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BCM56100

PRODUCT Brief

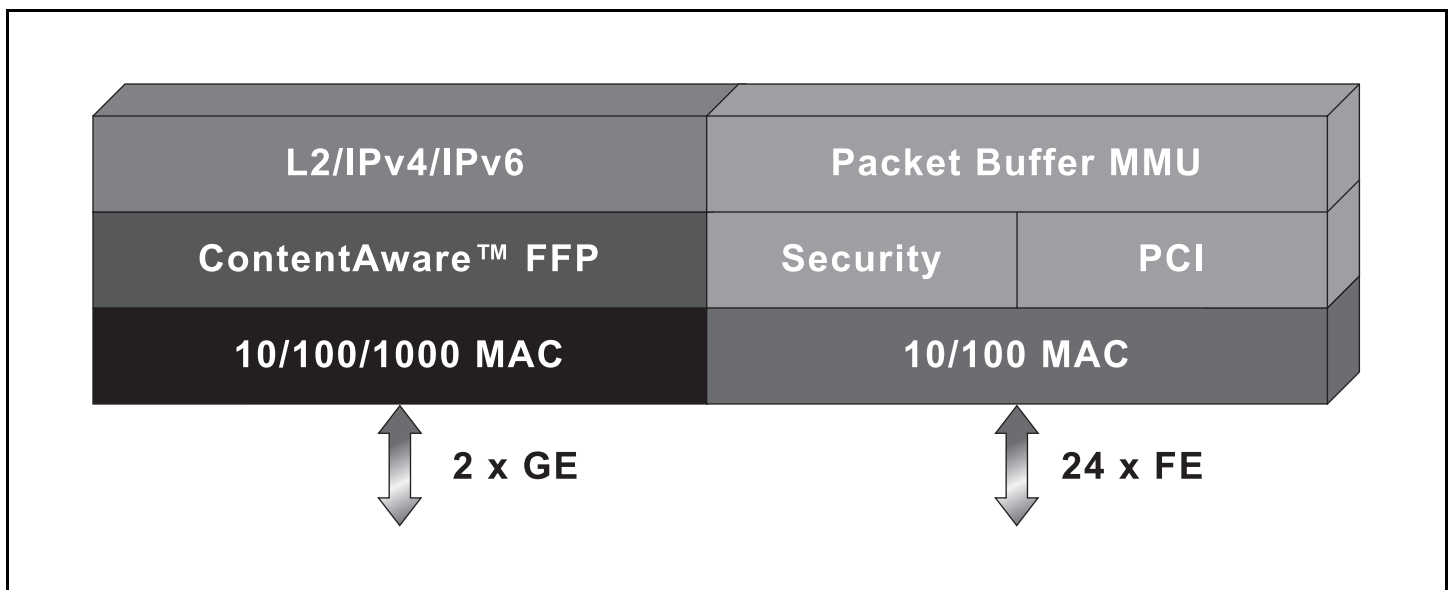# 24-PORT FAST ETHERNET AND 2-PORT GIGABIT ETHERNET MULTILAYER SWITCH

FEATURES

- Twenty-four 10/100 Mbps and two 10/100/100 Mbps Ethernet ports supporting both copper and fiber connections
- Fifth generation of StrataSwitch® and StrataXGS® product line
- 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
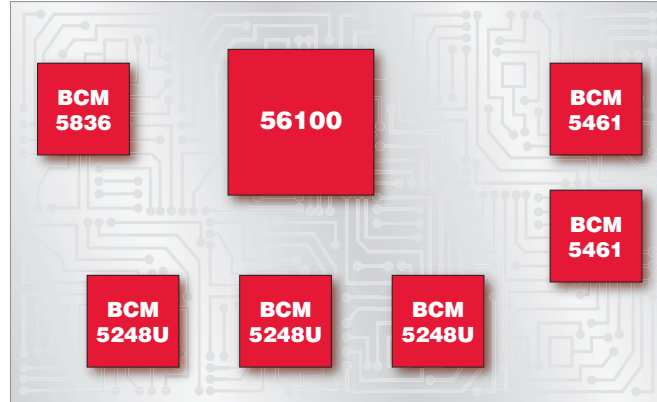- Standard compliant 802.1ad provider bridging

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

L2/IPv4/IPv6	Packet Buffer MMU	
ContentAware™ FFP	Security	PCI
10/100/1000 MAC	10/100 MAC	

2 x GE   24 x FE

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OVERVIEW

24 10/100 Mbps and 2 10/100/100 Mbps Switch

The **BCM56100** is the fifth generation of the highly-integrated and cost-effective Broadcom StrataSwitch and StrataXGS product line in a single-chip solution, with twenty-four FE ports and two GbE ports.

With high-integration, the **BCM56100** family is ideal for Enterprise applications in stand-alone, stackable, and chassis configurations. The **BCM56100** configurations are applicable in the edge, aggregation, and core areas of the Enterprise. The **BCM56100** is also ideal for embedded switch applications like the Blade Server Switch, ATCA chassis, IPDSLAM, 3G Wireless Base Station, and others.

The **BCM56100** integrates sophisticated advanced L3 switching features for cost-effective highly manageable enterprise networks. The **BCM56100** 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 **BCM56100** 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 **BCM56100** 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 **BCM56100** integrates sophisticated metering, statistics, and traffic management features, optimizing the QoS in the Enterprise networks for voice, video, and data convergence. The **BCM56100** also provides rate adjustable hardware-based sFlow implementation and flexible multiple session remote port mirroring functionality for efficient network management.

The **BCM56100** switch supports an I^2C 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 **BCM56100** 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 **BCM56100** switch.

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