

2-Port Ethernet Switch with Non-PCI Interface

Description

The KS8842M is the industry's first fully managed 2-port switch with a non-PCI CPU interface. The KS8842 is a proven, 4th generation, integrated Layer 2 switch that is compliant to the IEEE 802.3u standard.

The KS8842M can also be configured as a low-latency repeater to allow for 'cut thru' in latency critical Embedded or Industrial Ethernet applications. For industrial automation applications in the repeater mode, the KS8842M runs in half-duplex mode regardless of the application.

The KS8842M offers an extensive feature set that includes tag/port-based VLAN, QoS priority management, MAC filtering function, MIB counters, and CPU control/data interfaces to effectively address both current and emerging Fast Ethernet applications.

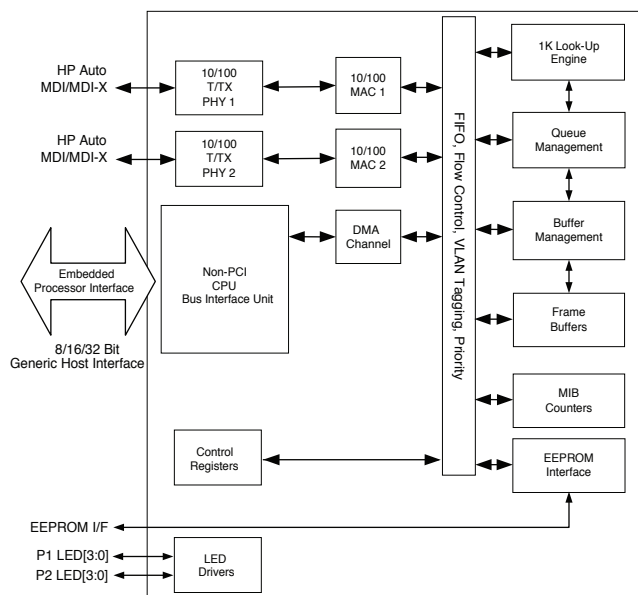
The KS8842 contains two 10/100 transceivers with patented mixed-signal low-power technology, two media access control (MAC) units and a direct memory access (DMA) channel, a high-speed non-blocking switch fabric, a dedicated 1K entry forwarding table, and an on-chip frame buffer memory.

Benefits

Offers all of the features of an integrated Layer 2 managed switch plus:

- Fully compliant to the IEEE 802.3u standard
- Repeater mode capabilities to allow for 'cut-thru' in latency critical Industrial Ethernet or Embedded Ethernet applications
- MAC filtering function to filter unicast packets
- Dynamic buffer memory scheme
 - Essential for applications such as Video over IP where image jitter is unacceptable
- 2-Port switch with flexible 8/16/32 bit generic host processor interface
- Micrel LinkMD™ cable diagnostic capabilities to determine cable length, diagnose faulty cables, and determine distance to fault
- HP Auto MDI-X crossover with disable and enable option
- Industrial Temperature support: -40°C to +85°C available from Q4
- Four priority queues to handle voice, video, data, and control packets

Block Diagram



Note: For an MII/RMII, I²C or SPI interface, use the KS8883ML.

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Applications

- Industrial applications for daisy chaining multiple devices
- Industrial control in latency critical applications
- Port redundancy and port monitoring
- Security cameras
- VoIP phone and ATA adaptors