

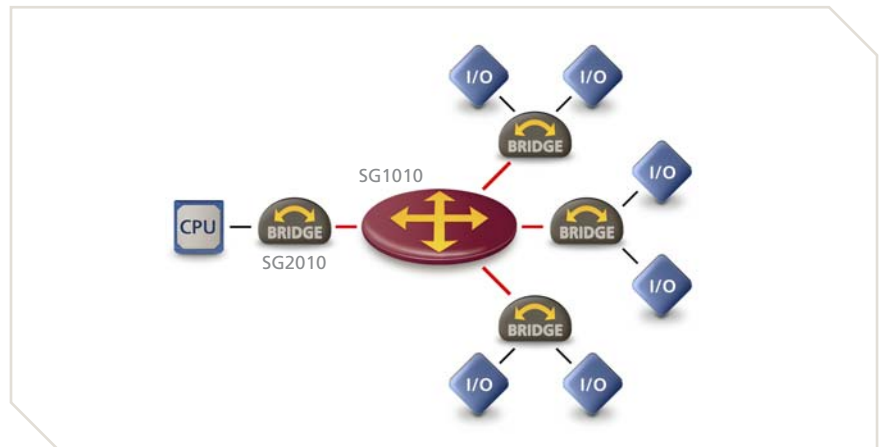
### Features

- ❖ Six StarFabric links, 2.5 Gbps, full duplex
- ❖ Two links can be bundled to create a 5 Gbps link
- ❖ 30 Gbps switching capacity
- ❖ Chip-to-chip, board-to-board and chassis-to-chassis connections with off the shelf connectors
- ❖ Chassis-to-chassis interconnect with low-cost CAT5 cables up to 10 meters
- ❖ Support for three routing methods:
  - Standard PCI Address Routing
  - Path Routing
  - Multicast Routing
- ❖ Standard PCI Address routing supports 100% PCI software compatibility
- ❖ Credit based flow control: Path-based (next turn) credits and Class of Service (CoS) Credits
- ❖ Four Classes of Service with separate buffering for each. Supported Classes:
  - Asynchronous
  - Isochronous
  - Multicast
  - High priority
- ❖ Link-by-Link CRC and 8b/10b checking on all traffic
- ❖ Diagnostic port for direct register access
- ❖ Compliant with the PCI Local Bus Specification revision 2.2 and the PCI-to-PCI Bridge Specification ver. 1.1
- ❖ Physical layer interface is compatible with the TIA/EIA-644 Low-Voltage Differential Signaling (LVDS) standards enabling easy implementation
- ❖ SROM interface for register pre-load and vital product data
- ❖ Eight general-purpose I/O pins with accessible registers

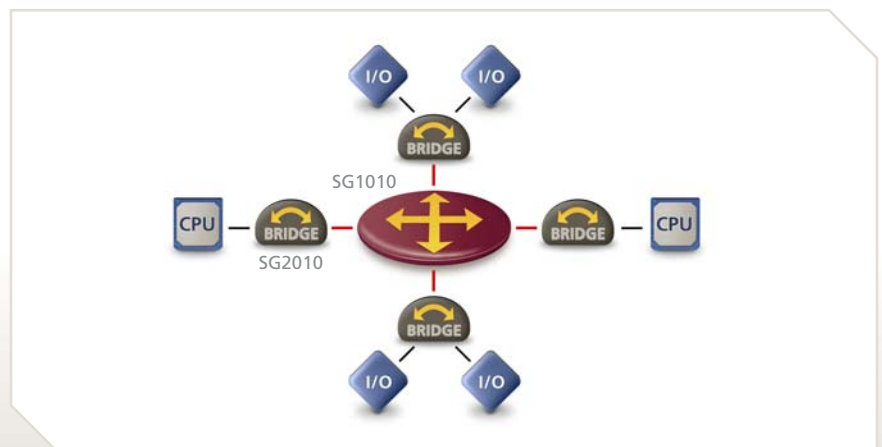
StarGen's SG1010 StarFabric Switch provides high-speed serial switching within a switched interconnect fabric. The SG1010 is cascadable enabling the creation of large topologies supporting high bandwidth and high availability applications. StarFabric bridges connect to the switch's serial ports and function as endpoints, interfacing to other protocols, such as PCI.

The SG1010 switch provides 30 Gbps of aggregated, non-blocking, full-duplex switching capacity through six serial links. Each link provides 2.5 Gbps of bandwidth in both directions simultaneously. Links are made up of four aggregated 622 Mbps LVDS differential pairs. Two 2.5 Gbps full-duplex links can be bundled to create a 5 Gbps full duplex link.

### PCI Expansion through Transparent Bridging



### Non-Transparent Bridging



The switch includes protocol-specific command status registers, and PCI-compliant Type 1 header for full compatibility with existing PCI BIOS, drivers, applications software, and operating systems.

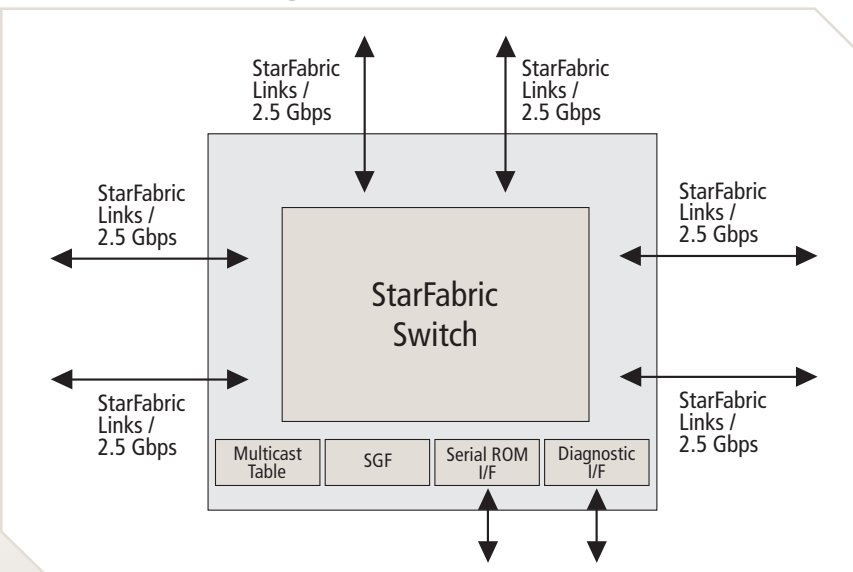
### Example Applications

- Networking and Telecommunication Equipment
- Servers and Storage Systems
- Medical Imaging Systems
- Industrial Control & Automation Systems
- Video and Image Processing Systems
- Military Imaging and Communication Equipment
- Scientific High Performance Computing
- Automated Test Equipment
- PICMG 2.17 & 3.3 Compliant

### Specifications

Core Power Supply:	Vdd = 1.5V +/-5%
I/O Power Supply:	Vdd = 3.3V +/-5%
Operating Temperature:	0 to 70 Degrees C
Storage Temperature:	-55 to 125 Degrees C
Power Dissipation:	3W maximum
Package:	272 PBGA
Part Number:	SG1010-A3

### StarFabric Switching



### Benefits

- ❏ Provides 6 StarFabric links with up to 30Gb/s of aggregate, non-blocking, full-duplex switching capacity
- ❏ Provides scalability through cascading multiple switches
- ❏ CAT5e cabling supplies a simple low cost method to cable multiple systems and expansion boxes for up to 40 feet
- ❏ Improves system performance through utilization of multiple classes of service (CoS)
- ❏ Low latency interconnect
- ❏ Full PCI compatibility maintains investment in existing PCI hardware and software