



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

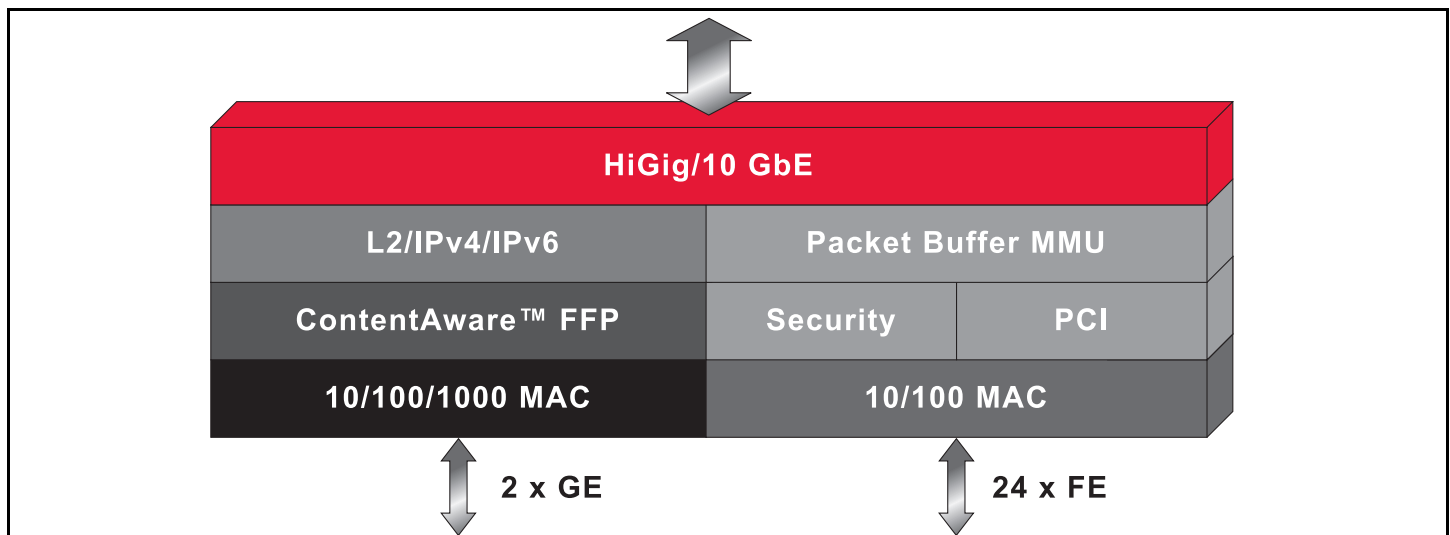
#### FEATURES

- 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+™ 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) ContentAware™ 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

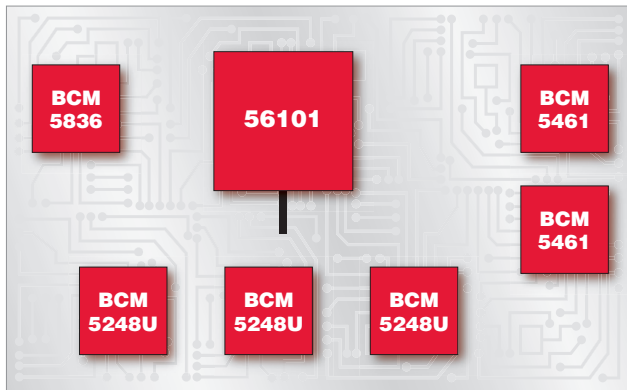
- Highly scalable BroadScale™ architecture evolved from five generations of switching experience provides rich features, scalability, and future-proof solutions.
- Optimized for secure switching and convergence of applications and services in the networks.
- System vendors can build scalable high-performance, high-port 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 high-performance system design.

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

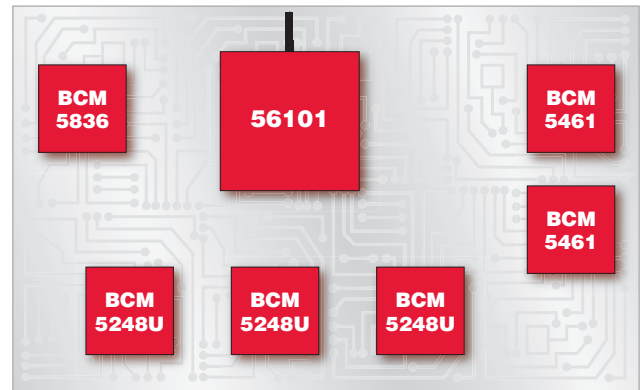


## OVERVIEW

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



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



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.

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 BroadSAFE™. 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 I<sup>2</sup>C 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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