



## SCALABLE 12-PORT GIGABIT ETHERNET LAYER 2 SWITCH

### FEATURES

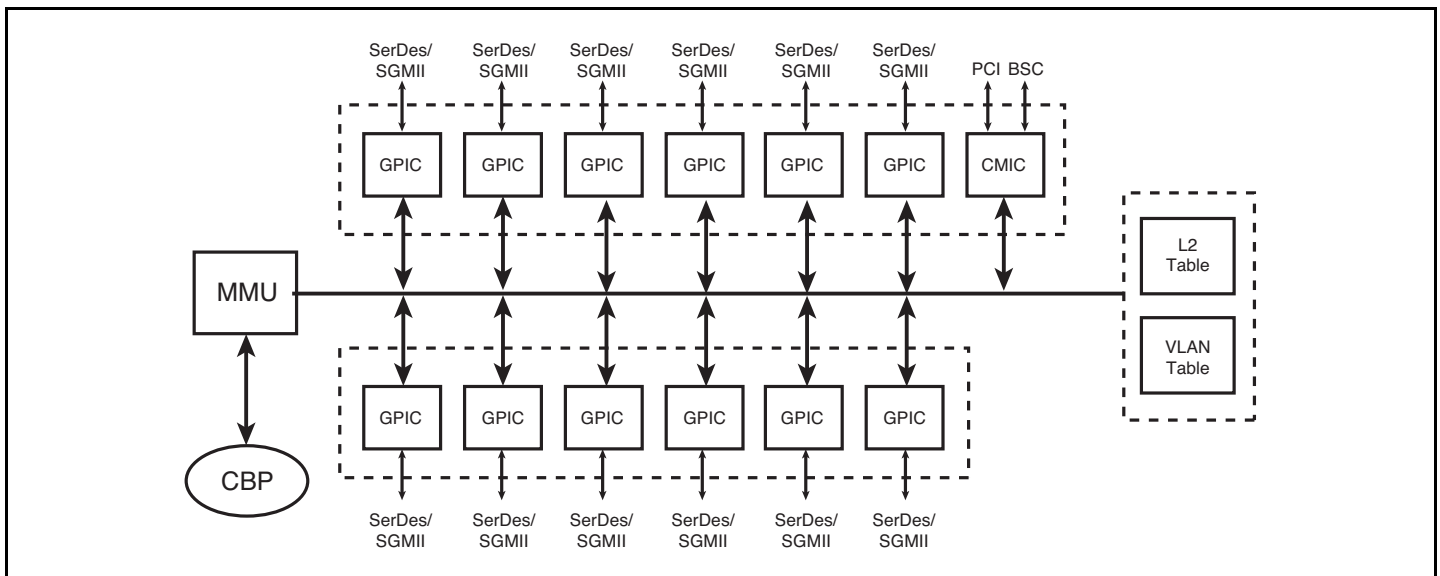
- 12 10/100/1000 Mbps Ethernet ports supporting both copper and fiber connections
- Integrated high-performance SerDes
  - Gigabit Ethernet SerDes per port
  - 4-pin per port SGMII interface to Gigabit Ethernet PHYs
- 32 million packets/second (line-rate) aggregate switching capacity
- 64 entries of FFP (Fast Filter Processor™)
- Port trunking and mirroring supported across stacked switches
- Fully integrated data and address memory on-chip
- Full duplex (802.3x) compatible flow control
- Support for jumbo frames of up to 9 KB
- Advanced diagnostic features including IEEE1149.1 JTAG boundary scan and BIST functionality
- Pin-to-pin compatible with BCM5691
- Low-power, enhanced thermal 480-pin EPGA package

### SUMMARY OF BENEFITS

- System vendors can build scalable high-performance, high port density Gigabit Ethernet layer 2 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..

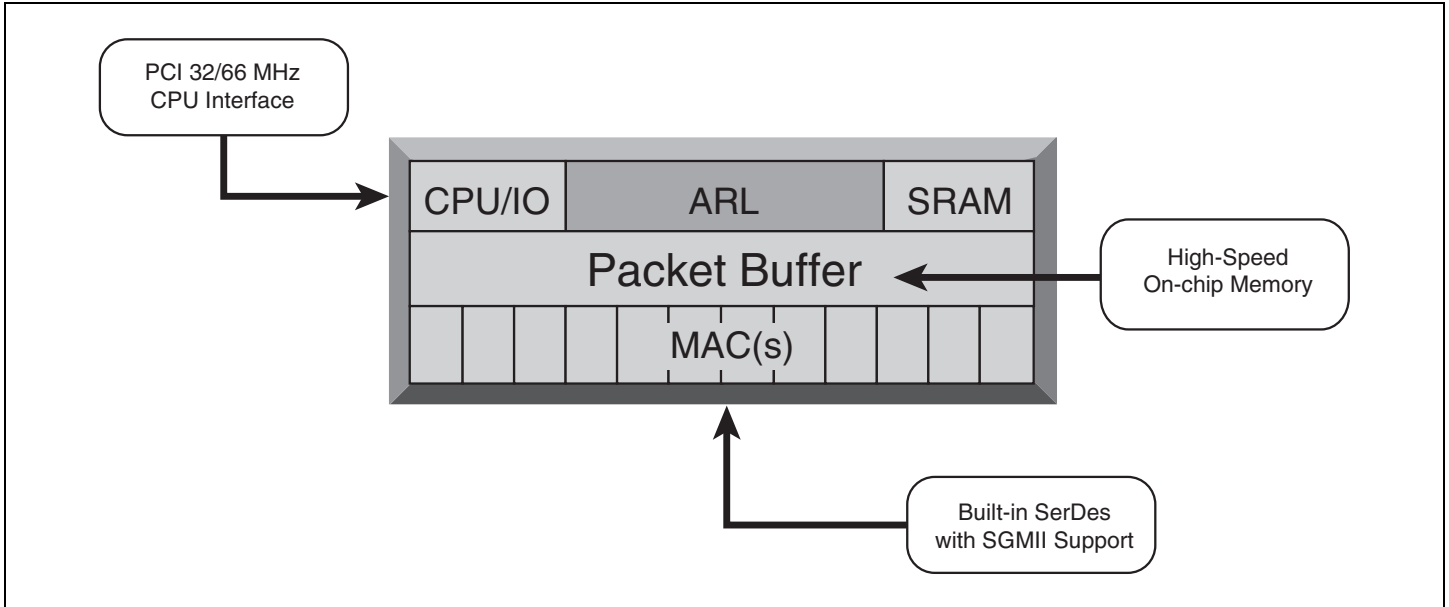
### TARGET APPLICATIONS

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



12-Port Gigabit Ethernet Multilayer Switch

## OVERVIEW



The BCM5693 layer 2 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 BCM5693 supports both copper and fiber physical interfaces. The BCM5693 has a fully integrated SerDes functionality consisting of a Gigabit Ethernet or a SGMII PHY interface.

The BCM5693 supports advanced packet flow control such as head-of-line blocking prevention and IEEE 802.3x compatible full-duplex control. Moreover, the BCM5693 supports a fully-integrated data and address memory.

The BCM5693 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 BCM5693 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 BCM5693 embodies the scalability, integration, and performance features that a next-generation switch requires.

### Additional information

The system design kit available for this device is BCM95691K12, which includes supporting documentation and software. Please contact your local sales representative for more information.

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