

## SCALABLE 12-PORT GIGABIT ETHERNET LAYER 2 SWITCH

### FEATURES

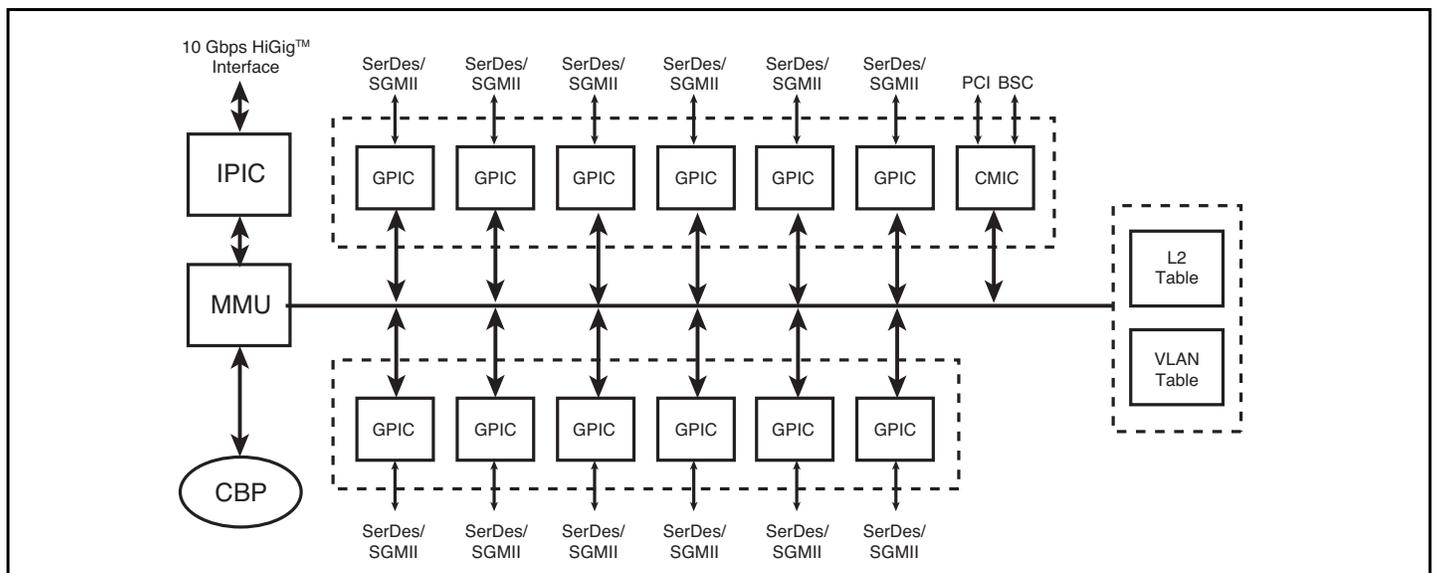
- 12 10/100/1000-Mbps Ethernet ports supporting both copper and fiber connections
- Integrated high-performance SerDes
  - Single 10-Gbps XAUI HiGig expansion port
  - Gigabit Ethernet SerDes per port
  - 4-pin per port SGMII interface to Gigabit Ethernet PHYs
- 32 million packets/second (line-rate) aggregate switching capacity
- 64 entries of FFP (Fast Filter Processor™)
- Scalable up to 32 BCM5692 switches in a system
- Port trunking and mirroring supported across stacked switches
- Fully integrated data and address memory on-chip
- Full duplex (802.3x) compatible flow control
- Advanced diagnostic features including IEEE1149.1 JTAG boundary scan and BIST functionality
- Low power
- Enhanced thermal 480-pin EPGA package (pin-to-pin compatible with BCM5690/BCM5691)

### SUMMARY OF BENEFITS

- System vendors can build scalable high-performance, high port density Gigabit Ethernet LAN switches in several form factors.
- Built-in high-speed serial interfaces with Broadcom-unique SerDes technology eases and accelerates system design, while reducing cost and conserving board space.
- Broadcom switch API compatibility enables software reuse and faster time-to-market.
- Small package and low power enable cost-effective and high-performance system design.

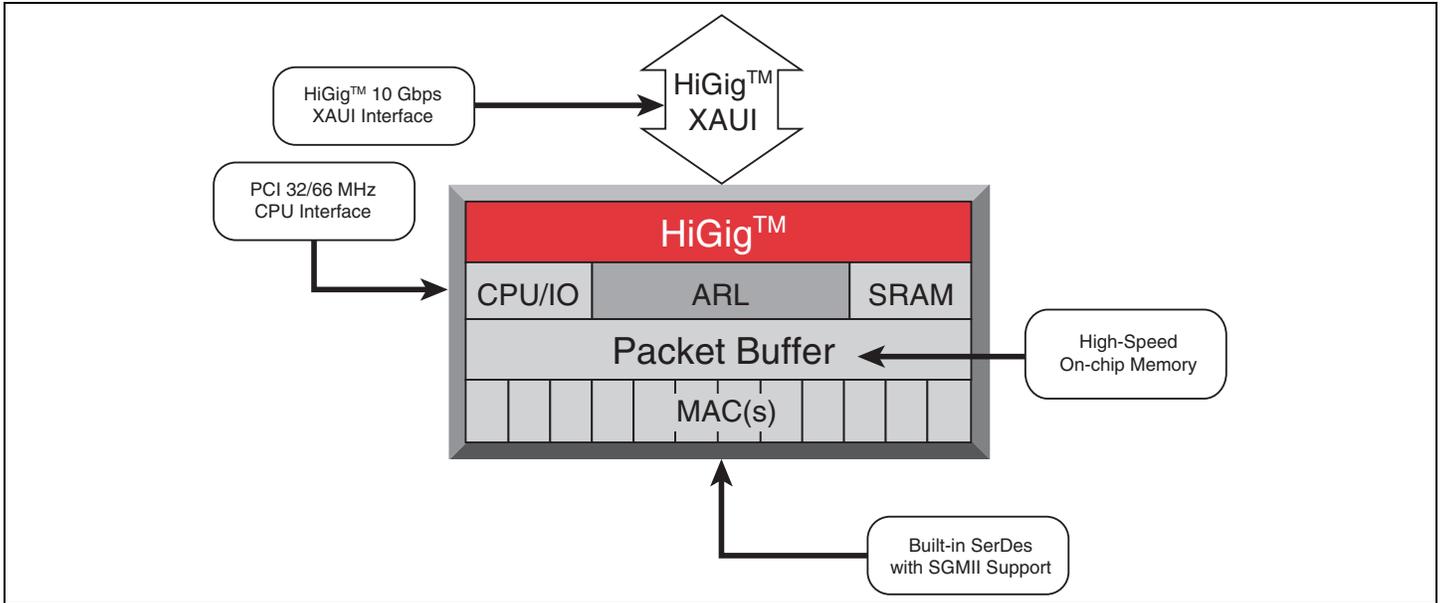
### TARGET APPLICATIONS

- Layer 2 in modular Gigabit Ethernet switches
- High port-count stand-alone or stackable Gigabit Ethernet layer 2 switches



12-Port Gigabit Ethernet Multilayer Switch With HiGig™

## OVERVIEW



The BCM5692 network switch is a scalable, modular chip solution with 12 ports. Each of these flexible ports supports Gigabit Ethernet or 10/100-Mbps Ethernet. Additionally, the BCM5692 supports both copper and fiber physical interfaces. The BCM5692 has a fully integrated SerDes functionality consisting of a 10-Gbps XAUI HiGig Port, Gigabit Ethernet, or SGMII PHY interface.

The 10-Gbps HiGig Expansion port supports explicit priority, port trunking, and mirroring functions across switch elements. The HiGig port can be used to interconnect up to 32 BCM5692 devices, making it extremely useful for highly-scalable network switch applications.

The BCM5692 has a built-in Fast Filter Processor™ that supports Layer 2–Layer 7 ContentAware™ switching, packet filtering and network processing per port. The FFP has 64 entries.

The BCM5692 supports advanced packet flow control such as head-of-line blocking prevention and IEEE 802.3x compatible full-duplex

control. Moreover, the BCM5692 supports a fully-integrated data and address memory.

The BCM5692 switch supports a BSC (Broadcom Serial Control bus) controller for communicating with external devices such as serial EEPROM, flash memories, and parallel port devices.

The modular switching architecture of the BCM5692 embodies the scalability, integration, and performance features that a next-generation switch requires.

### Additional information

The available system design kits are BCM95690K24 and BCM95690K24S, which include supporting documentation and software. Please contact your local sales representative for more information.

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