

108 GBPS INTEGRATED MULTILAYER ETHERNET SWITCH

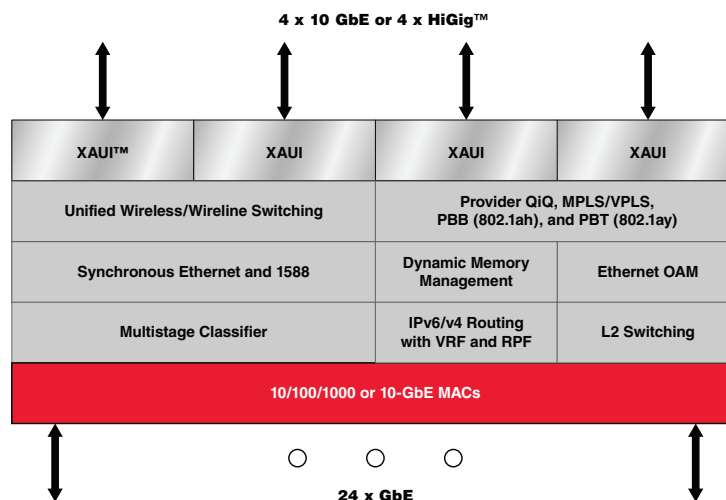
FEATURES

- Seventh generation of Broadcom’s switching and routing technology
- Industry’s first unified wireless/wireline switch, supporting CAPWAP tunneling and multiple mobility models
- Non-blocking architecture, line rate for all packet sizes
- Optimized for Metro applications; Multiprotocol Label Switching (MPLS), enhanced Q-in-Q, MAC-in-MAC, and IP tunneling
- Carrier grade with robust memory protection schemes
- Enhanced on-chip packet buffer, optimized for burst absorption and multicast at low latency
- Flow control: Link pause, per Class of Service (CoS) priority, ServiceAwareFlow flow control mechanisms
- Comprehensive support for layer-one clock recovery (G.8261) and packet-based timing (1588 and 802.1AS)
- PCI host processor interconnect

SUMMARY OF BENEFITS

- **Highly integrated, purpose-built solution for:**
 - Enterprise wiring closet, fixed stackable, and stand-alone configurations
 - Metro Access/Edge fixed applications
- Provides a truly integrated wireless and wireline switching solution, enabling cost-effective unified switching in the wiring closet
- Comprehensive, flexible Metro protocol interoperability via virtual ports
- Hardware-based Ethernet Operations, Administration & Maintenance (OAM) support for guaranteed, full-standard performance; completely alleviates software support
- Dynamic memory technology delivers optimum usage of packet buffer resources
- Advanced congestion management for lossless packet delivery
- Sophisticated per-port or per-flow user authentication scheme
- Leverages Broadcom’s unified API for software reuse and quick time-to-market

BCM56520 Block Diagram



OVERVIEW

The BCM56520 is Broadcom's seventh generation of the StrataXGS® product line. It is a highly integrated multilayer switch designed to address new and emerging Enterprise and Metro Area Networking applications. With a combination of cost-optimized Ethernet functionality, sophisticated classification, accounting, and Metro protocols, and advanced services, the BCM56520 makes an ideal solution for the Enterprise wiring closet as well as Metro fixed access and edge networks.

The BCM56520 incorporates up to 24 ports of GbE and four ports of HiGig2™. The four ports of HiGig2 can operate as standard IEEE 802.3ae XAUI™ or as ports running the HiGig2 protocol. Using the HiGig2 protocol, the BCM56520 can interconnect with other Broadcom devices for scalable, high-performance fixed, and modular systems.

Building upon the industry-leading XGS architecture, the BCM56520 is the industry's first true unified wireless/wireline switch. Supporting the CAPWAP protocol for access point and mobility domain connectivity, the BCM56520 enables edge stackable systems to offer the performance and scalability previously only available on high-end wireless controllers. With this new paradigm, system vendors can deliver a seamless, integrated wireless solution with a dramatic reduction in total solution cost.

The BCM56520 also delivers the most critical emerging technologies in Metro Area Networking. It features popular protocols such as enhanced

Q-in-Q (802.1ad), MPLS/VPLS, Provider Backbone Bridging (802.1ah), Provider Backbone Transport (802.1Qay), and VLAN cross-connect. Built upon a novel virtual port architecture, all of these protocols may operate simultaneously to satisfy all manner of Metro deployments.

As service providers deploy carrier Ethernet networks, two underlying technologies are used for guaranteeing service quality: time synchronization and OAM. The BCM56520 is architected with a comprehensive synchronization solution that includes layer-one clock recovery (G.8261) and hardware support for 1588v2 and 802.1AS. The highly scalable and flexible BCM56520 OAM solution relieves application software by handling critical high-bandwidth functions in hardware.

All devices in the BCM56520 family support a 32-bit PCI interface running at 66 MHz.

BCM56520 Product Family

<i>Part Number</i>	<i>10/100/1000 Ports</i>	<i>XAUI/HiGig2 Ports</i>
BCM56520	24 x GbE	No uplinks
BCM56522	24 x GbE	2 x HiGig2
BCM56524	24 x GbE	4 x HiGig2

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