



**CYPRESS, IDT AND MICRON TEAM TO PROVIDE  
NEW QDR SRAM ARCHITECTURE**

**New SRAM Architecture Targets High-Bandwidth Applications  
Operating at Data Rates Above 200 MHz**

SAN JOSE, Calif., July 26, 1999 — Cypress Semiconductor Corp. (NYSE: CY), IDT, Inc. (Nasdaq: IDTI) and Micron Technology Inc. (NYSE: MU) today announced that they have jointly defined and developed a new SRAM architecture for future high-performance communications applications. The new Quad Data Rate (QDR™) SRAMs target the next generation of switches and routers that operate at data rates above 200 MHz.

The three companies are working closely together to ensure that customers will have multiple sources for the new SRAMs by developing pin- and function-compatible products. Each partner is providing system expertise and product direction, giving customers the benefit of a wide range of market experience and innovative technology.

The development of the unique QDR SRAM architecture included extensive input from networking industry leaders. The devices are designed to greatly increase memory bandwidth compared to existing SRAM solutions in applications such as switches and routers, and will serve as the main memory for look-up tables, linked lists and controller buffer memory. A family of high-performance QDR SRAMs is defined to ensure customers have the security of consistent multiple supplier roadmaps.

“The popular Zero Bus Turnaround (ZBT™) and No Bus Latency (NoBI™) architectures are well suited for today’s systems operating with data rates up to 200 MHz,” said Jess Huffman, SRAM industry analyst for Cahners In-Stat Group. “As explosive Internet growth continues, we will see increased demand for higher speed systems. Designers of these new systems will be eager for the performance boost offered by QDR SRAMs, and multiple sourcing by three established vendors will expedite its acceptance.”

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ZBT and NoBL products, with 3.3-volt or 2.5-volt standard LVTTTL I/Os and a flexible data structure, meet the requirements of today's communications systems operating between 66 MHz and 200 MHz. Targeting emerging systems operating beyond 200 MHz data rates, the new QDR SRAMs will have two ports that independently run at double data rate (DDR), resulting in four data items per clock cycle. Depending upon the application, the new QDR SRAMs can more than double the SRAM bandwidth.

Each vendor will design and manufacture the devices in its own technology and fabrication facilities, and will deliver products according to its own internal development schedules. All expect to make specific product availability announcements during the next year. More information on the QDR SRAM technology can be obtained at [www.QDRSRAM.com](http://www.QDRSRAM.com).

#### **About Cypress**

Cypress Semiconductor Corporation, headquartered in San Jose, California, provides a broad range of integrated circuits for leading computer, networking, and telecommunications companies worldwide. Cypress's products include static RAM and specialty memories, programmable logic devices (PLDs), data communications products, timing devices, and USB microcontrollers. Its shares are listed on the New York Stock Exchange under the symbol CY, and its web site is [www.cypress.com](http://www.cypress.com).

#### **About IDT**

IDT enables a digitally connected world by providing semiconductor solutions to leading edge designers in communications and computing. IDT's broad product mix consists of communications memories, networking devices, RISC microprocessors, high-speed SRAMs and high-performance logic and clock management products. IDT stock is traded on the Nasdaq stock market under the symbol "IDTI." Additional information about IDT is easily accessible through the Web at [www.idt.com](http://www.idt.com) and CD-ROM by calling 800/345-7015.

#### **About Micron**

Micron Technology, Inc., and its subsidiaries manufacture and market DRAMs, very fast SRAMs, Flash, other semiconductor components, memory modules, and personal computer systems. Micron's common stock is traded on the New York Stock Exchange (NYSE) under the symbol, MU, and its web site is <http://www.micron.com>.

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“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995: Statements herein that are not historical facts are “forward-looking statements” involving risks and uncertainties. Please refer to the companies’ Securities and Exchange Commission filings for a discussion of such risks.

QDR SRAMs and Quad Data Rate comprise a new family of products developed by Cypress Semiconductor, IDT, and Micron Technology. ZBT and Zero Bus Turnaround are trademarks of Integrated Device Technology, Inc. and the architecture is supported by Micron Technology, Inc. and Motorola Inc. NoBL is a trademark of Cypress.