

BCM56101





24-PORT FAST ETHERNET AND 2-PORT GIGABIT ETHERNET MULTILAYER SWITCH WITH ONE 10-GIGABIT ETHERNET/HIGIG+™ PORT

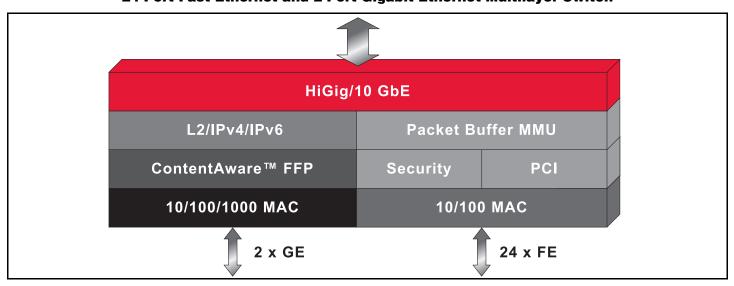
FEATURES

- Twenty-four 10/100 Mbps and two 10/100/1000 Mbps Ethernet ports supporting both copper and fiber connections
- Fifth generation of StrataSwitch[®] and StrataXGS[®] product line
- One 12-Gbps or 10-Gbps HiGig+TM port uplink interface
- One 10-GbE Switching port, CX4 support
- · Line-rate switching for all packet sizes and conditions
- On-chip data packet memory and table memory
- IPv6 routing and tunneling
- Advanced Fast Filter Processor (FFP) ContentAwareTM classification
- · Advanced security features in hardware
- Port trunking and mirroring supported across stack
- Advanced packet flow control:
 - Head-of-line blocking prevention
 - Back pressure support
- Eight QoS queues per port with hierarchical minimum/ maximum shaping per Classes of Service (CoS) per queue per port
- Standard compliant 802.1ad provider bridging

SUMMARY OF BENEFITS

- Highly scalable BroadScaleTM architecture evolved from five generations of switching experience provides rich features, scalability, and future-proof solutions.
- Optimized for secure switching and convergence of applications and services in the networks.
- System vendors can build scalable high-performance, highport density FE LAN switches in several form factors.
- Multiple CoS and 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 ease and accelerate 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 highperformance system design.

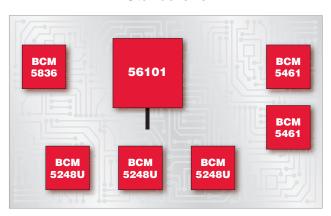
24-Port Fast Ethernet and 2-Port Gigabit Ethernet Multilayer Switch





OVERVIEW

24 10/100 and 2 10/100/100 + One 10xGbE Standalone



The **BCM56101** is the fifth generation of the highly-integrated and cost-effective Broadcom StrataSwitch and StrataXGS product line in a single-chip solution, with 24FE, two GE, and one 10-GbE/HiGig+uplink ports. The uplink port can operate in two modes:

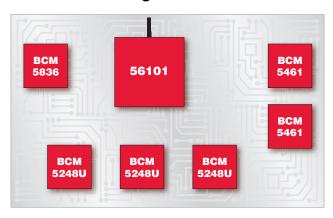
- 10-GbE switching mode
- · HiGig+ uplink mode

The integrated 10-GbE switching port is a CX-4 compliant XAUI interface. The HiGig+ uplink interface is used to connect to other StrataXGS devices in a larger stacking system or to the BCM5675/BCM5676 Switch Fabric via a backplane in a multislot redundant chassis system.

With high-integration and high-port density, the BCM56101 family is ideal for Enterprise applications in stand-alone, stackable, and chassis configurations. The BCM56101 configurations are applicable in the edge, aggregation, and core areas of the Enterprise. The BCM56101 is also ideal for embedded switch applications like the Blade Server Switch, ATCA chassis, IPDSLAM, 3G Wireless Base Station, and others

The **BCM56101** integrates sophisticated advanced L3 switching features for cost-effective highly manageable enterprise networks. The **BCM56101** performs IPv6 routing and transition services in hardware, allowing IT managers to deploy L3 switches that are future-proof, highly manageable L3 networks and to enable cost-effective transition from IPv4 to IPv6.

24 10/100 and 2 10/100/100 + One HiGig+Stackable



The ContentAware classification feature of the StrataSwitch and StrataXGS has been further enhanced in the BCM56101 with unmatched flexibility and programmability. The ContentAware engine could be used for applications such as policy-based routing, access control list, dynamic adaptation to changes in virus threats, and so on.

The **BCM56101** has built-in security functions for highly secure Enterprise networks including BroadSAFETM. Utilizing hardware-based identity management and authentication coupled with key management software that directs and manages clients, BroadSAFE Security provides exceptionally strong network security without impacting network performance.

The BCM56101 integrates sophisticated metering, statistics, and traffic management features, optimizing the QoS in the Enterprise networks for voice, video, and data convergence. The BCM56101 also provides rate adjustable hardware-based sFlow implementation and flexible multiple session remote port mirroring functionality for efficient network management.

The **BCM56101** switch supports an I²C controller for communicating with external devices such as serial EEPROM, flash PROM memories, and parallel port devices, and also supports a serial interface for the MII management of physical layer devices.

The **BCM56101** switch interfaces to a host CPU via a 32-bit PCI bus running at up to 66 MHz. Bus mastering and advanced DMA are supported for efficient exchange of packet data between CPU memory and the **BCM56101** switch.

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