



SCALABLE 12-PORT GIGABIT ETHERNET MULTILAYER SWITCH

BCM5690 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**
- **Supports 8 classes of service (CoS) per port**
- **Scalable upto 32 BCM5690 switches in a system**
- **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 IEEE1149.1 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

- Multilayer 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 with HiGig™

