AMD Product Brief - Preliminary Information

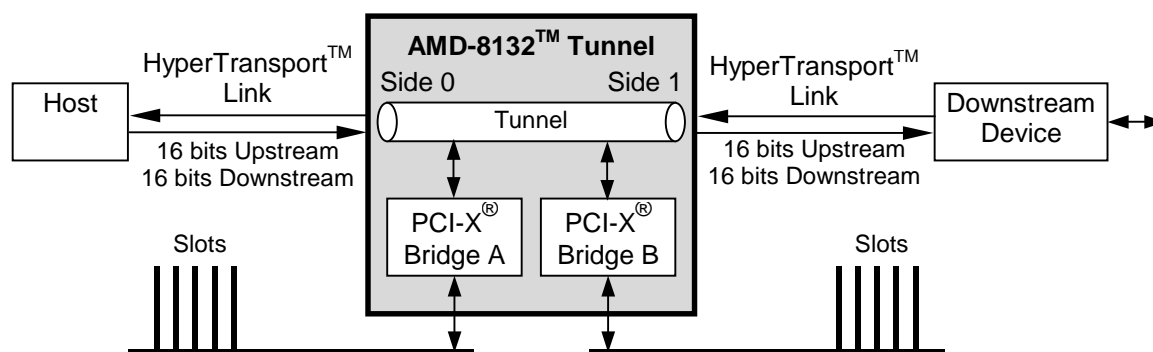# AMD-8132™ HyperTransport™ PCI-X® 2.0 Tunnel

Product Overview

The AMD-8132™ HyperTransport™ PCI-X® 2.0 tunnel developed by AMD provides two PCI-X bridges designed to support PCI-X 266 transfer rates[1]. The AMD-8132 tunnel is compliant with *HyperTransport™ I/O Link Specification, Rev 2.0* including errata up to specification Rev 1.05c. The package is a 31 x 31 millimeter, 829 ball, flip-chip organic BGA. The core is 1.2 volts. Power dissipation is 8 watts.

HyperTransport™ Features:

- HyperTransport tunnel with side 0, 16-bit input/16-bit output; and side 1, 16-bit input/16-bit output.

- Either side can connect to the host or to a downstream HyperTransport technology compliant device.

- Each side supports HyperTransport technology-defined reduced bit widths: 8-bit, 4-bit, and 2-bit.

- Each side supports transfer rates of 2000, 1600, 1200, 1000, 800, and 400 mega-bits per second per wire.

- Maximum bandwidth is 8 gigabytes per second across each side (half upstream and half downstream).

- Independent transfer rate for each side and each direction.

- Independent bit width selection for each side and each direction.

- Link disconnect protocol supported.

- HyperTransport interrupt control support.

- 64-bit address support.

PCI-X® Features:

- Two PCI-X bridges: bridge A and bridge B.
  - Each bridge supports a 64-bit data bus.
  - Each bridge supports Mode 1 PCI-X and Conventional PCI protocol. Each bridge is designed to support Mode 2 operation.
  - In PCI-X Mode 2, bridges are designed to support transfer rates of 266 and 200 MHz.
  - In PCI-X Mode 1, bridges support transfer rates of 133, 100, 66, and 50 MHz.
  - In PCI mode, bridges support transfer rates of 66, 50, 33, and 25 MHz.
  - Independent transfer rates and operational modes for each bridge.
  - Each bridge includes support for up to 5 PCI masters with clock, request, and grant signals.
  - Each bridge includes a HyperTransport™ technology compliant interrupt controller. Legacy interrupt controller and IOAPIC modes are also supported.
  - Each bridge can receive PCI device interrupts via INTA/B/C/D pins or via MSI/MSI-X transactions.
  - SHPC-compliant hot-plug controller and support.

- PCI-X Mode 2, 1.5 V link signaling. PCI-X Mode 1, 3.3 V link signaling. PCI, 3.3 V link signaling.

AMD-8132™ HyperTransport™ PCI-X® 2.0 Tunnel

AMD

Licensed Technology

PCI-X and PCI Hot Plug technology developed by Compaq/Hewlett Packard Corporation.

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