

Marvell Prestera CX 8248/8234

High-Density 10GbE/40GbE Switches for Next-Generation Datacenters



PRODUCT OVERVIEW

The Marvell® Prestera® CX product line provides high-density multilayer 10 Gigabit (GbE)- and 40 GbE-enabled Ethernet switches. These highly integrated, line-rate packet processors are specifically built for the new generation of high performance datacenters with converged Ethernet network. They support the latest IEEE standard for congestion management and priority flow control, as well as cut-through for low latency operations. The Prestera CX switches also provide comprehensive support for FibreChannel over Ethernet for converged storage and data networks. They can be used for service provider carrier Ethernet with built-in support for IETF VRF, IEEE 802.1ad, 802.1ag and extensive OAM.

The flexible policy control and Ethernet tunneling features enable applying network policy for virtual machines and layer 2 roaming. Sophisticated routing and tunneling features allow dual-stack coexistence for smooth and efficient migration from IPv4- to IPv6-based networks. Advanced ingress and egress traffic policers with support for metering, counting, statistics, scheduling and shaping help optimize Quality of Service (QoS) for converged data, voice and video traffic. The Prestera CX switches also support sFlow®, IPFIX and remote port analysis for network traffic monitoring and management.

BLOCK DIAGRAM

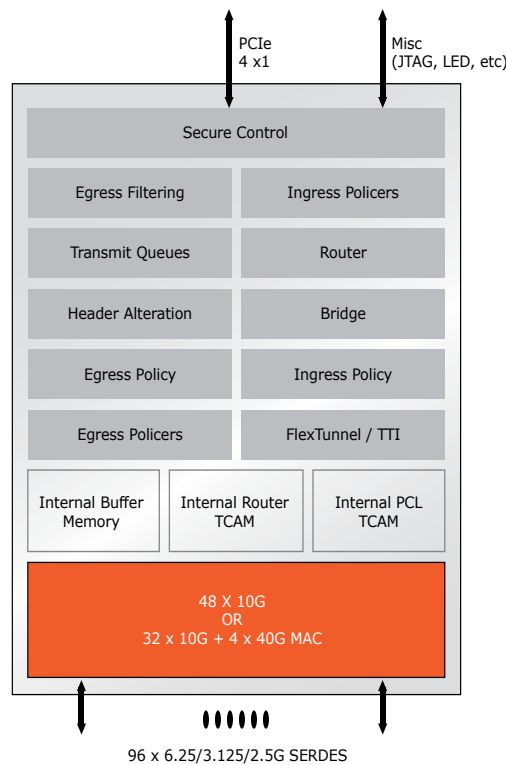


Fig 1. Marvell Prestera CX 8248/8234

FEATURES

- High density 10GbE and 40GbE ports
- Congestion management and priority flow control

BENEFITS

- Drive higher bandwidth to the edge for next-generation optical broadband networks
 - Up to 48 ports of 10GbE with 98CX8248
 - Up to 4 ports of 40GbE uplinks with 98CX8234
- Isolation
 - Provides lossless performance for critical applications such as storage
 - Provides network congestion and improved performance for lossy traffic

▶ FEATURES (continued)	BENEFITS
<ul style="list-style-type: none"> • FibreChannel over Ethernet 	<ul style="list-style-type: none"> • Enables converged storage and internet traffic on unified Ethernet infrastructure
<ul style="list-style-type: none"> • Virtual machine policy 	<ul style="list-style-type: none"> • Identification of virtual machines and services across datacenter network – Enables application/service delivery with associated SLA
<ul style="list-style-type: none"> • Ethernet in GRE tunneling 	<ul style="list-style-type: none"> • Enables scaling of a flat Layer 2 topology and virtual machine roaming
<ul style="list-style-type: none"> • Cut-through and low latency 	<ul style="list-style-type: none"> • Reduces network latency and provides unified low latency across all packet sizes
<ul style="list-style-type: none"> • Turnkey software solution 	<ul style="list-style-type: none"> • Enabling fast time-to-market with field-proven Marvell software solution

▶ **APPLICATIONS**

The Prestera CX product line delivers optimal switching solutions for a broad range of applications in the datacenter and in service provider environments. These switches enable standalone or stackable L2-L4 switching systems and converged Ethernet datacenters, as well as broadband aggregation systems such as EPON/GPON OLT. They also provides an ideal solution for embedded switched backplane applications for ATCA and blade servers.

To shorten system manufacturer design cycles and accelerate time-to-market, Marvell provides complete Prestera CX development platforms and reference designs with device drivers, schematics, layout files and other documentation. Software and hardware solutions based on the Prestera CX platform are available from third-party vendors.



Fig 2. RD-CX-48XG - Prestera CX 48 port 10GbE (SFP+) Reference Design

THE MARVELL ADVANTAGE: Marvell chipsets come with complete reference designs which include board layout designs, software, manufacturing diagnostic tools, documentation, and other items to assist customers with product evaluation and production. Marvell’s worldwide field application engineers collaborate closely with end customers to develop and deliver new leading-edge products for quick time-to-market. Marvell utilizes world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low-cost total solutions.

ABOUT MARVELL: Marvell is a leader in storage, communications, and consumer silicon solutions. Marvell’s diverse product portfolio includes switching, transceiver, communications controller, processor, wireless, power management, and storage solutions that power the entire communications infrastructure, including enterprise, metro, home, storage, and digital entertainment solutions. For more information, visit our Web site at www.marvell.com.



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