Marvell Prestera® 98PX1012 Port Extender

Purpose-Built IEEE 802.1BR Port Extender

PRODUCT OVERVIEW

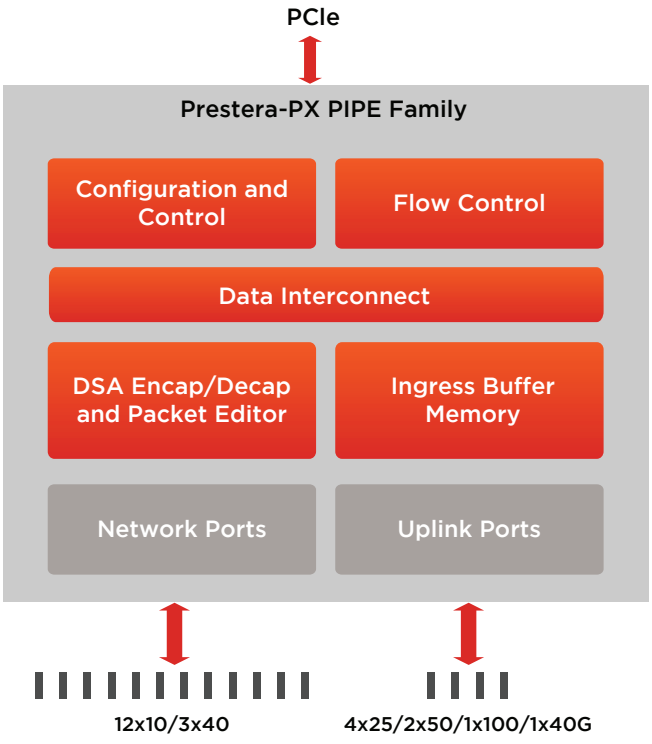
The Marvell® Prestera® 98PX1012 Passive Intelligent Port Extender (PIPE) family is the first generation of dedicated port extender devices for 10GbE and 25GbE networks. These devices enable dramatic reduction of power consumption, complexity and cost for the first level of Ethernet connectivity in the Data Center.

The PIPE family targets the following networking applications:

- 10GbE aggregation: 10GbE fanout from 100GbE uplinks. For server, FPGA, SoC connectivity
- Optimized passive Top of Rack for 10G/40G servers
- Uplink support to enable campus and data center networking transition from 10/40GbE to 25/50/100GbE port speeds

PIPE devices support standard port extender protocols such as IEEE 802.1BR. A programmable header engine supports proprietary and future protocols, such as DSA and other forwarding tags.

BLOCK DIAGRAM



Port Configuration: 12x10G + 4x25G or 2x50G or 1x100G

KEY FEATURES AND BENEFITS

FEATURES	BENEFITS
Port Externder Protocol	• The device supports industry standard port extender protocols IEEE 802.1BR • Simplifies the central management of hundreds of thousands of ports in the data center
High Integration	• Line rate programmable forwarding engine • Low-latency pipeline • Shared packet buffer memory • High-speed SERDES
Packet Header editor	• A programmable header engine supports proprietary and future protocols making it interoperable with a variety of networking gear
Resiliency	• Marvell's PIPE solution integrates fast-fail-over and resiliency functionality, providing continuity and high availability to mission-critical applications
SERDES	• Rx and Tx/Rx training capability per SERDES lane • FC-FEC or RS-FEC for 25/50/100GbE ports • IEEE 802.3ba Backplane Ethernet support
Typical Port Configuration	• 12x10G + 1x100G • 12x10G + 4x25G • 3x40G + 1x100G
Package	• 17x17mm FCBGA

TARGET APPLICATIONS

- 100GbE Upgrade for SoC and FPGAs
- 10GbE/ 40GbE Passive ToR for the data center
- 10GbE ports fan-out
- Speed conversion from 10GbE/40GbE to 25GbE/50GbE/100GbE

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.

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