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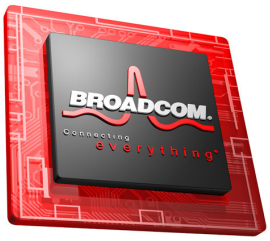
BCM5338M PRODUCT Brief



NINE-PORT MANAGED 10/100 SWITCH WITH IEEE 802.1/P/X/Q VLAN

FEATURES

- **Sixth-generation L2+ Fast Ethernet switch on a chip**
- **The BCM5338M integrates:**
  - Eight transceivers (IEEE 802.3u compliant)
  - Nine medium access controllers (MACs) (IEEE 802.3x compliant)
  - One port can be assigned as a WAN port
  - 256-KB memory for packet buffer and control
  - Non-blocking switch fabric supports up to 24 ports
- **Cascades to 36 ports through a 3.2-Gbps expansion port**
- **Stack to 48 ports with a 200-Mbps turbo MII port**
- **IEEE 802.1p QoS packet classification with four priority queues**
- **IEEE 802.1Q based VLAN with 512 entries**
- **Supports IEEE 802.1x EAPOL higher layer protocol**
- **MAC based trunking with automatic link failover**
- **Programmable per port storm control and rate control**
- **Port protection allows traffic aggregation to assigned port**
- **4K MAC addresses with automatic learning and aging**
- **Per port programmable MAC address locking**
- **Programmable per port flow control and back pressure**
- **Buffer repeater mode**
- **MII or reversed MII**
- **MDC/MDIO and SPI interfaces**
- **Port mirroring and IGMP layer2/3 snooping**
- **MIB Autocast® function**
- **DTE (power over Ethernet)**
- **Hardware support for SNMP, RMON, and STP**
- **Internal oscillator simplifies design and reduces cost**
- **JTAG**
- **3.3V and 1.8V, and typical power consumption is less than 2W**
- **BCM5328M pin-to-pin compatible 208-pin MQFP package**

SUMMARY OF BENEFITS

- **Enables a new generation of affordable 10/100 switches with highest integration of enhanced L2+ features**
- **Uses field-proven industry-standard 10BASE-T/100BASE-TX (100BASE-FX compatible) Fast Ethernet transceivers—lowering overall system interoperability and reliability risks**
- **IEEE 802.1Q based VLAN and flexible priority queues mapped to selectable protocols such as IEEE 802.1p, Diffserv, ToS, and CoS, enable the switch to be designed to a wide variety of applications for multimedia and data traffic**
- **Supports port based Extensible Authentication Protocol over LAN in four application modes; forwards only EAPOL frames to the CPU for authentication and allows secure mode traffic filtering**
- **Supports IEEE 802.1ad aggregation/port trunking**
- **Per port storm control of broadcast, multicast, and unlearned unicast traffic**
- **Flexible per port ingress/egress rate control with minimum resolution of 48 Kbps for better traffic management**
- **MAC address locking enhances security control**
- **MII port supports additional 100TX/FX**
- **Optional reversed MII port connects directly to an IEEE 802.3 compliant MAC**
- **Access to all internal registers through SPI or MDC/MDIO interfaces**
- **Low-cost management using the on-chip MIB registers allows the collection and transmission of basic management statistics for each port**
- **Switch management features:**
  - Low-cost MIB Autocast function
  - Hardware support for Simple Network Management Protocol (SNMP), remote network monitoring (RMON), IEEE 802.1d spanning tree protocol, IEEE 802.1s multiple spanning tree (up to 32), and IEEE 802.1w rapid spanning tree protocol