Marvell® Prestera® 98DX25xx Ethernet Switches Series

A Family of 1/2.5/5/10G Ethernet Switches for Enterprise/SMB Access and Edge

Overview

Marvell® Prestera® 98DX25xx series is an upgrade of the Marvell Prestera 98DX33xx/32xx/22xx/23xx family with enlarged table scales, enhanced multilayer feature set, security improvement, and higher performance/interfaces in CPU subsystem. The switches support 1/2.5GbE network access ports and 10GbE uplinks and stacking.

The 98DX25xx family enables RBOM optimized designs with single clock input and unified power rails. Switches with advanced process node deliver compact and low power products. Marvell's Prestera Control and Management Subsystem with advanced interfaces and integrated multi-core Arm Cortex CPU cores provides application offload and direct access to the switch pipeline, allowing applications to take full advantage of hardware features.
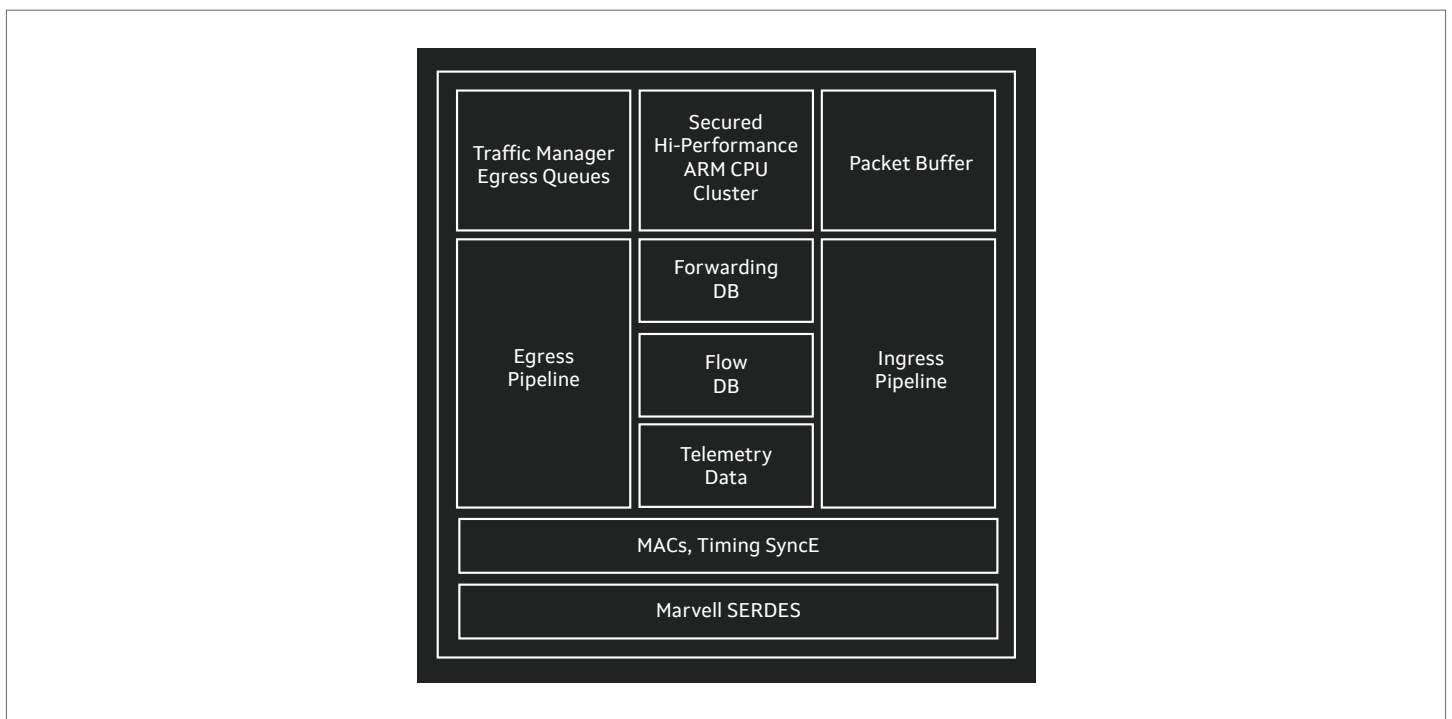
Designed to deliver full capabilities of network visibility, actionable analytics and troubleshooting, the 98DX25xx family provides entry level cloud edge telemetry functionalities.

SecureIQ is integrated and includes secure boot and delivers secured storage network-embedded trustworthiness, essential for protection of the network hardware and software from ever-evolving security threats.

The 98DX25xx family is an ideal solution for cost sensitive Enterprise and SMB access, as well as cloud edge access. 98DX25xx switches can be designed with external CPU/controller for SD-WAN, branch office gateway, security firewall and other embedded applications.

Built on the proven scalable Prestera end-to-end architecture and unified software development kit (SDK), the 98DX25xx family supports a variety of software packages for different applications – unmanaged, cloud managed and full L2/L3 managed systems.
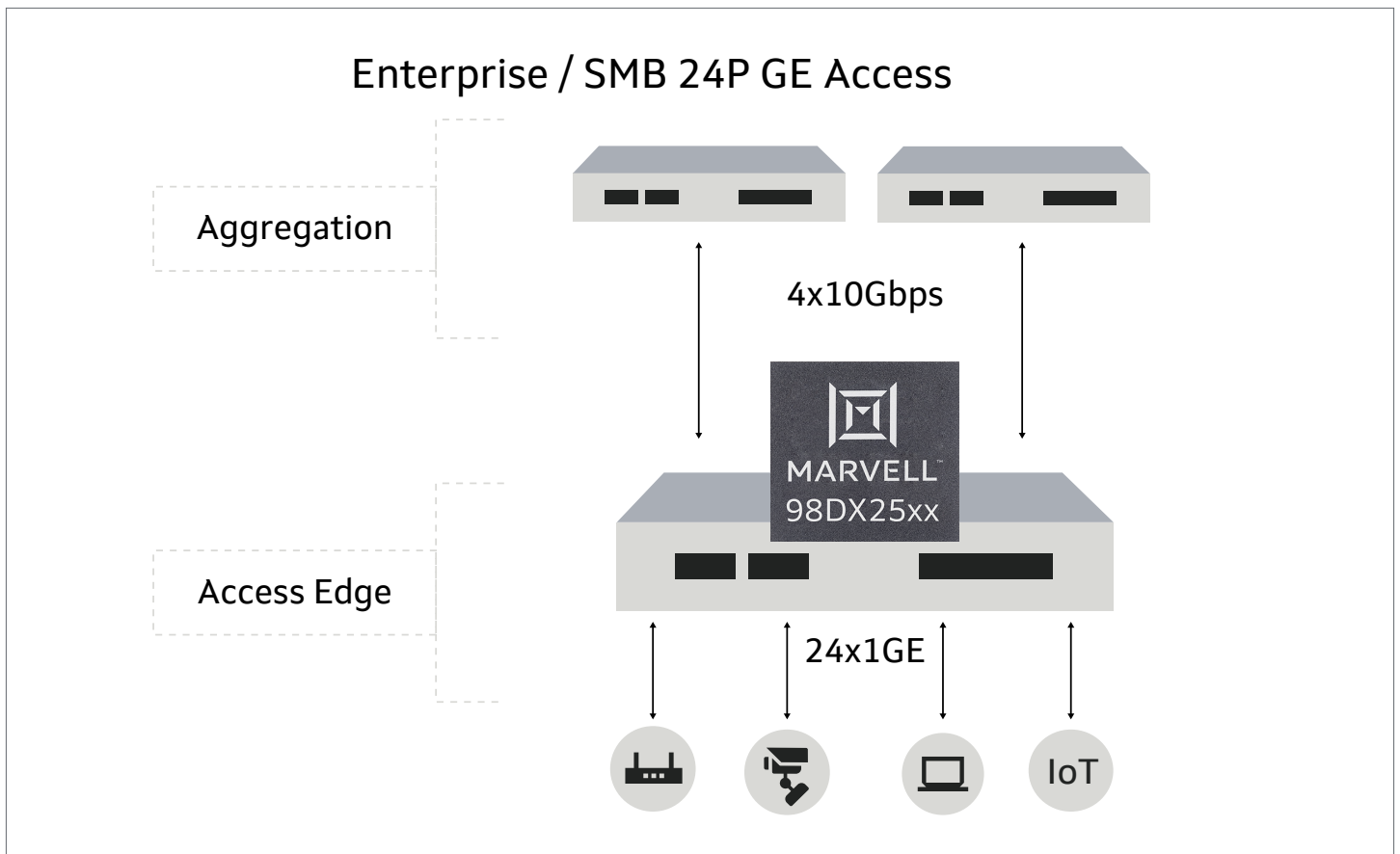
Block Diagram

Key Features

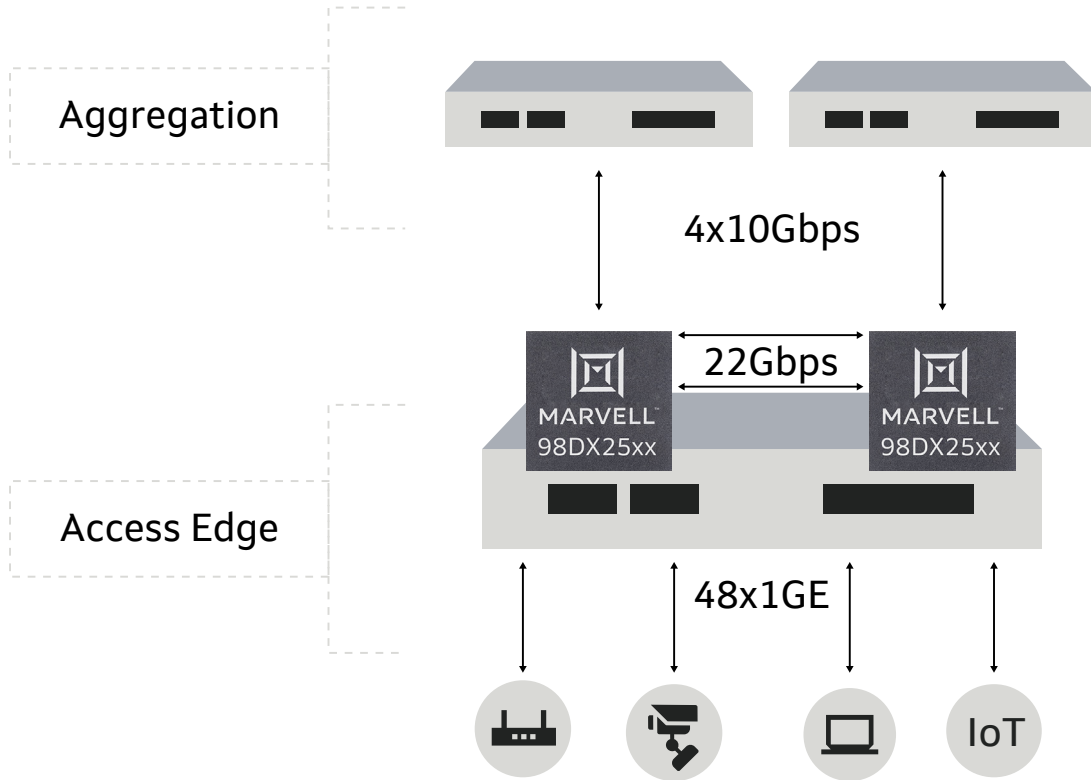| Features	Benefits
Unified feature-rich Prestera architecture	• Feature-rich Enterprise access pipeline • Easy migration from previous generation access device with unified SDK
High-performance Control and Management Subsystem with integrated Arm Cortex CPU cores and advanced management interfaces	• Powerful Arm dual-core host CPU for cloud edge applications • Multiple Arm co-processors to offload real-time applications from host CPU • High-capacity DDR3/DDR4
Multi-Rate 1G/2.5G/5G/10G/22G ports QSGMII Switch-PHY interface, conveying multiple 10M/100M/1G Ethernet ports over a single SerDes lane	• 10G uplinks and stacking • Easy PCB routing with single lane QSGMII serdes, QSGMII can also work as 2.5G to provide multi-rate access solution
Optimized RBOM Power saving	• Single clock and optimized power rails dispatch for significant RBOM saving • Advanced process node to achieve more than 20% power saving comparing to previous generation

SecureIQ multilayer network-embedded advanced security
  - Secure boot and secured storage
  - Secure Control Technology (SCT) and Network Shield Technology (NST)
	• Providing zero-trust access integrated security
	• Trustworthy mechanisms deliver hardware and network software immunity
	• Reactive control and management plane security and DDOS protection

Entry Level Cloud Edge Telemetry	• Full capability of network visibility, actionable analytics and troubleshooting

Target Applications

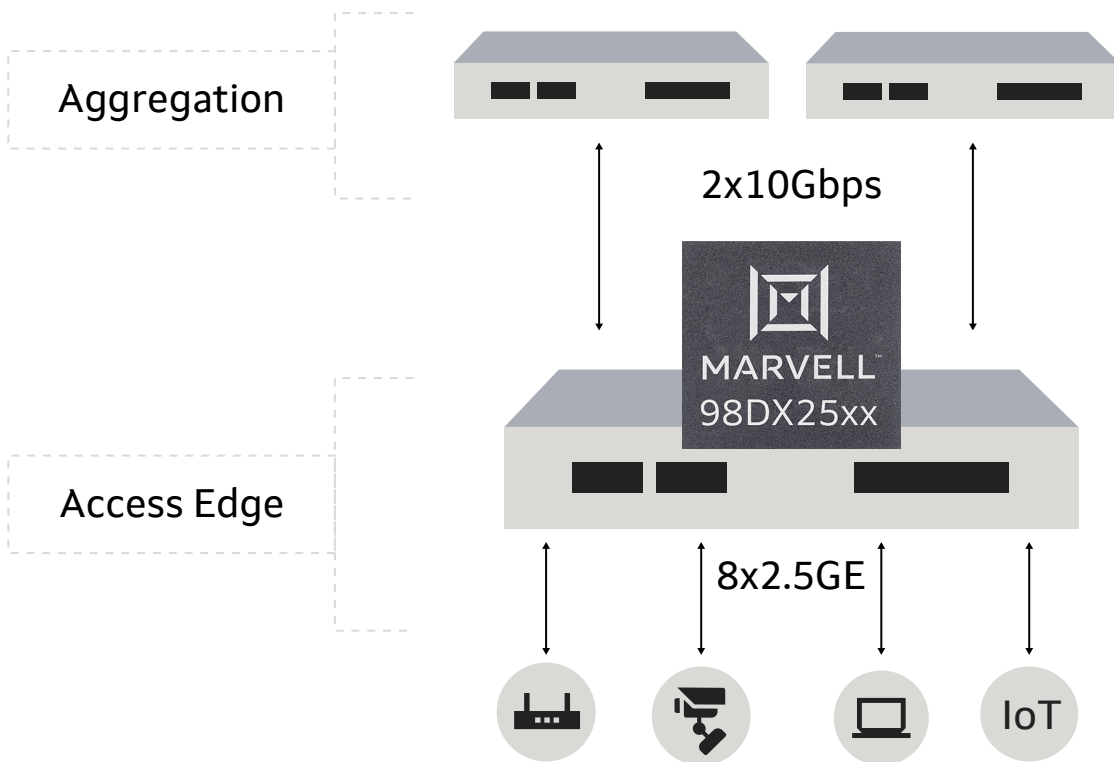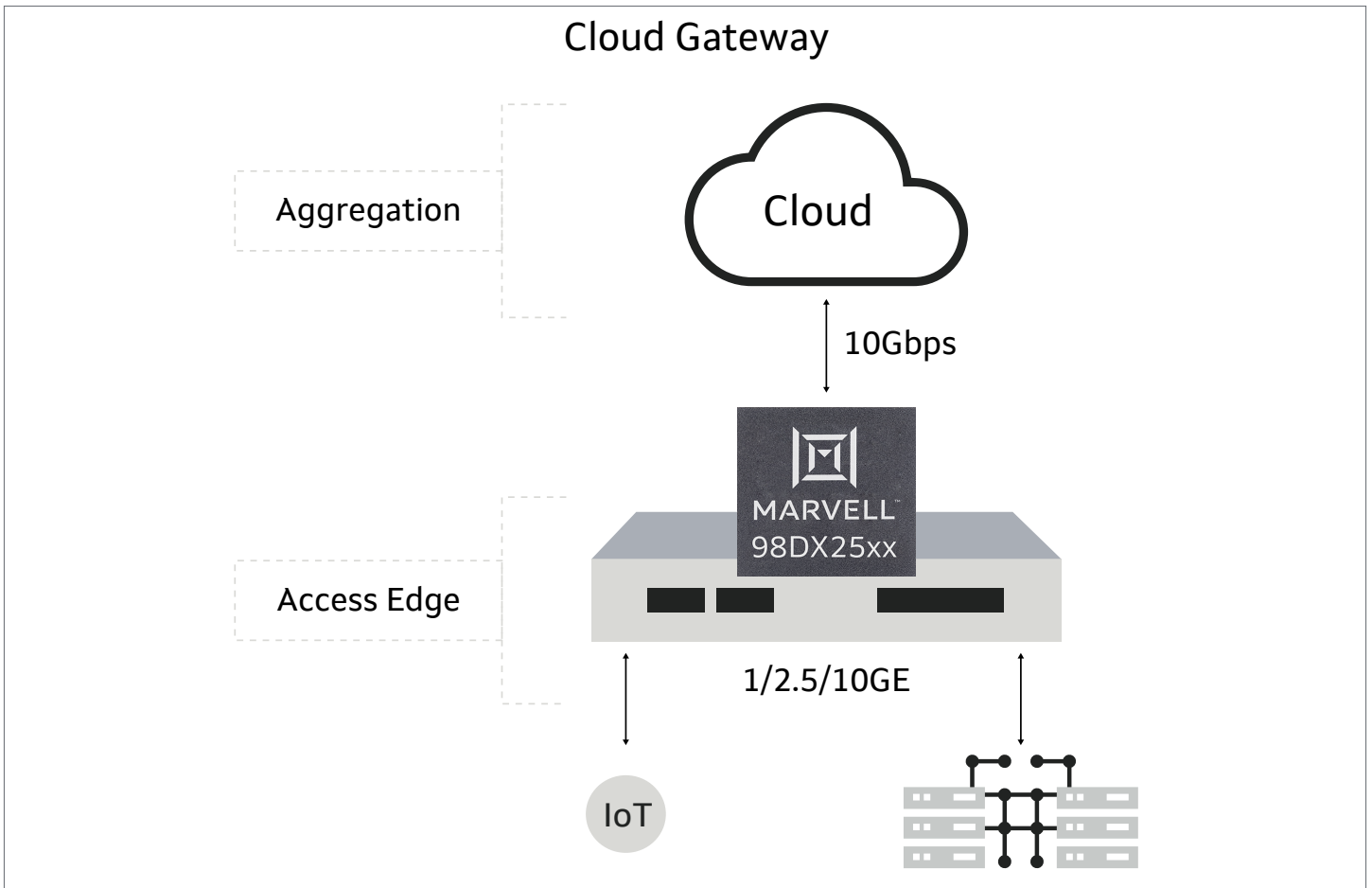**Enterprise:** Access Switch, Access Chassis Line Card Switch, Embedded Systems designs

SMB: Access Switch

Enterprise / SMB 24P GE Access

Aggregation

4x10Gbps

MARVELL™
98DX25xx

Access Edge

24x1GE

IoT

Enterprise / SMB 48P GE Access

Aggregation

4x10Gbps

22Gbps

MARVELL
98DX25xx

MARVELL
98DX25xx

Access Edge

48x1GE

IoT

Enterprise / SMB 8P 2.5G multi-speed Access

Aggregation

2x10Gbps

MARVELL
98DX25xx

Access Edge

8x2.5GE

IoT

Cloud Gateway

Ordering Information

Part Number	Description
98DX2538	24x1GbE Downlink Ports with 4x1/2.5/5/10GbE Uplinks and Stacking Ports, Dual Core CPU
98DX2535	24x1GbE Downlink Ports with 4x1/2.5/5GbE Uplinks and Stacking Ports, Dual Core CPU
98DX2532	8x1GbE Downlink Ports with 2x1/2.5/5GbE+2x1/2.5/5/10GbE Uplinks and Stacking Ports, Dual Core CPU
98DX2531	8x1GbE Downlink Ports with 4x1/2.5/5GbE Uplinks and Stacking Ports, Dual Core CPU

Note: For more information and complete part numbers list, contact Marvell Sales.