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Tundra advances the standard for host bridges for PowerPC(R)

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Tundra Launches the First Host Bridge for PowerPC with DDR2 Memory Support

[http://biz.yahoo.com/prnews/050301/mo217\\_1.html](http://biz.yahoo.com/prnews/050301/mo217_1.html)

OTTAWA, March 1 /PRNewswire-FirstCall/ - Tundra Semiconductor Corporation (TSX: TUN - News), the leader in System Interconnect, launched the Tundra Tsi108(TM) host bridge for PowerPC today. This advanced host bridge, with patent-pending technology, delivers industry-leading system power, cost, and performance for customers in the wireless infrastructure, storage networking, network access, printer, military and industrial automation markets. Host bridges interconnect PowerPC processors with subsystems in embedded designs. Building on a decade of PowerPC expertise, the Tsi108 expands Tundra's System Interconnect family and is being designed into customer applications today.

The Tsi108, the embedded industry's only host bridge to feature DDR2 (Double Data Rate 2) memory support, interconnects PowerPC processors, peripheral devices, and memory while reducing overall system power and cost. DDR2 provides several advantages over products with DDR memory, including ease of design and reliability. DDR2 also delivers power savings of up to 50 per cent when compared to DDR memory, an important advantage for power sensitive applications such as wireless base stations, printers and media gateways.

"DDR2 will be the dominant memory technology in 2006," says Jim Feldhan, president of Semico Research. "Today's launch of the Tundra Tsi108 means customers can begin their next-generation designs immediately, achieving overall system cost savings while gaining critical competitive advantage."

The lowest power consuming host bridge on the market, the Tsi108 also offers an integrated clock generator removing the need for external clock generators and buffers. For designers this represents additional savings in terms of costs, power and board space that can be applied toward higher performance processing in their embedded designs.

"By 2008, the industry projects that PowerPC-based processing should double to 120 million products shipped. This growth will strengthen PowerPC's leadership in the markets we serve," says Rick O'Connor, Tundra's chief technology officer and vice president of product management. "Open architectures, like PowerPC, enable manufacturers to confidently outsource their System Interconnect requirements while focusing on their competitive advantages. Tundra is the first to deliver the power, performance and system cost benefits that designers are demanding for the next-generation PowerPC designs."

"The Tundra Tsi108 is an important companion chip for Freescale's next-generation PowerPC processor, the MPC7448, and supports Freescale's focus on enabling customers to downsize their power and cost without downsizing their performance," says Bill Dunnigan, vice president and general manager of Freescale Semiconductor's Computing Platform Division. "Not only will this combination of technologies serve our embedded networking customers well, it is also a high-value duo for computing applications such as printers and servers. Freescale plans to continue working closely with Tundra to enable our collective customers to benefit from this low-power, high-performance interconnect technology."

In December 2004, Tundra teamed with IBM as a founding member of Power.org, an open standards community built around the chips and systems that use Power Architecture(TM) technology. Power Architecture designers, who commonly outsource their System Interconnect requirements, rely on Tundra's industry-proven, off-the-shelf System Interconnect for PowerPC processors to accelerate their time-to-market.

"The Tsi108, which supports IBM's 750 family of PowerPC processors, is part of a new industry standard for PowerPC host bridging," says Mark Ireland, manager, Semiconductor Marketing at IBM. "The cost and power benefits delivered by the Tsi108 demonstrate Tundra's leadership in helping to advance Power Architecture technology worldwide."

## Tsi108 AVAILABILITY

The Tundra Tsi108 host bridge is available now for sampling through Tundra's worldwide sales network. Documentation, including ordering information, reference diagrams, software drivers, user manuals and other support material is available at [www.tundra.com](http://www.tundra.com). Low volume pricing for the Tsi108 is under \$100 USD.

## Tsi108 PRODUCT DESCRIPTION

Host bridges (also referred to as system controllers) interconnect PowerPC processors and major subsystems such as memory, graphics and input/output. The Tundra Tsi108 host bridge supports PCI-X, DDR2 Memory, Gigabit Ethernet and Flash memory. The device was designed in close collaboration with Freescale and IBM, leaders in the PowerPC processor market, to minimize power and keep customers' system costs low. System Interconnect for PowerPC is one of Tundra's key product lines. Tundra's offerings for PowerPC processors include the QSpan(TM) II PowerQUICC-to-PCI Bridge, the PowerSpan(TM) II Multi-port PCI Bus switch, and the Tundra Tsi106(TM) and Tsi107(TM) host bridges for PowerPC.

### Industry's Best System Power

- 2.5W typical power consumption with all ports operating at maximum speed (3.7W maximum)
- DDR2 Memory Controller (up to 50% memory power savings compared to DDR)

### Industry's Best System Cost

- DDR2 Memory Controller
- dominant technology in 2006
- Integrated Clock Generator with optional Spread Spectrum capability
- Removes cost, power, and design complexity associated with external clock generation and buffering

### Industry's Highest Performance

- Best System Performance per Watt
- Best System Performance per Dollar
- Best host bridge choice for Freescale and IBM PowerPC processors
- 200 MHz 60x/MPX processor bus
- PCI or PCI-X bus, up to 133-MHz operation
  - PCI/X Host or Agent modes supported
- Low latency non-blocking internal switch fabric

## Advanced Packaging

- RoHS compliant packaging
- 1023-pin, 33x33 mm, FCBGA

## About Tundra

Tundra Semiconductor Corporation designs, develops, and markets standards-based System Interconnect for use by the world's leading communications, networking, storage system and information technology vendors. Tundra supports RapidIO, VME, PCI/X and ATCA standards. Tundra System Interconnect is a vital communications technology that enables customers to connect critical system components while compressing development cycles and maximizing performance. Applications include wireless infrastructure, storage networking, network access, military applications, industrial automation and information technology. Tundra headquarters are located in Ottawa, Ontario, Canada. The Company also has a design center in South Portland, Maine, and sales offices in the U.K., across the US and in Asia. Tundra sells its products worldwide through a network of direct sales personnel, independent distributors and manufacturers' representatives. Tundra employs about 200 employees worldwide.

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