

Ethernet® SwitchKit™ Product Brief

Features

- From two to thirty-two Ethernet ports.
- Support for standard (10/100/1000) and non-standard Ethernet data rates.
- Supports both cut-through, and store and forward packet forwarding with extremely low cut-through forwarding latency.
- Port mapping table supports up to 8K MAC addresses
- Multicast rate limiting support.
- Flexible buffer memory interface supporting a wide range of on-chip and off-chip memory technologies.
- Port aggregation support for trunking and load balancing applications, with user definable distribution functions.
- Support for EDAC on all memory structures.
- Extensive diagnostic, and fault recovery capabilities.
- Flexible management interface supports both on-chip and off-chip management processors.
- Linux based management firmware.

Description

The switch provides low-latency, wire-speed connectivity between Ethernet ports. The Switch Management Block handles maintenance transaction accesses to internal registers, as well as generating event notification messages. Figure 1 illustrates the overall architecture of the switch.

Supported Standards

IEEE 802.3 Ethernet
 IEEE 802.3x Flow Control
 IEEE 802.3ad Link Aggregation
 IEEE 802.1D MAC Bridging
 IEEE 802.1Q VLAN Tagging
 IEEE 802.1p Traffic Prioritization
 IEEE 802.1s Multiple Spanning Tree
 IEEE 802.1v Protocol VLAN & Port VLAN
 IEEE 802.1w Rapid Spanning Tree
 IEEE 802.1x Port Access Authentication

Figure 1 Ethernet Switch Block Diagram

