

BCM5308M 9-PORT MANAGED 10/100BASE-T/TX SWITCH

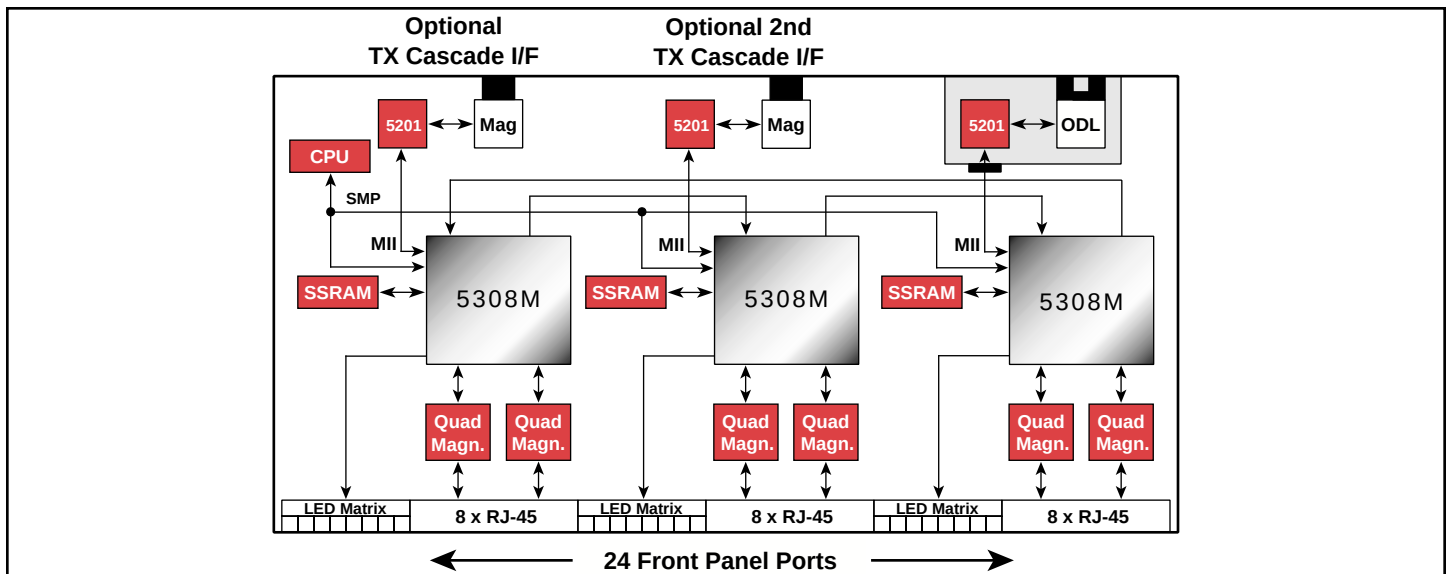
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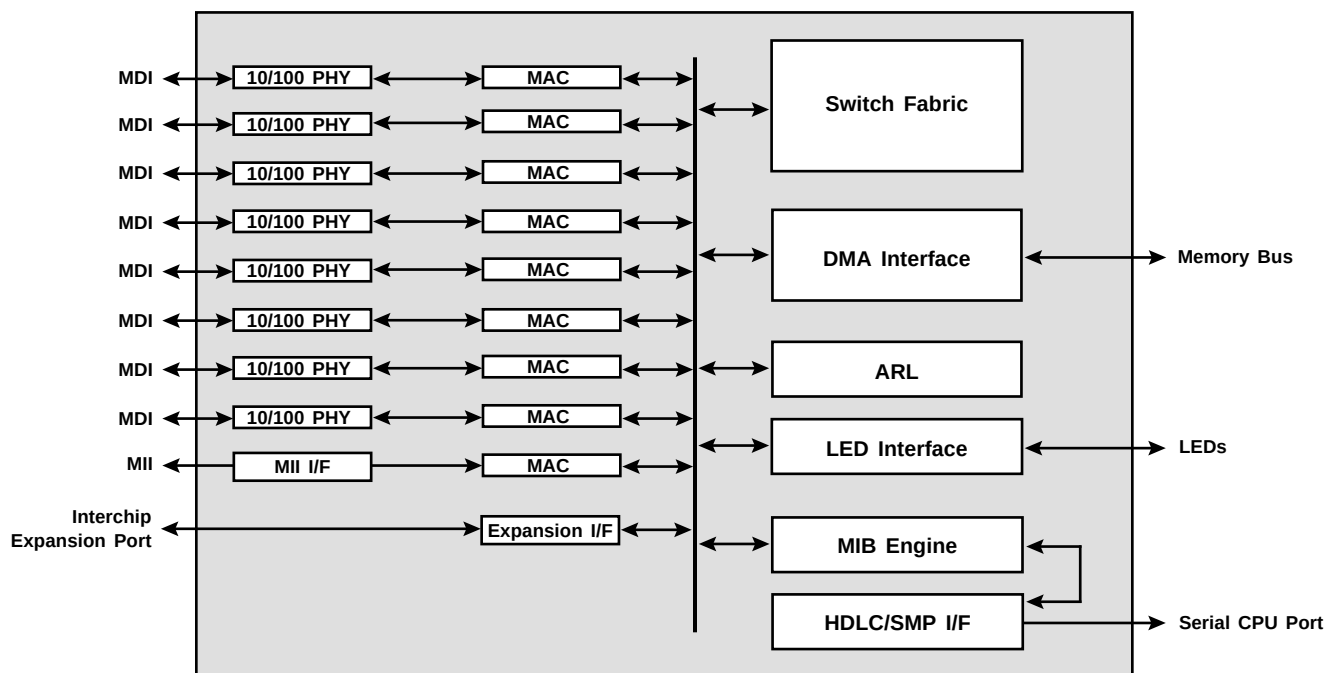
- 9-Port 10/100 Switch Integrating the MACs, Switching Fabric and eight Transceivers into a Single Chip
- Support for Full-Wire Speed, Full-Duplex Traffic on Every Port Simultaneously
- Non-Blocking and Cascadable up to 24 Ports
- On-Board 32/64-Bit Counters Support Popular MIBs
- Serial Management Port (SMP) Provided for CPU
- Hardware Support for SNMP, RMON, and Spanning Tree
- Glueless Interface to Low-Cost 512 KB or 1 MB SSRAM
- Support for Address Learning and Aging
- MII Connection for External Phy (FX or TX)
- 2.6-Gbps Expansion Port that Cascades up to three Devices in a Daisy-Chain Configuration
- Support for up to 16K Unicast MAC Addresses
- Flow Control: Support for Full-Duplex (802.3x) and Half-Duplex Options
- Direct LED Interface to Provide Status on each Port
- Low-Power, 3.3V Design in 0.35μ CMOS Technology
- 352-Pin TBGA Package

SUMMARY OF BENEFITS

- **World's most integrated 10/100 managed switch**
- **Lowest cost solution for SOHO and entry-level corporate applications**
- **Smallest form factor (reducing board space by 50%)**
- **Fully manageable with external CPU**
- **Ability to gather and support basic management statistics with only a very low-cost microcontroller**
- **Scalable architecture that supports 8 to 24 port densities**
- **Cost of external LED latches and drivers eliminated**
- **Robust and field-proven Digi- Φ^{TM} -based 10/100 transceivers**
- **Substantially simplified board and system design**
 - Integrated transceivers, eliminating pin-intensive Media Independent Interface (MII)
 - Internal PLL, generating all system clocks from a single 25-MHz source

24-Port Fully Managed Cascadable Switch





The Broadcom® **BCM5308M** is a 9-port 10/100BASE-T/TX integrated switch targeted at cost-sensitive Fast Ethernet managed switch systems. The device contains eight full-duplex 10BASE-T/100BASE-TX Fast Ethernet transceivers, each of which performs all of the physical layer interface functions for 10BASE-T Ethernet on Category 3, 4 or 5 unshielded twisted-pair (UTP) cable and 100BASE-TX Fast Ethernet on Category 5 UTP cable.

The **BCM5308M** device is a highly integrated solution. It combines all of the functions of a high-performance switch system including transceivers, media access controllers, address management, learning and aging MIB statistic gathering/

reporting, 802.1D Spanning Tree Protocol support, and a non-blocking switch controller into a single monolithic 0.35μ CMOS device. It also complies with the IEEE 802.3, 802.3u, and 802.3x specifications, including the MAC control PAUSE frame and Auto-Negotiation subsections, providing compatibility with all industry-standard Ethernet and Fast Ethernet devices.

The **BCM5308M** is designed with Broadcom's industry-proven, DSP-based 10/100 transceiver technology. The use of digital technology in the **BCM5308M** design results in robust performance over a broad range of operating conditions, and mitigates problems inherent to mixed-signal implementations, such as analog offset and on-chip noise.

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