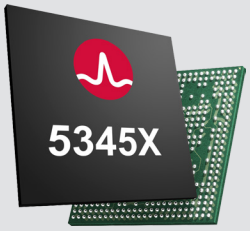
BROADCOM®

Product Brief

BCM5345X

Low-Power 2.5G/10G Ethernet Switch



Key Features

- Integrated 2.5G/10G SerDes with diverse I/O for multiple configurations
- Wide range of natively supported interfaces including KX, KR, XFI, XAUI, RXAUI, SGMII, and QSGMII
- Optional high-performance ARM Cortex-A9 CPU
- Line rate, non-blocking architecture for all packet sizes
- Flexible ContentAware Engine for ACL and QoS
- Fully integrated packet buffer
- Intelligent Memory Management Unit (MMU) optimized for handling bursty data traffic
- Support for Priority-based Flow Control (PFC)
- Timestamping support with IEEE 1588 transparent clock (TC) and Synchronized Ethernet (SyncE)
- IEEE 802.1ag OAM
- Support for Industrial temperature
- Support for Energy Efficient Ethernet
- Low-power consumption

Description

The Broadcom® BCM5345X System-on-a-Chip (SoC) family of switches offers industry-leading integration and performance in a small footprint. These devices offer up to 20x2.5G + 4x10G multilayer ports. Offering the industry's highest level of integration, the BCM5345X family of switches has embedded SerDes supporting KX, KR, XFI, XAUI, RXAUI, SGMII, and QSGMII modes and an optional powerful ARM Cortex-A9 single-core processor. The BCM5345X is ideal for cost-sensitive Edge connectivity applications such as embedded designs for control-plane applications or embedded switches for Small and Medium Businesses (SMB).

The BCM5345X family of switches offers multiple I/O configurations and speeds (1G/2.5G/10G) that address key segments of Edge connectivity.

With an integrated packet buffer and the industry's lowest power consumption, the BCM5345X family of switches is designed to reduce overall system costs.

The BCM5345X family of switches offers many advanced features such as IEEE 802.1Q VLAN, VLAN translation, enhanced Denial-of-Service (DoS) protection, IPv4 and IPv6 support, advanced ContentAware™ Engine, and IEEE 802.1p Quality-of-Service (QoS).

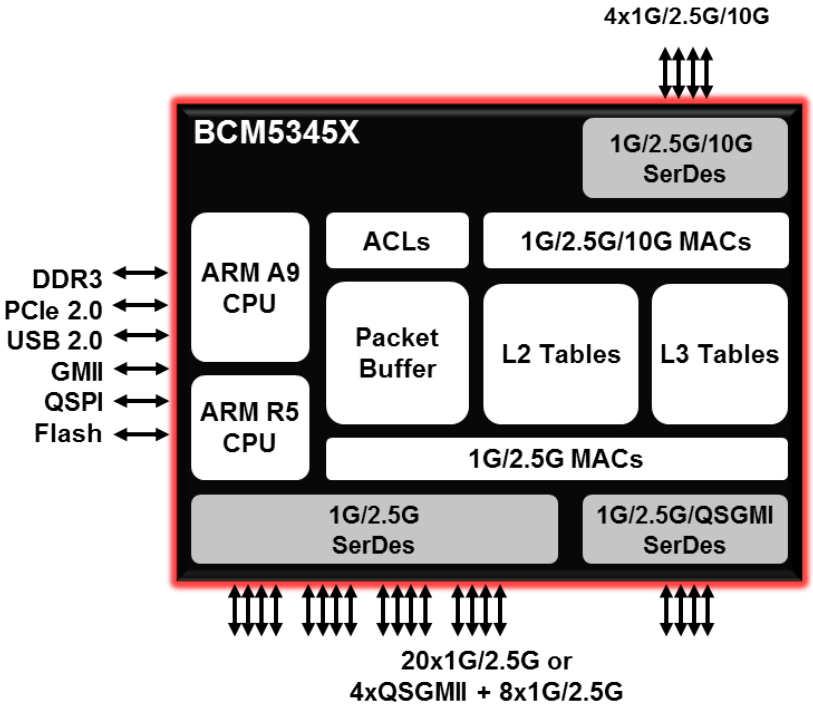
Benefits

- Based on industry-leading and market-proven StrataConnect® architecture
- Single-chip switch SoC optimized for embedded control plane, embedded switch, and embedded data plane connectivity applications for SMB networks
- Seamless connection to StrataXGS® fabric via HiGig2™ and HiGig+™ protocols
- Enhanced buffer management delivers optimum usage of packet-buffer resources
- Eight flexible Class-of-Service (CoS) queues per port assure the lowest latency to high-priority traffic
- IPv6 support provides future-proofing
- Flexible I/O configuration support for future-proofing
- Leverages the Broadcom unified API for software reuse and quick time-to-market
- Optimized ball pattern for low-cost PCB design
- Low-power 28 nm CMOS technology

Applications

- SMB/SME 1G/2.5G switches
- Embedded Control Plane switches
- Embedded connectivity switch for base stations, Ethernet storage arrays, and other chassis backplanes

BCM5345X Block Diagram



Ordering Information

Part Number	Package	Integrated ARM Cortex-A9 CPU	Description
BCM53455A0KFSBG BCM53455A0IFSBG	27 mm x 27 mm	Yes	20x1G/2.5G + 4x10G
BCM53454A0KFSBG BCM53454A0IFSBG	25 mm x 25 mm	No	20x1G/2.5G + 4x10G
BCM53457A0KFSBG BCM53457A0IFSBG	27 mm x 27 mm	Yes	4xQSGMII + 8x1G/2.5G + 4x10G
BCM53456A0KFSBG BCM53456A0IFSBG	25 mm x 25 mm	No	4xQSGMII + 8x1G/2.5G + 4x10G

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