PCI 9080

I_2O Compatible PCI Bus Master I/O Accelerator Chip

Features

- PCI Version 2.1 compliant Bus Master interface chip for adapters and embedded systems
- Programmable local bus supports nonmultiplexed 32-bit address/data, multiplexed 32- or 16-bit, and accesses of 32-, 16-, or 8-bit local bus devices
- I_2O compatible messaging unit
- 3.3 or 5 volt PCI signaling, 5 volt core, low-power CMOS in 208-pin PQFP
- Two independent programmable DMA channels for local bus memory to/from PCI host bus data transfers
- Eight programmable FIFOs for zero wait state burst operation
- PCI to/from local data transfers up to 133MB/sec
- Local bus runs asynchronously to the PCI bus
- Eight 32-bit mailbox and two 32-bit doorbell registers
- Performs Big Endian/Little Endian conversion
- Upward compatibility with PCI 9060, 9060ES, 9060SD

Flexible Connection to the PCI Bus

For add-in card and embedded system designers and integrators alike, the mission is clear: reduce the time to integrate new technology and time to market. Achieving this task requires the latest in I/O technology. PLX Technology, Inc. is committed to providing complete and proven PCI solutions with our PCI 9080 Bus Master I/O Accelerator interface chip.

The PLX® PCI 9080 provides a compact, high performance PCI bus master interface with a programmable local bus. Integrating the latest in I/O technology, the PCI 9080 contains an Intelligent I/O (I_2O) messaging unit in hardware that allows high performance and compatible software implementations of the I_2O bus protocol specification.

The highly flexible local bus solution can be configured to directly connect a wide variety of processors, controllers and memory subsystems. Combined with the PCI 9080RDK reference design kits, PCI SDK and I_2O software development kits available from PLX, the design-in process is simple and painless with little or no glue logic. Customers are using the PCI 9080 with IBM PowerPC 40x, Motorola MPC850/860, Intel i960C/J/H, Hitachi Super H, MIPS R 3000/4000/5000, NEC V830/831, ARM, Motorola 68XXX, and others. Thoroughly tested and proven, PLX products have become the gold standard of the industry.

Leading the way in PCI design, the PCI 9080 provides two intelligent DMA channels with scatter/gather, programmable burst modes, and asynchronous bus clocks to provide the best PCI throughput available. The versatility of the PCI 9080 also allows for a local processor to configure other PCI devices in the system.

While the PCI 9080 is capable of keeping up with the most demanding of applications and the latest in technology, upward compatibility with existing PLX PCI I/O accelerators is maintained. The 9080 continues the PLX tradition of providing the highest performance and fully compatible PCI interface solutions.

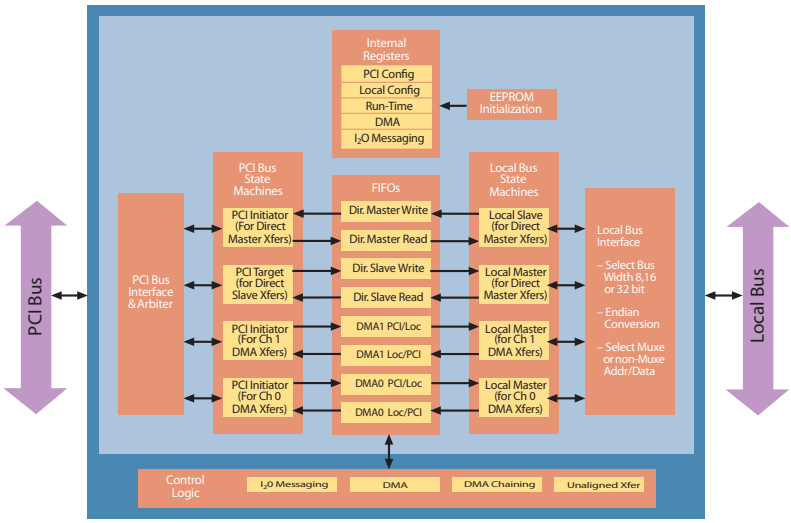


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Technical Specifications

Package	208-pin PQFP
PCI compliance	PCI local bus specification, v. 2.1
I_2O messaging unit	PCI extension of the I_2O specification v.1.5
Interface protocol	Direct bus master
PCI signaling	3.3v or 5v
Local bus speed	0-40MHz
Big/Little Endian conversion	Dynamic switching for direct slave, direct master, DMA, and the internal register accesses on the local side
PCI Bus Speed	33MHz max
PCI host capability	Type 0 or Type 1 PCI configuration cycles in direct master mode
Mailbox registers	Eight 32-bit, accessed from PCI or local bus
Doorbell registers	Two 32-bit, one from PCI to local bus, one from local bus to PCI bus
Unaligned DMA transfer support	From any byte boundary
Programmable local bus modes	Selected through mode pins
Mode C	32-bit address/32-bit data, non multiplexed
Mode J	32-bit address/32-bit data, multiplexed
Mode S	32-bit address/16-bit data, non multiplexed
Serial EEPROM interface	Supported

PCI 9080 Internal Block Diagram



Product Ordering Information

PCI 9080	PCI to Local Bus Master Chip
I_2O SDK	I_2O Software Development Kit for Motorola MPC860 CPU, Intel i960 CPU, IBM PPC 401 CPU
PCI SDK	PCI Software Development Kit for Motorola MPC860 CPU, Intel i960 CPU, IBM PPC 401 CPU

*See PLX web site for latest version and product support information

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