



Cyclone IV FPGAs FAQ

Cyclone IV FPGA Family

Q: What are you announcing today?

A: Altera is announcing the new Cyclone IV FPGA family. This new FPGA family is built on an optimized low-power process, and comes in two variants, Cyclone IV GX FPGAs with integrated 3.125-Gbps transceivers and Cyclone IV E FPGAs. Both variants are ideal for a wide spectrum of general logic applications. The new Cyclone IV FPGA family provides power and cost savings without sacrificing performance, along with a low-cost integrated transceiver option.

Q: When will the devices be shipping?

A: Production shipments of the EP4CGX15 and EP4CE115, the first Cyclone IV GX and Cyclone IV E devices respectively, will begin in the first quarter of 2010.

Q: What markets are you targeting with this new family?

A: The Cyclone IV FPGA family is ideal for low-cost, small form-factor applications in the wireless, wireline, broadcast, industrial, and consumer industries. The Cyclone IV GX FPGAs address cost sensitive, small form factor applications requiring mainstream protocols with data rates up to 3.125 Gbps. The Cyclone IV E FPGAs target high-volume, cost-sensitive applications, enabling system designers to meet increasing data processing requirements while lowering costs and power consumption. Example applications are handheld software-defined radios, video- and-image processing equipment, and wireless customer-premise equipment.

Cyclone IV GX FPGAs

Q: What are Cyclone IV GX FPGAs?

A: Cyclone IV GX devices offer an unprecedented combination of low power, high functionality, and low cost—enhanced with integrated transceivers. These devices have up to 150K logic elements (LEs), up to 6.5-Mbit RAM, up to 360 multipliers, and up to 8 integrated 3.125-Gbps transceivers supporting mainstream protocols.

Q: Which protocols do Cyclone IV GX FPGAs support?

A: Cyclone IV GX FPGAs support mainstream serial protocols including PCI Express®, Gigabit Ethernet (SGMII, 1000BASE-X), SDI, 10-Gbps Ethernet (XAUI), CPRI, OBSAI, Serial RapidIO®, DisplayPort, V-by-One, and SATA. The transceivers also include a basic mode that allows customization of features to implement proprietary protocols with data rates up to 3.125 Gbps.



Cyclone IV E FPGAs

Q: What are Cyclone IV E FPGAs?

A: Cyclone IV E devices deliver an unprecedented combination of low cost and high functionality, and lower power for general logic applications. These devices have up to 114K LEs, 3.9-Mbits RAM, and up to 266 multipliers. The Cyclone IV E FPGA extends the low-power leadership of its predecessor by reducing core voltage, which lowers total power by 25 percent for power-sensitive applications.

Quartus II Design Software

Q: What is new in Quartus II design software v9.1?

A: Quartus[®] II design software version 9.1 is number-one in terms of performance and productivity for FPGAs, CPLDs, and HardCopy[®] ASIC designs. New in this release is the support for Altera's new lowest cost and lowest power device family:

Cyclone IV FPGAs. Version 9.1 further extends Quartus II software's productivity advantage by delivering 20 percent overall compile time reduction over Quartus II software v9.0, and maintains its lead of two to three times faster compile times than the nearest competitor for high-density 65-nm and 40-nm designs.

Q: When will Quartus II design software support Cyclone IV FPGAs?

A. The three smallest Cyclone IV GX devices will be supported in the Quartus[®] II design software version 9.1 with the remaining Cyclone IV devices supported in the Quartus II design software version 9.1 service pack 1.

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Forward-Looking Statements

This FAQ contains forward-looking statements regarding Cyclone IV production shipments and pricing that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that forward-looking statements involve risks and uncertainty that can cause actual results to differ from those currently anticipated, including without limitation, dependence upon product development schedules, design performance of software and other tools, development technology and manufacturing capabilities of Altera and third parties as well as other risks discussed in Altera's Securities and Exchange Commission filings, copies of which are posted on Altera's website and are otherwise available from the company without charge.