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## **CYPRESS BOOSTS PERFORMANCE OF FLEx36 DUAL-PORTS**

### **Original Internet RAM™ Family Upgrades to 9.6 Gbps Throughput, Speeds to 133 MHz**

SAN JOSE, Calif., May 1, 2000 -- Addressing the growing need for increased data throughput, Cypress Semiconductor Corp. (NYSE:CY) today introduced an upgrade to the FLEx36™ family of x36 dual-port SRAMs. The FLEx36 dual-ports deliver an industry-best performance of up to 133 MHz. With two 36-bit-wide ports each operating at 133 MHz, the FLEx36 devices offer bandwidth up to 9.6 Gbps, compared with 7.2 Gbps for the 100 MHz version. This bandwidth benchmark of 9.6 Gbps translates to roughly 700,000 typed pages per second. The devices are available in densities up to 1 Mbit, operate at 3.3 V, and offer a flexible data interface that allows designers to seamlessly mesh buses of different widths without using external logic.

Multimedia, emerging wireless Internet protocols, and other applications are all fueling the demand for more bandwidth. Memories optimized for high-speed data cycling through switching and routing equipment, in addition to deeper devices optimized for traditional storing-and-forwarding, are called for in many of these applications.

"We have seen incredible unit growth with the FLEx36 family, introduced less than a year ago as the point product in our family of Internet RAMs™," said Richard Quon, Cypress product marketing manager for specialty memories. "The FLEx36, optimized for bandwidth, is ideal for bandwidth-hungry local area networks (LANs), wide area networks (WANs), and storage area networks (SANs), all of which are used to transfer and store the rapidly expanding amount of information that travels over the Internet.

"Many of our customers are constantly pushing the bandwidth envelope, particularly those in performance-driven markets such as storage area networking, wireless base stations, and the telecommunications infrastructure," Quon said. "This higher-speed, higher-bandwidth version of the FLEx36 is an excellent solution for their requirements."

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The FLEx36 dual-port family has also improved the performance of the asynchronous devices, further extending Cypress's industry leading access times to as low as 10ns. These devices will complement many leading DSPs in the market today by allowing a minimal number of wait states, while maximizing the speed at which data can be accessed. These dual-ports also offer on-chip arbitration schemes to enhance and simplify port-to-port communication. Targeted applications for this new speed grade include wireless basestations and other high-performance telecom applications.

The synchronous devices give users the ability to select either flowthrough or pipelined operation on each port, independent of the mode of the other port. Designers can match each port to its respective processor's most efficient mode of operation to maximize performance and ease the design while operating in separate clock domains.

Dual-port RAMs allow the data in the 1 Mbit memory array to be shared by multiple processors and/or buses. Two ports provide independent access for reads and writes to any location in memory. The devices are widely used in performance-driven markets such as mass storage, base stations, telecom, and data communications.

### **Specialty Memory Focus**

Cypress has introduced many new families of higher performance, deeper, and wider specialty memory devices over the last three years, gaining market share and enhancing its specialty memory portfolio. The company's emphasis on bandwidth addresses the demands of local area networks (LANs), wide area networks (WANs), and storage area networks (SANs), all of which are used to transfer and store the rapidly expanding amount of data that travels over the Internet.

Bandwidth, the amount of data throughput, can be increased by several methods, including increasing clock speeds, widening the word width of devices, and/or increasing the number of access ports. Cypress has and will continue to use all three of these methods to extend its leadership with new architectures optimized for bandwidth. Cypress specialty memories are on the cutting edge with developments like the 9.6 Gbps FLEx36 family and others that shatter the 30 Gbps barrier.

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## **Price and Availability**

The FLEx36 dual-ports include 32K x36 and 16K x36 devices in both synchronous and asynchronous versions. They are scheduled to sample in July, with full production in late Q399. All the devices are offered in 144-pin TQFP and 172-ball fBGA packages. In 10,000-unit quantities, the 1-Mbit devices are priced starting at \$60, and the 512K dual-ports start at \$50.

## **About Cypress**

Cypress Semiconductor provides high-performance integrated circuit solutions “By Engineers. For Engineers.<sup>TM</sup>” for fast-growing companies in fast-growing markets, including data communications, telecommunications, computation, consumer products, and industrial-control. With a focus on emerging communications applications, Cypress’s product lines include networking-optimized and micropower static RAMs; high-bandwidth multiport and FIFO memories; high-density programmable logic devices; timing technology for PCs and other digital systems; and controllers for Universal Serial Bus (USB). Cypress is No. 1 in the USB and clock chip markets.

More than two-thirds of Cypress’s sales come from fast-growing datacom/telecom markets and dynamic companies such as Alcatel, Cisco, Ericsson, Lucent, Motorola, Nortel Networks, and 3Com. Cypress’s ability to mix and match its broad portfolio of intellectual property enables targeted, integrated solutions for high-speed systems that feed bandwidth-hungry Internet applications. Cypress aims to become the preferred silicon supplier for Internet switching systems and for every Internet data stream to pass through at least one Cypress IC.

Cypress employs more than 3,900 people worldwide with international headquarters in San Jose, California. Its shares are listed on the New York Stock Exchange under the symbol CY. More information about Cypress is accessible electronically on the company’s worldwide web site at <http://www.cypress.com> or by CD-ROM (call 1-800-858-1810). An electronic investor forum, and other investor information, is located at <http://www.cypress.com/investor/index.html>.

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