

Product: SlimLine™ PCI Express® to PCI Reversible Bridge

Part Numbers: PI7C9X111SL

Product Description

The PI7C9X111SL is the latest edition to Pericom's PCI Express® Bridge SlimLine™ family of solutions. With the PI7C9X111SL, users can expect a x1 PCI Express to 32bit/66MHz PCI reversible bridge with high performance, very low power consumption, and a small footprint. All 3 of these characteristics are vital for consumer, mobile, and high volume applications. The typical usage for this device is high volume applications requiring a "bridge" from legacy PCI products to new PCI Express based systems, or applications requiring a "bridge" from new PCI Express based devices to legacy PCI systems. The PI7C9X111SL is a versatile device that can be used in applications including desktops, graphics cards, combo cards, PC peripherals, and video surveillance systems.

Industry Specifications Compliance

- PCI Express Base Specification, Rev. 1.1
- PCI Express CEM Specification, Rev. 1.0a
- PCI Express to PCI/PCI-X Bridge Specification, Rev. 1.0
- PCI-to-PCI Bridge Architecture Specification, Rev. 1.2
- PCI Local Bus Specification, Rev. 3.0
- PCI Hot-Plug Specification, Rev. 1.1
- PCI SHPC and Subsystem Specification, Rev. 1.0
- PCI Mobile Design Guide, Version 1.1
- System Management (SM) Bus, Version 2.0
- PCI Bus PM Interface Specification, Rev. 1.1
- Advanced Configuration and Power Interface Specification, Rev. 2.0

Special Features

- Fully Reversible
 - Forward – PCIe primary, PCI secondary
 - Reverse – PCI primary, PCIe secondary
- Maximum Payload Size – Up to 512 bytes
- Ultra Low Power Modes
 - Critical for mobile applications
- Support for up to 4 PCI Bus Masters
- Two level internal arbitration
- GPIO Support
- 4 dedicated bi-directional
- When external arbiter is used:
 - 4 additional outputs
 - 4 additional inputs
- Masquerade support
 - User defined vendor, device, revision, subsystem device, and subsystem vendor ID
- Large 10KB Buffer
 - 4KB for upstream reads, 2KB for downstream reads & 2KB for writes per port

- Access to Extended Configuration Registers From PCI side in Reverse Mode
- Tiny 14 x 14mm, 128-pin QFP Package

PCI Express Features

- Virtual Isochronous Support
 - Upstream TC 1 – 7 generation
 - Downstream TC 1 – 7 mapping
- 16-bit CRC, LCRC (32-bit)
- ECRC and Advanced Error Reporting
- Error Forwarding (Data Poisoning)
- Loop back (serial and parallel)
- PRBS (Pseudo Random Bit Sequencing) Generator/Checker
- Lane Reversal (Polarity Toggle)
- VDDAUX Support (1.0V)

PCI Features

- 3.3V Signaling with 5V I/O Tolerance
- PME# Support
- 16-bit Address Decode for VGA
- VAUX Support (3.3V)
- Hot Plug Support
- Subsystem Device and Subsystem Vendor ID
- MSI and INT Support
- SM Bus
 - PHY, data link, network layer, PEC, ARP, etc.
- I2C Serial EEPROM Support

Application Example

