

Product Brief

PCle2 6-Port/6-Lane Packet Switch, GreenPacket Family Product:

Part Numbers: PI7C9X2G606PR

Product Description

The PI7C9X2G606PR is a 6-lane PCI Express Gen 2 Switch with 6 PCI Express ports specifically designed to meet high performance and the latest GREEN low-power, lead (Pb)-free system requirements, such as Network, Embedded, Storage and other platforms. The name of the family, GreenPacketTh refers to Pericom proprietary power saving technology.

The PI7C9X2G606PR provides one upstream port supporting x1, and 5 downstream ports that support x1 operation. The flexible upstream port provides users the flexibility to expand or fan-out from a wide range of x86, ARM, MIPS, PowerPC SoC/ Chipset, and it is a suitable solution for wired/ wireless Networking. Switch router, Embedded, Storage, HBA, Surveillance, Combo card and other applications.

Industry Specifications Compliance

- PCI Express® Base Specification, Revision 2.1
- PCI Express CEM Specification, Revision 2.0
- PCI-to-PCI Bridge Architecture Spec., Rev 1.2
- Advanced Configuration Power Interface (ACPI) Specification
- SMBus interface support

Features

- PCISIG PCI Express 2.1 certificated
- Reliability, Availability and Serviceability
 - Supports Data Poisoning and End-to-End CRC
 - Advanced Error Reporting and Logging
- Device State Power Management
 - Supports D0, D3_{Hot} and D3_{Cold} device power states
- **Advanced Power Savings**
 - o Empty downstream ports are set to idle
- Programmable driver current and de-emphasis level at each individual port
- Port Arbitration: Round Robin (RR), Weighted RR and Time-based Weighted RR
- Extended Virtual Channel capability
 - Two Virtual Channels (VC) and Eight Traffic Class (TC) support
 - Independent TC/VC mapping for each port
- Supports Isochronous Traffic
 - Isochronous traffic class mapped to VC1 only
- Supports "Cut-through" (Default) as well as "Store and Forward" mode for switching packets
- Strapped pins configurable with optional EEPROM or **SMBus**
- Peer-to-peer switching between any two downstream ports
- Supports up to 512-byte maximum payload size
- Power Dissipation: 0.6 W typical in L0 normal mode
- Industrial Temperature Range: -40° to 85°C
- MTBF: 50,927,360 hours

Enhanced Features

17-0042

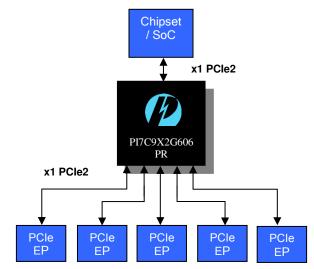
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- Package: 196-pin LBGA 15mm x 15mm
 - o Pb free and 100% Green

- 150ns typical latency for packet running through switch without blocking
- Link Power Management
 - Supports L0, L0s, L1, L2, L2/L3_{Ready} and L3 link power
 - Active state power management for L0s and L1 states
 - Supports PCI-PM and ASPM of L1.1 PM Sub-state
- Supports Device Specific PME Turn-Off Message for each downstream port
- Support Access Control Service (ACS) for peer-to-peer traffic
- Support Address Translation (AT) packet for SR-IOV application
 - Support OBFF and LTR
- Support Serial Hot Plug Controller

Application

- Wireless AP/ Switch Router
- Wired/ Wireless Tele/ data communication
- Embedded system
- IPC/ Industrial control
- 100 Automotive
- NAS/ Storage
- Server
- Printer/ MFP/ Peripheral
- Surveillance/ Security
- HBA / Combo cards
- Set-top box and consumer devices
- NB/ PC Motherboard PCIe slot expansion



Order Information

ſ	PART NUMBER	PACKAGE	PB-FREE &	TEMPERATURE
L			GREEN	
ſ	PI7C9X2G606PRDNJAEX [†]	196 LBGA	YES	-40°C TO 85°C
Ī	PI7C9X2G606PRDEVB	Board	Evaluation kit for	
			PI7C9X2G606PRD	

1/5/2017

[†]Note: Adding an X suffix =Tape/Reel