



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



FEATURES

• High Performance Non-Blocking Switch Architecture

- 32-lane 8-port PCIe switch
- Integrated SerDes supports 8.0 GT/s Gen3, 5.0 GT/s Gen2 and 2.5 GT/s Gen1 operation
- Delivers up to 64 GBps (512 Gbps) of switching capacity
- Low latency cut-through architecture
- Multicast compliant to Spec
- Supports up to 2 KB maximum payload size
- Request metering for maximum system throughput

• Standards and Compatibility

- PCI Express Base Specification 3.0 compliant
- Implements the following optional PCI Express features:
 - Advanced Error Reporting (AER) on all ports
 - Access Control Services (ACS)
 - Alternative Routing ID (ARI) ECN
 - Internal Error Reporting (IER) ECN
 - Atomic operations ECN
 - TLP processing hints (TPH) ECN
 - Latency Tolerance Reporting (LTR) ECN
 - Optimized Buffer Flush/Fill (OBFF) ECN
- PCI Power Management Spec
 - Supports D0, D3hot and D3 power management states
- Active State Power Management (ASPM)

• Switch Initialization/Configurability

- Supports x8, x4, x2 and x1 ports
- Automatic per port link width negotiation
- Automatic lane reversal
- Autonomous and software managed link width and speed control
- Per lane SerDes configuration
- Supports Global and Local reference port clock input
- Crosslink support
- 9 General Purpose I/O
- Supports Root (BIOS, OS, or driver), Serial EEPROM, pin strapping, or SMBus switch initialization
- No power sequencing requirements

• Multi-Root Support

- Supports up to 8 fully independent switch partitions
- Configurable downstream port device numbering
- Supports dynamic reconfiguration of switch partitions
- Movable upstream port within and between switch partitions

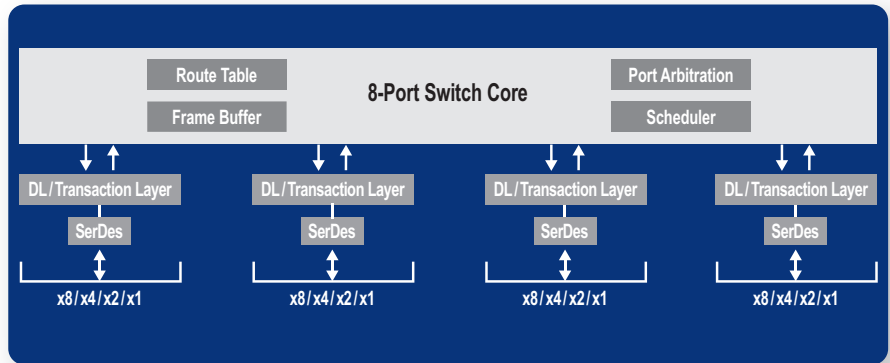
• Reliability, Availability and Serviceability (RAS)

- ECRC support
- AER on all ports
- SECCED ECC protection on all internal RAMs
- End-to-end data path parity protection
- Ability to generate an interrupt (INTx or MSI) on link up/down transitions
- Hot-plug supported on all downstream switch ports
- On-chip link activity and status outputs available including the upstream ports
- Supports IEEE 1149.6 AC JTAG and IEEE 1149.1 JTAG

• Development Tools

- 89KTPES32H8G3 Evaluation Board
- PCIe Browser Software
- Provides ODS (On-Die Scope)
- Built-in PRBS generator and checker
- Documentation and support at: www.IDT.com

• Packaged in a 23mm x 23mm 484-ball FCBGA

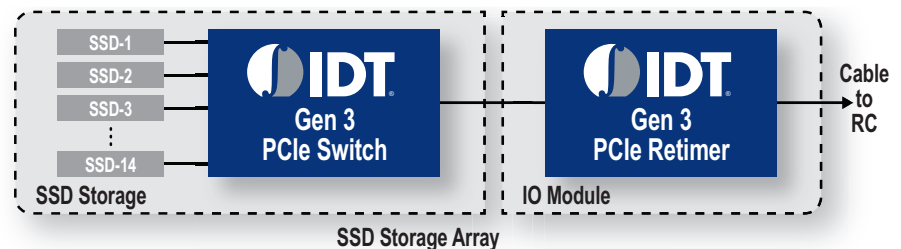
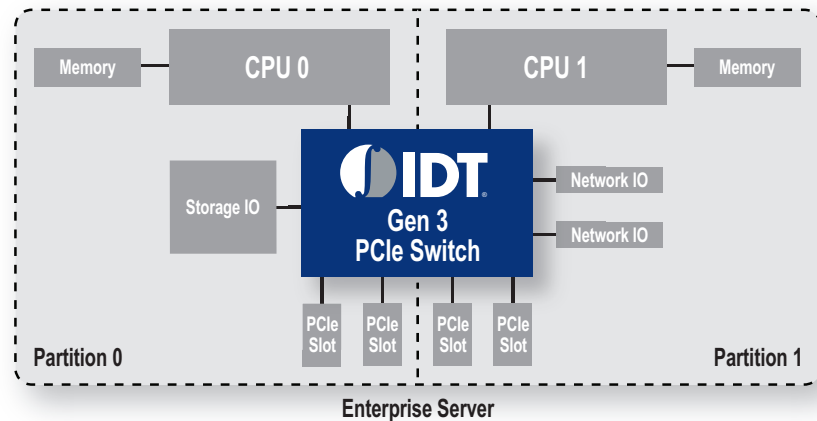


32 PCI Express Lanes - Up to 4 x8 ports or 8 x4 ports

Device Overview

The 89H32H8G3 is a 32-lane, 8-port system interconnect switch optimized for PCI Express® Gen3 packet switching in high-performance applications, supporting multiple simultaneous peer-to-peer traffic flows. Target applications include servers, storage, communications, embedded systems, and multi-host or intelligent I/O based systems with inter-domain communication.

Utilizing standard PCI Express Gen3 interconnect, the 89H32H8G3 provides the most efficient system interconnect switching solution for applications requiring high throughput, low latency, and simple board layout with a minimum number of board layers. It provides 32 GBps (256 Gbps) of aggregated, full-duplex switching capacity through 32 integrated serial lanes, using proven and robust IDT technology. Each lane is capable of 8 GT/s of bandwidth in both directions and is fully compliant with PCI Express Base specification 3.0.



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