

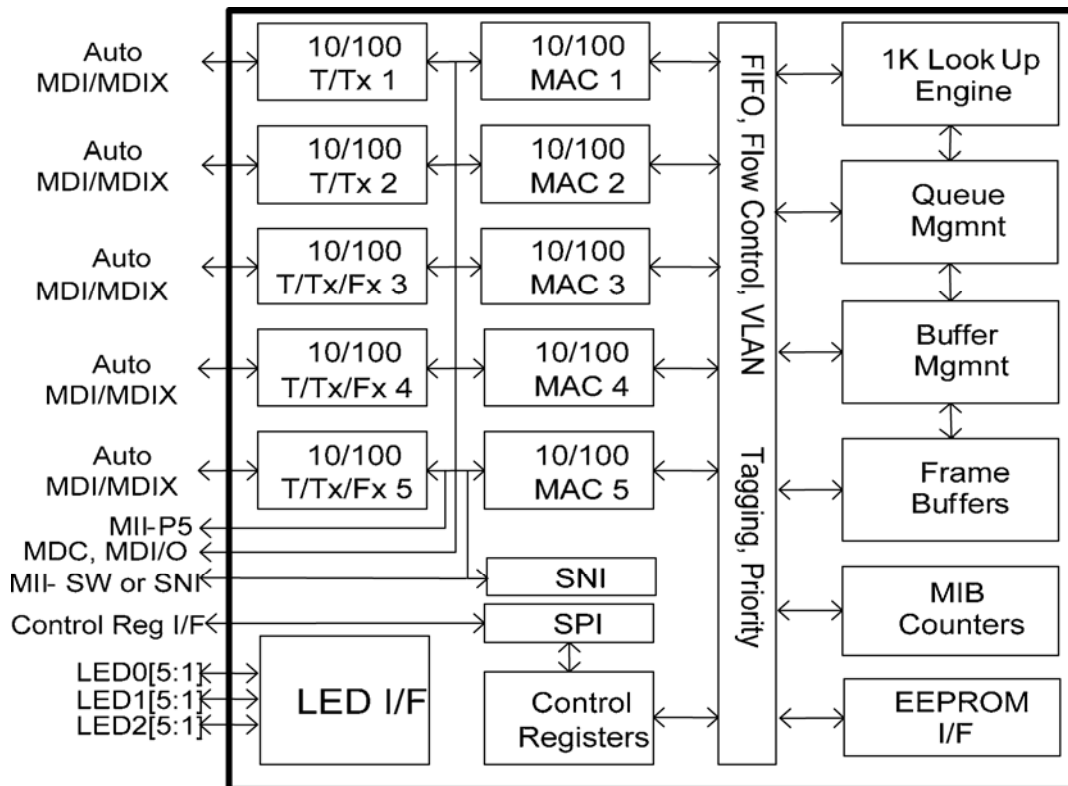
Integrated 5-Port 10/100 Managed Switch

Description

The KS8995FQ is a highly integrated Layer 2 managed switch with optimized bill of materials (BOM) cost for low port count, cost-sensitive 10/100Mbps switch systems. It also provides an extensive feature set such as tag/port-based VLAN, quality of service (QoS) priority, management, MIB counters, dual MII interfaces and CPU control/data interfaces to effectively address both current and emerging fast Ethernet applications.

The KZS8995FQ contains five 10/100 transceivers with patented mixed-signal low-power technology, five media access control (MAC) units, a high-speed non-blocking switch fabric, a dedicated address lookup engine, and an on-chip frame buffer memory. KSZ8995FQ supports 10BASE-T and 100 BASE-TX on port 1, 2, and 5 and 100BASE-FX on port 3, 4.

Block Diagram



Features

- Integrated switch with five MACs and five fast Ethernet transceivers fully compliant to IEEE 802.3u standard
- Shared memory based switch fabric with fully non blocking configuration
- 1.4Gbps high-performance memory
- 10BASE-T, 100BASE-TX, and 100BASE-FX modes on port 3 and port 4
- Dual MII configuration:
- IEEE 802.1q tag-based VLAN (16 VLANs, full-range VID)
- VLAN ID tag/untag options, per-port basis
- Programmable rate limiting 0Mbps to 100Mbps in 32Kbps increments
- Integrated 34 MIB counters per port
- Enable/Disable up to 1916 bytes frame
- IGMP v1/v2 snooping for multicast packet
- Special tagging mode to send CPU info on Ingress packet's port value
- Register control of SPI slave and MDIO
- CPU access to MAC table entries
- 802.1d Spanning Tree Protocol
- Port mirroring/monitoring/sniffing
- Broadcast storm protection
- Fiber-to-copper media conversion

- QoS/CoS packets prioritization supports
- 802.1p/q tag insertion or removal
- Register control of MDC and MDI/O
- MII local loopback support
- On-chip 64Kbyte memory for buffering
- Wire-speed reception and transmission
- 1K MAC addresses look-up engine
- Full duplex IEEE 802.3x and half-duplex
- Automatic MDI/MDI-X crossover
- Commercial temperature: 0°C to +70°C
- Industrial temperature: -40°C to +85°C
- ESD 2kV
- Available in 128-pin PQFP package

Applications

- Broadband gateway/firewall/VPN
- Integrated DSL or cable modem multi-port router
- Wireless LAN access point plus gateway
- Home networking expansion
- Standalone 10/100 switch
- Hotel/campus/MxU gateway
- Enterprise VoIP gateway/phone
- FTTx customer premise equipment
- Managed Media converters

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