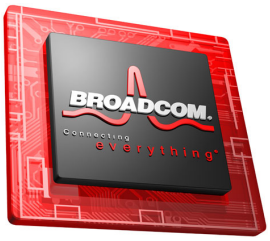
BROADCOM®
Connecting everything®

BCM5645 PRODUCT Brief



STRATASWITCH II™ BCM5645 INTEGRATED MULTI-LAYER SWITCH

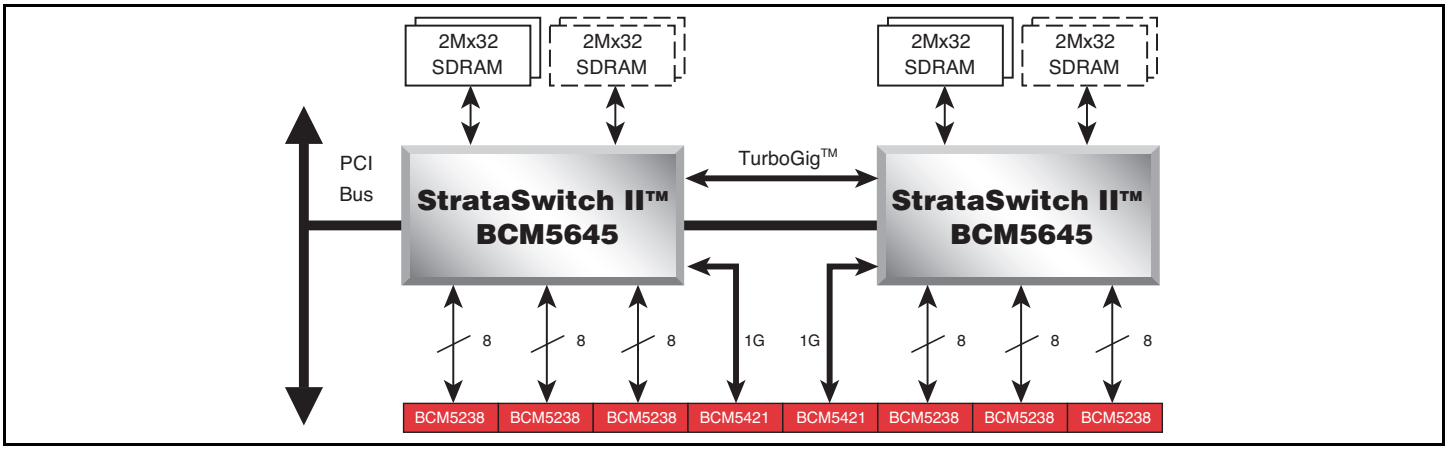
FEATURES

- **24 10/100 Mb and 2 10/100/1000 Mb Ethernet ports**
- **High-speed 2.5-Gbps TurboGig™ stacking link**
- **8.9 Mpps (line rate) switching**
- **Default route table with 16 entries**
- **Integrated 255 entry IP multicast table**
- **IP multicast support (IGMP snooping capable)**
- **Integrated (8k) L2 table with auto learning**
- **Integrated (2k) L3 table**
- **Integrated (256 KB) data packet memory**
- **64- or 128-bit-wide SDRAM support**
- **Spanning Tree support per VLAN**
- **DiffServ compliant**
- **Stacking architecture compatible with StrataSwitch I™**
- **IEEE 802.1Q.D support**
- **Fast Filter Processor (FFP)**
  - Examines up to the 80th byte of a packet
  - Supports TOS and DiffServ field modification
  - Bandwith regulation and monitoring per network flow
  - Network data flow tracking granular to 1 Mbps

SUMMARY OF BENEFITS

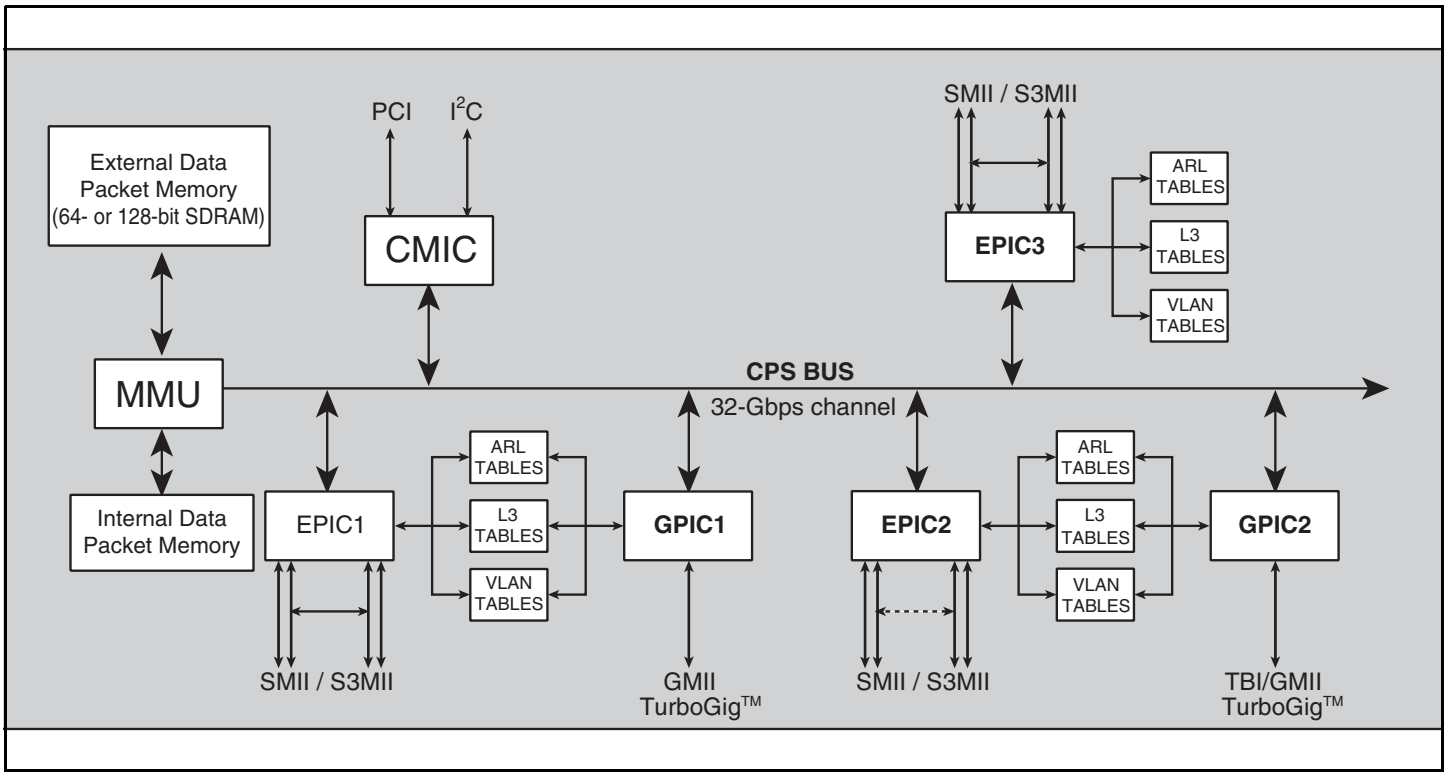
- **2.5-Gbps TurboGig™ stacking link defines the next generation of performance for 48-port switching devices**
- **Optimized for 48FE+2GE and 24+2GE switches**
- **New service offerings for ISPs**
  - Pay for bandwidth consumption
  - Voice over IP
  - Police over-consumption of network resources
  - Line rate switching on all ports
- **Greater insight to network resource utilization through the advanced FFP features**
- **More efficient deployment of existing network resources through insight provided by StrataSwitch II™ feature set**
- **Line rate switching on all ports for:**
  - Layer 2 switching
  - Layer 3 switching
  - All FFP actions — steering, forwarding, reclassifying
- **Low power of device, 3W (<120 mW/ FE port), enables low-cost power supplies**
- **High level of integration minimizes PCB layer count and routing issues**
- **Flexible (128- or 64-bit) SDRAM interface supports low system cost of memory**

BCM5645 Application Diagram



BROADCOM®

OVERVIEW



The BCM5645, with a forwarding rate of 8.9 Mpps, defines the next generation of performance for 48-port Fast Ethernet switching solutions. Through its advanced ContentAware™ feature set, the StrataSwitch II™ product family supports advanced applications and services, at wire speed, with non-blocking performance.

The BCM5645 uses 60 million transistors and 1 MB of internal memory to integrate the functionality of large 48-port board designs into two chips. This level of integration allows the BCM5645-based switch to sustain line rate on all 48 Fast Ethernet and 2-Gigabit Ethernet ports for Layer 2, and Layer 3 switching and all L2-L7 processing applications.

The StrataSwitch IITM Fast Filter Processor (FFP) delivers line rate packet processing to support policy management, VoIP, and firewall applications.

The data packet memory can be extended from 4 MB to 64 MB using commodity SDRAM in either a 128-bit-wide interface or a 64-bit-wide interface.

The StrataSwitch™ family supports using the gigabit ports or TurboGig™ in a stacking link mode, giving you tremendous scalability configuring your switching system.

The BCM5645 also provides a wide range of choices in levels of manageability and solution costs. For example, the BCM5645 provides a low-cost I2C interface for unmanaged applications, as well as a 33-MHz PCI interface for higher management and network service requirements.

The flow metering and monitoring of the StrataSwitch II™ enables many new applications and services. ISPs can benefit from the metering capabilities of the StrataSwitch II™, eliminating unregulated bandwidth from over-consuming their network. Using the monitoring features of the FFP, IT managers can gain tremendous insight to the utilization of their current network resources and optimize those resources accordingly.

Broadcom®, the pulse logo, and **Connecting everything**® are trademarks of Broadcom Corporation and/or its subsidiaries in the United States and certain other countries. All other trademarks mentioned are the property of their respective owners.

Connecting everything®

BROADCOM®

BROADCOM CORPORATION
16215 Alton Parkway, P.O. Box 57013
Irvine, California 92619-7013

© 2003 by BROADCOM CORPORATION. All rights reserved.

5645-PB05-R 10/22/03

Phone: 949-450-8700
Fax: 949-450-8710
E-mail: info@broadcom.com
Web: www.broadcom.com