

## PI7C8150A: 32-bit 2-Port PCI-to-PCI Bridge

### PRODUCT FEATURES

- 32-bit / 66MHz primary and secondary ports
- Compliant with the following specifications:
  - *PCI Local Bus Specification, Revision 2.2*
  - *PCI-to-PCI Bridge Architecture Specification, Revision 1.1*
  - *Advanced Configuration Power Interface (ACPI) Specification*
  - *PCI Power Management Specification, Revision 1.0*
- Concurrent primary and secondary port operation
- Provides internal arbitration for one set of 9 secondary bus masters
  - Programmable 2-level priority arbiter
  - Disable control to allow use of an external arbiter
- Supports posted write buffers in both directions (downstream and upstream)
- Two 128-byte FIFO's for delay transactions
- Two 128-byte FIFO's for posted memory transactions
- Enhanced address decoding
  - 32-bit I/O address range
  - 32-bit memory-mapped I/O address range
  - VGA addressing and VGA palette snooping
  - ISA-aware mode for legacy support in the first 64KB of I/O address range
- IEEE 1149.1 JTAG interface support
- 3.3V core; 3.3V and 5V PCI I/O interface
- Packages
  - 208-pin QFP
  - 256-pin PBGA
- Available in 66MHz and 33MHz
- Intel 21150 compatible

### PRODUCT DESCRIPTION

The PI7C8150A is a 2-port PCI-to-PCI Bridge designed to be fully compliant with the *PCI Local Bus Specification, Revision 2.2*. Both the primary and secondary ports are specified to run at 32-bit and up to 66MHz.

The PI7C8150A supports synchronous bus transactions between devices on the primary bus and the secondary bus. The two buses can operate in concurrent mode, resulting in added increase in system performance. Concurrent bus operation off-loads and isolates traffic on a single bus by allowing a master and target on the same bus to communicate with each other while the other bus is busy.

The *PCI Local Bus Specification* denotes loading restrictions on the PCI bus. The PI7C8150A allows designers to expand the loading capability by adding a second PCI bus. On motherboards, more PCI slots or devices can then be added on this second PCI bus. On add-in cards, more than one device can now reside on the add-in card (*PCI Local Bus Specifications* specify that each add-in card may only have one device because there may only be one connection per PCI signal in the add-in card connector).

### ORDERING INFORMATION

PART NUMBER	SPEED	PACKAGE
PI7C8150AMA	66 MHz	208-FQFP
PI7C8150AMA-33	33 MHz	208-FQFP
PI7C8150AND	66 MHz	256-PBGA
PI7C8150AND-33	33 MHz	256-PBGA

