

## **PRESS RELEASE**

### **CYPRESS INTRODUCES COMPLETE LINE OF 3.3 VOLT FPGAS**

#### **Fastest 3.3 Volt FPGAs Available**

SAN JOSE, Calif., April 24, 1995 -- Cypress Semiconductor Corporation today introduced 3.3 Volt versions of its pASIC380™ family of field-programmable gate arrays (FPGAs). The new devices are the first complete family of 3.3V FPGAs, with density offerings of 1000, 2000, 4000, and 8000 gates. They offer the highest performance of any currently available low-voltage FPGAs, and are targeted at PCMCIA and other systems requiring low-voltage programmable logic.

The new 3.3V UltraLogic™ CY7C338X FPGAs are offered in the same plastic package configurations as Cypress's current 5V FPGAs, giving customers an easy migration path from existing designs. They also are offered in low-profile thin-quad flatpack (TQFP) packages which are ideal for the space requirements of PCMCIA applications. The products also offer high performance and the same routability advantages as Cypress's current 5V offerings. The new FPGAs offer loadable counter frequencies greater than 80 MHz, and chip-to-chip operating frequencies up to 60 MHz, making them an excellent choice for high-performance applications. The announcement of the 3.3V FPGAs follows the introduction earlier this year of Cypress's 8000-gate, PCI-compliant CY7C387A and CY7C388A FPGAs.

Dan McCranie, Cypress's vice-president of marketing and sales, said, "The addition of the 3.3 Volt devices to our pASIC380 family allows us to serve the growing market need for low-voltage programmable logic. As with our earlier products, these FPGAs offer best-in-class performance and full routability. They add to what is already one of the industry's broadest lines of programmable logic offerings -- from 16V8s PLDs to 8000-gate FPGAs -- all supported by our VHDL-based *Warp3*™ software."

Cypress's new 3.3V FPGAs include the 1000-gate CY7C3381A and CY7C3382A; the 2000-gate CY7C3383A and CY7C3384A; the 4000-gate CY7C3385A and CY7C3386A; and the 8000-gate CY7C3387A and CY7C3388A.

Cypress's pASIC380 family of FPGAs is based on an array of highly flexible logic cells optimized for efficient implementation of high-speed arithmetic, counter, data path, state machine, and glue logic functions. Logic cells are configured and interconnected by rows and columns of routing metal lines and Vialink metal-to-metal programmable interconnect elements. The result is a programming element one-seventh the size of SRAM-based programming elements. The smaller programming element gives the pASIC380 FPGAs one-twentieth the capacitance and resistance of SRAM-based devices, improving speed, reducing power consumption, and providing highly predictable timing delays so minor design changes do not significantly affect performance. It also allows the use of more programming elements than SRAM-based devices employ, giving users greater capacity and 100% automatic place and route capability.

The pASIC380 FPGAs are a key part of Cypress's UltraLogic™ programmable logic family. UltraLogic includes the world's fastest complex programmable logic devices (the FLASH370™ CPLDs), the pASIC380 FPGAs, and the full-featured, VHDL-based *Warp3* design tool. UltraLogic gives users access to the highest performance CPLDs and FPGAs with a single, open development tool, positioning Cypress as a leader in high-density programmable logic.

### Price and Availability

The new 1000-, 2000-, and 4000-gate 3.3V FPGAs are now sampling, with production volumes available in June. The 8000-gate devices, which will also include full PCI compliance at 3.3V, will be available in the third quarter. The 1000-gate CY7C3381A in a 44-pin PLCC package is priced starting at \$13.50 in 100-unit volumes. The 4000-gate CY7C3385A in a 100-pin TQFP package starts at \$41.15 in lots of 100.

Cypress Semiconductor Corporation is a leader in the design, development, and manufacture of a broad line of high-performance digital integrated circuits, fabricated using its proprietary 0.5-, 0.65- and 0.8-micron CMOS and BiCMOS technologies. Cypress offers a range of products, including PLDs (programmable logic devices), FPGAs (field programmable gate arrays), static RAMs (random access memories), CMOS PROMs (programmable read-only memories) and EPROMs, high performance multichip modules, frequency synthesizer products, FCT logic products, specialty memories, and data communications products.

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