



SCALABLE 12-PORT GIGABIT ETHERNET MULTILAYER SWITCH

BCM5691 FEATURES

- 12 10/100/1000 Mbps Ethernet ports supporting both copper and fiber connections
- Integrated high-performance SerDes
 - Gigabit Ethernet SerDes per port
 - 4-pins per port SGMII interface to Gigabit Ethernet PHYs
- 32 million packets/second (line rate) aggregate switching capacity
- Supports 8 classes of service (CoS) per port
- Port trunking and mirroring supported across stacked switches
- Fully integrated data and address memory on-chip
- Advanced packet flow control:
 - Head-of-line blocking prevention
 - Full-duplex flow control (802.3x compatible)
- ContentAware™ network processing per port
 - Line rate multifield packet classification
 - Supports IEEE802.1p, ToS/DiffServ, rate limiting, policing, priority tagging, and remapping
- Support for jumbo Frames of up to 9 KB
- Advanced diagnostic features including IEEE 1149.1 JTAG boundary scan and BIST functionality
- Low-power, enhanced thermal 480-pin EPGA package

SUMMARY OF BENEFITS

- System vendors can build scalable high-performance, high port density Gigabit Ethernet LAN switches in several form factors.
- Multiple classes of service (CoS) and very low latency enable the support of VoIP and other voice, video, and data applications.
- 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 enables cost-effective and high-performance system design

TARGET APPLICATIONS

- Multi-layer switch in modular Gigabit Ethernet switches
- High-port-count stand-alone or stackable Gigabit Ethernet switches
- Chassis and in-server switch blade applications

12-Port Gigabit Ethernet Multilayer Switch

