

# PRODUCT BRIEF

## PI7C9X2G808PR

### PCIe2 8-Port/8-Lane Packet Switch, GreenPacket Family

The PI7C9X2G808PR is an 8-lane PCI Express Gen 2 Switch with 8 PCI Express ports specifically designed to meet high performance and the latest GREEN low-power, lead (Pb)-free system requirements, such as Networking/ Telecom, Embedded, Server, Storage and other platforms. The PI7C9X2G808PR supports Non-Transparent port apply for high Performance, dual-host and failover applications

The PI7C9X2G808PR provides elastic configuration as below.

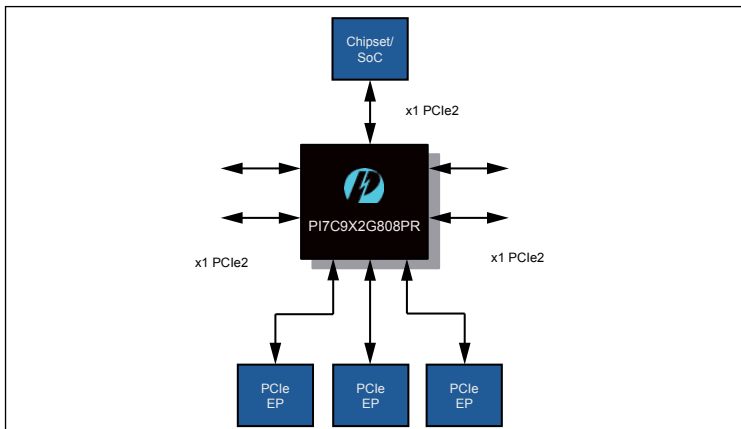
Upstream port	Downstream port
x1 PCIe2	7 x1 PCIe2
x4 PCIe2	4 x1 PCIe2
x4 PCIe2	1 x4 PCIe2

#### 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
- I2C Slave interface support

#### Applications

- Networking Switch Router
- Wired/ Wireless Telecom/ data communication
- Control plane
- NAS/ Storage
- Server
- Embedded system
- HBA / Combo cards
- IPC/ Industrial control
- Printer/ MFP/ Peripheral
- Surveillance/ Security
- Fail-Over system



#### 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, D3Hot and D3Cold device power states
- Advanced Power Savings
  - Empty downstream ports are set to idle
- Support programmable Non-Transparent mode
- Support Multicast
- Dual Clock domain
- 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
- Supports up to 512-byte maximum payload size
- Power Dissipation: 2.0 W typical in L0 normal mode
- Industrial Temperature Range: -40°C to 70°C
- MTBF: 50,927,360 hours
- Package: 196-pin PBGA 15mm x 15mm
  - Pb free and 100% Green

#### Enhanced Features

- 150ns typical latency for packet running through switch without blocking
- Link Power Management
  - Supports L0, L0s, L1, L2, L2/L3Ready and L3 link power states
  - Active state power management for L0s and L1 states
- Support Access Control Service (ACS)
- Support Address Translation (AT) packet for SR-IOV application
- Support Alternative Routing ID Interpretation (ARI)
- Support Serial Hot Plug Controller

#### Order Information

Part Number	Package	PB-Free& Green	Temperature
PI7C9X2G808PRBNJAEX*	196 PBGA	YES	-40°C TO 70°C
PI7C9X2G808PRBEVB	Board	Evaluation kit for PI7C9X2G808PRB	

\*Note: Adding an X suffix = Tape/Reel