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BCM5674
PRODUCT Brief
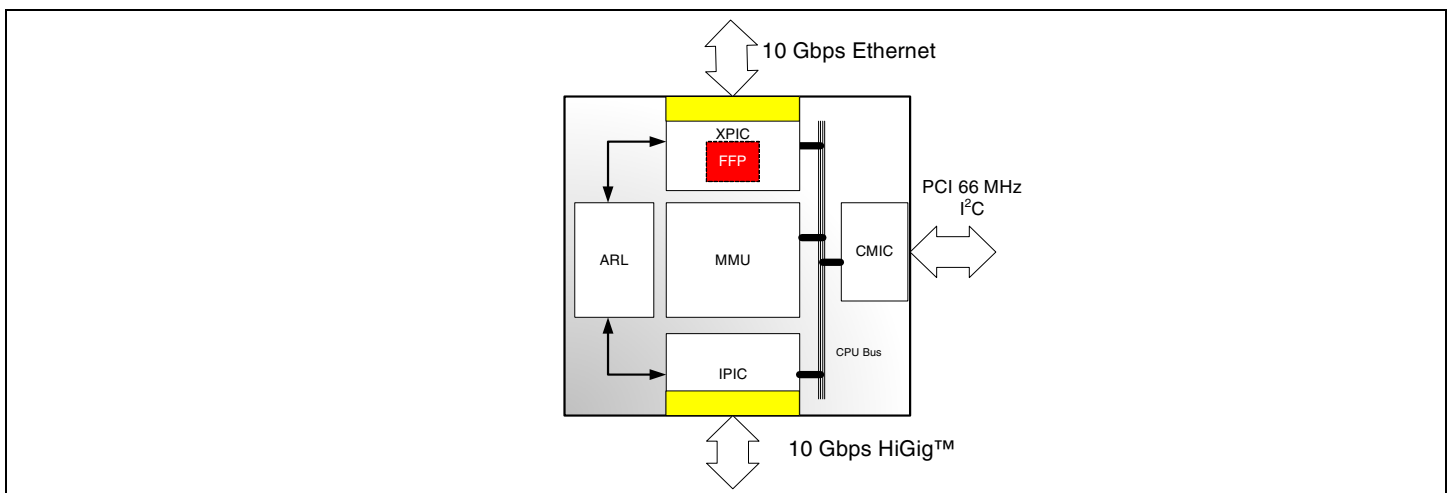
MULTILAYER 2-PORT 10 GIGABIT ETHERNET AND HiGig™ SWITCH

FEATURES

- **One 10 Gbps IEEE 802.3ae compliant Ethernet port**
- **One HiGig™ port configurable for 10 Gbps speed**
- **Integrated on-chip 512 KB packet buffer memory**
- **Integrated on-chip layer 2/3 tables**
- **Supports wire speed switching for all packet sizes, including jumbo frames (up to 9 KB)**
- **Supports eight class of service (CoS) queues**
- **Supports advanced packet flow control:**
  - Head-of-line blocking prevention
  - Full-duplex flow control (IEEE 802.3x compatible)
- **ContentAware™ network processing per port:**
  - Line rate deep packet classification
  - Supports IEEE 802.1p, ToS/DiffServ, rate limiting, policing, priority tagging, and re-mapping
- **Provides hardware support for IP multicast and IP multicast replication**
- **Support for double VLAN tagging with loopback feature**
- **Support for 128 StrataXGS™ devices using module remapping**
- **Supports port mirroring across the stack**
- **Feature parity with BCM5695 multilayer switch**
- **Low power ~4 W**

SUMMARY OF BENEFITS

- **Enables system vendors to build scalable high-performance switches with 10 Gigabit Ethernet support**
- **Built-in double VLAN tagging enables seamless integration of enterprise networks and service provider networks.**
- **Provides hardware support for a number of multicast applications, such as video and audio conferencing, web training**
- **Multiple classes of service (CoS) enable the switch to prioritize latency-sensitive applications, such as VoIP and video applications**
- **Built-in 10 Gigabit Ethernet/XAUI SerDes, in addition to integrated data and address memory, reduces overall system cost and design complexity**
- **Broadcom Switch API compatibility enables software reuse and faster time to market**
- **Small package and low-power enables cost effective and high performance system design**
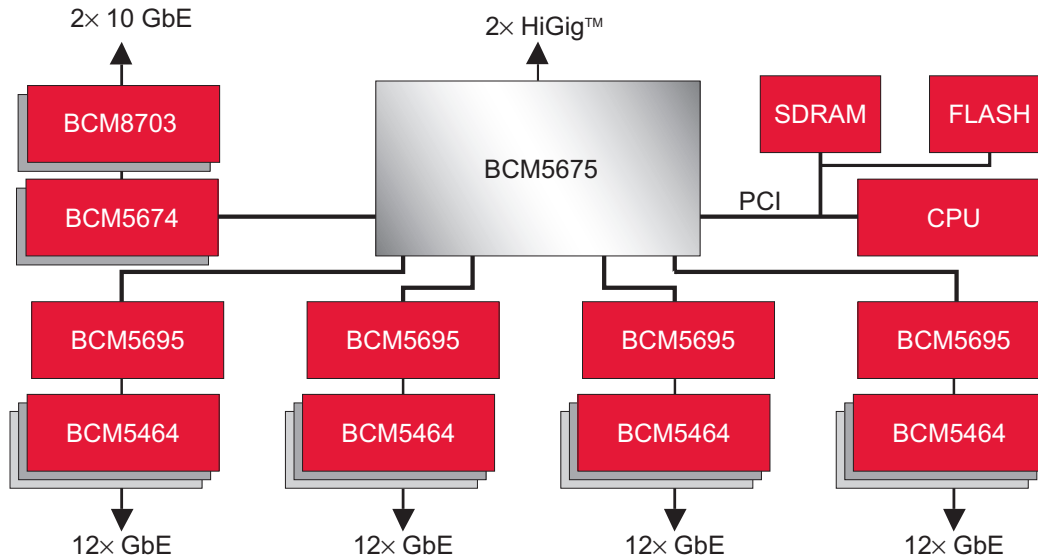
TARGET APPLICATIONS

- **High performance 10 Gigabit Ethernet multilayer switching applications targeting the following types of systems:**
  - Stand-alone systems
  - Stackable systems
  - Modular chassis systems
  - High-end server blades

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Functional Design of 48-Port Gigabit Ethernet Switch Based on BCM5674 with 2×10 GbE Ports and Stacking

2× 10 GbE   2× HiGig™

BCM8703		SDRAM	FLASH
BCM5674	BCM5675	PCI	CPU

BCM5695	BCM5695	BCM5695	BCM5695
BCM5464	BCM5464	BCM5464	BCM5464

12× GbE   12× GbE   12× GbE   12× GbE

The BCM5674 10-Gigabit Ethernet switch is a scalable, multilayer switch-on-chip member of the StrataXGS family. The BCM5674 is a dual-port switch, which supports a 10 Gigabit Ethernet (IEEE 802.3ae) port and a HiGig™ uplink port. The 10 Gigabit Ethernet port can be used to interface to the XENPAK module via the XAUI interface.

The HiGig uplink expansion port supports explicit priority and mirroring functions across the stack. The HiGig port can be used to interconnect up to 128 switching devices, which enables high port density switching applications.

The BCM5674 supports VLAN double tagging that is compatible with other StrataXGS™ devices. The switch can also be used in loopback mode enabling VLAN double tagging support for the Gigabit Ethernet ports on the BCM5695.

The built-in Fast Filter Processor (FF) provides ContentAware™ network processing. The FFP supports functions such as ToS/DiffServ mapping, rate limiting, policing, priority tagging, and metering functions. The enhanced packet classification feature of the FFP enables cutting-edge applications such as VoIP and firewalls.

The BCM5674 provides hardware support for IP multicast as well as IP multicast replication. This enables a number of multicast applications, such as Web training and audio/video conferencing.

The BCM5674 supports advanced packet flow control, such as head-of-line blocking prevention and IEEE 802.3x compatible full-duplex control.

For additional information on the BCM5674, please contact your local sales representative.

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