Code.** You get a fully tested design that is optimized for the CoolRunner-II architecture and ready to use.

- **Detailed Application Notes.** Each design is fully explained, along with how to implement it. You get everything you need including timing diagrams, state machine diagrams, and a full description of the design methodology.

- **The CoolRunner-II Technology**. CoolRunner-II CPLDs are the lowest-power, highest I/O count per macrocell, most advanced feature rich CPLDs available. Our Fast Zero Power (FZP) technology makes it possible for us to build micro-power devices, at low cost, with uncompromising performance.

- **Chip Scale Packaging (CSP).** Once your design is complete, you'll want to manufacture it at the lowest cost with the least board space – CSP makes it possible. These tiny packages are ideal for portable, low-cost applications.

- **Xilinx Support –** Our reference designs are so easy to use, you probably won't need any help. However, if you need additional training, complete design services, or access to our worldwide network of Xperts partners, we're here to help you. You don't have to face your challenges alone.

XILINX®

Features

Our list of reference designs is always growing, for all of our products. Here's the current list of our reference designs that are optimized for the CoolRunner-II architecture.

Speed Your Designs to Market!

Xilinx CoolRunner-II CPLDs are the fastest way to develop portable, low-power products – there is no easier or better way to get to market quickly and to stay in the market longer. Now, with CoolRunner reference designs, some of the most difficult parts of your design are already completed, even before you begin – that's a real time machine.

Visit **www.xilinx.com/coolrunner2** for the complete story on CoolRunner-II CPLDs and reference designs, and sleep easy tonight.

Faster Designs with CoolRunner Reference Designs

Application	Reference Design	Reference Number	Language	CoolRunner-II 1.8V	XPLA3 3.3V
PDA	XPATH Module Design	XAPP356	VHDL	XC2C384	XCR3256XL
	Springboard Module Design	XAPP147	Pocket C, VHDL	XC2C128	XCR3256XL
	8 Channel DVM Springboard	XAPP146	Pocket C, VHDL	XC2C256	XCR3256XL
Datacom	SECDED	XAPP383	VHDL	XC2C128	
	N x N Crosspoint Switch	XAPP380	VHDL	XC2C256	
	IrDA and UART	XAPP345	VHDL or Verilog	XC2C128	XCR3128XL
	UARTs	XAPP341	VHDL or Verilog	XC2C128	XCR3128XL
	16b/20b Encoder/Decoder	XAPP336	VHDL	XC2C128	XCR3128XL
Bus Interface	SPI	XAPP348	VHDL	XC2C256	XCR3256XL
	I²C Bus Controller	XAPP333	VHDL or Verilog	XC2C256	XCR3256XL
	SM Bus Controller	XAPP353	VHDL	XC2C256	XCR3256XL
	Manchester Encoder/Decoder	XAPP339	VHDL or Verilog	XC2C64	XCR3064XL
Memory	NAND Interface	XAPP354	VHDL or Verilog	XC2C32	XCR3032XL
Wireless	Wireless Transceiver	XAPP358	VHDL	XC2C256	XCR3256XL
Multimedia	MP3 Player	XAPP328	VHDL		XCR3256XL
Microcontroller	PicoBlaze 8-Bit Controller – **New!**	XAPP387	VHDL	XC2C256	
	8051 Microcontroller Interface	XAPP349	VHDL	XC2C64	XCR3064XL

Coming Soon – MP3 Player, DDR Memory Interface, μp

Free HDL design code download: **http://www.xilinx.com/products/xaw/coolvhdlq.htm**

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The Programmable Logic Company℠

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