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C o n n e c t i n g
e v e r y t h i n g®

BCM5615
PRODUCT
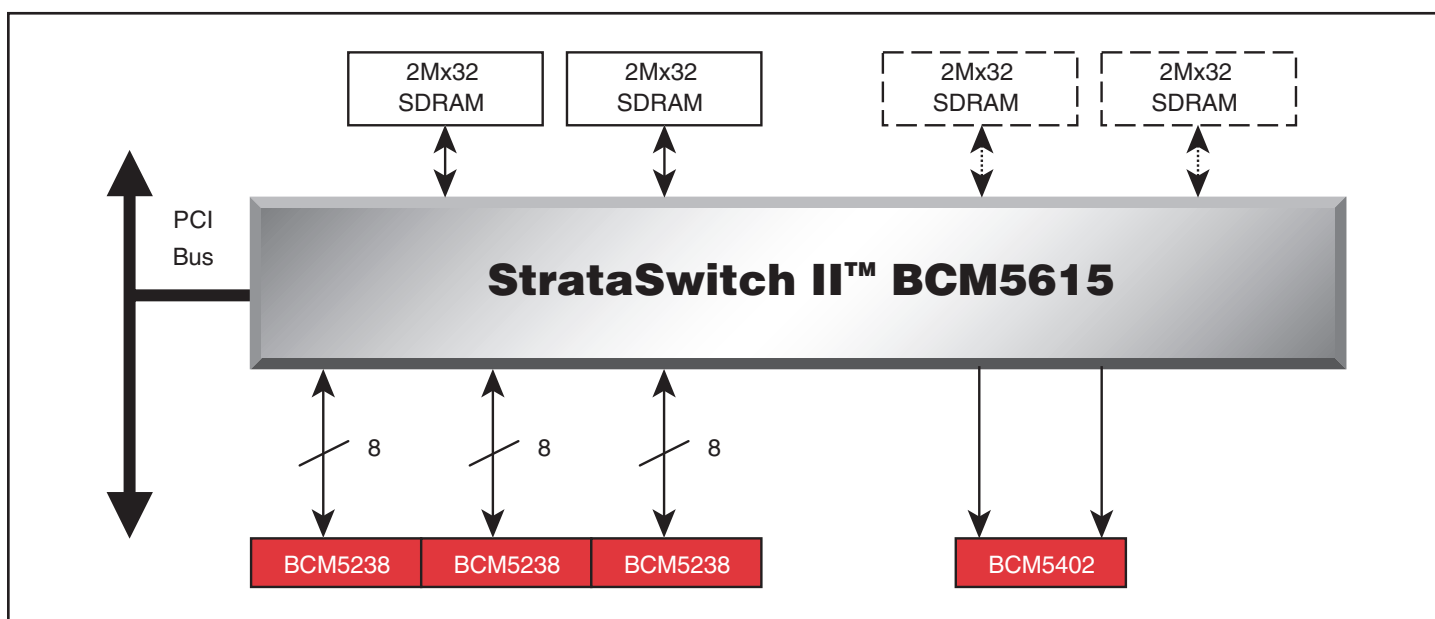**Brief**

StrataSwitch II™ BCM5615 INTEGRATED MULTI-LAYER SWITCH

BCM5615 FEATURES

- **24 10/100-Mbps and 2 10/100/1000-Mbps Ethernet ports**
- **6.6 Mpps (line rate) switching**
- **1–4 Classes of service (CoS); map to 802.1p priority**
- **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 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
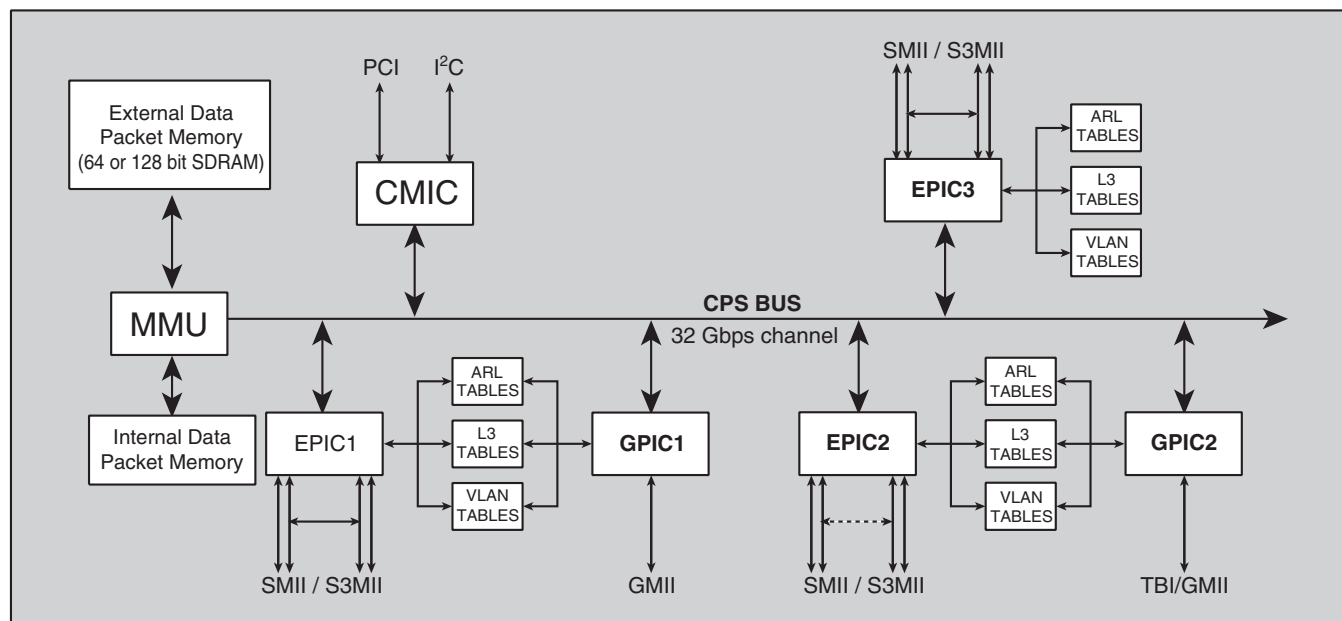 - Network data flow tracking granular to 1 Mbps

SUMMARY OF BENEFITS

- **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, 5W (<250 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.**

BCM5615 Application Diagram

BCM5615 Application Diagram showing 2Mx32 SDRAM, 2Mx32 SDRAM, 2Mx32 SDRAM, 2Mx32 SDRAM connected to StrataSwitch II™ BCM5615 via PCI Bus, with connections labeled 8 to BCM5238, BCM5238, BCM5238, and BCM5402.

BCM5615 Block Diagram

The **BCM5615**, with a forwarding rate of 6.6 Mpps, defines the next generation of performance for single-chip switching solutions. Through its advanced ContentAware™ feature set, the StrataSwitch II™ product family supports advanced applications and services, at wire speed, with nonblocking performance.

The **BCM5615** uses 60 million transistors with 1 MB of internal memory to integrate the functionality of large board designs into a single chip. This level of integration allows the **BCM5615** to sustain line rate on all 24 Fast Ethernet and 2-Gigabit Ethernet ports for Layer 2, and Layer 3 switching and all L2–L7 processing applications.

The StrataSwitch II 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 in a stacking link mode, giving you tremendous scalability for configuring your switching system.

The **BCM5615** also provides a wide range of choices in levels of manageability and solution costs. For example, the **BCM5615** provides a low-cost I²C interface for unmanaged applications, as well as a 33/50-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.

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