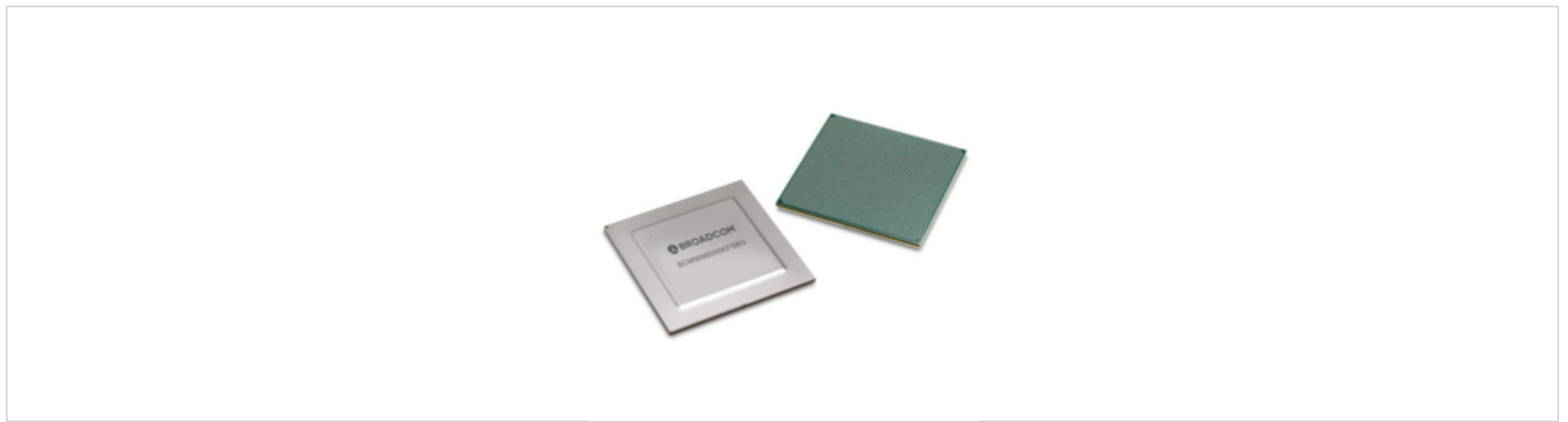# BCM56880

CONTACT SALES

High-Capacity StrataXGS® Trident 4 Ethernet Switch Series

Currently Viewing:

Overview ▼

Overview

The StrataXGS® Trident 4 series is a family of Ethernet switches designed to address performance, capacity, and service requirements for next-generation data center and cloud computing environments as well as high-bandwidth enterprise and mobile network applications. The Trident 4 architecture delivers complete, user-programmable forwarding and instrumentation capabilities at a very high port density, while maintaining minimum power, latency and board footprint.

Trident 4 has extensive features to address the rapidly increasing scale of data center network deployments and distributed computing applications. These features include flexible in-band and streaming telemetry, large scale forwarding databases with flexible allocations to allow tailoring to the required application, and support for the latest in datacenter protocols.
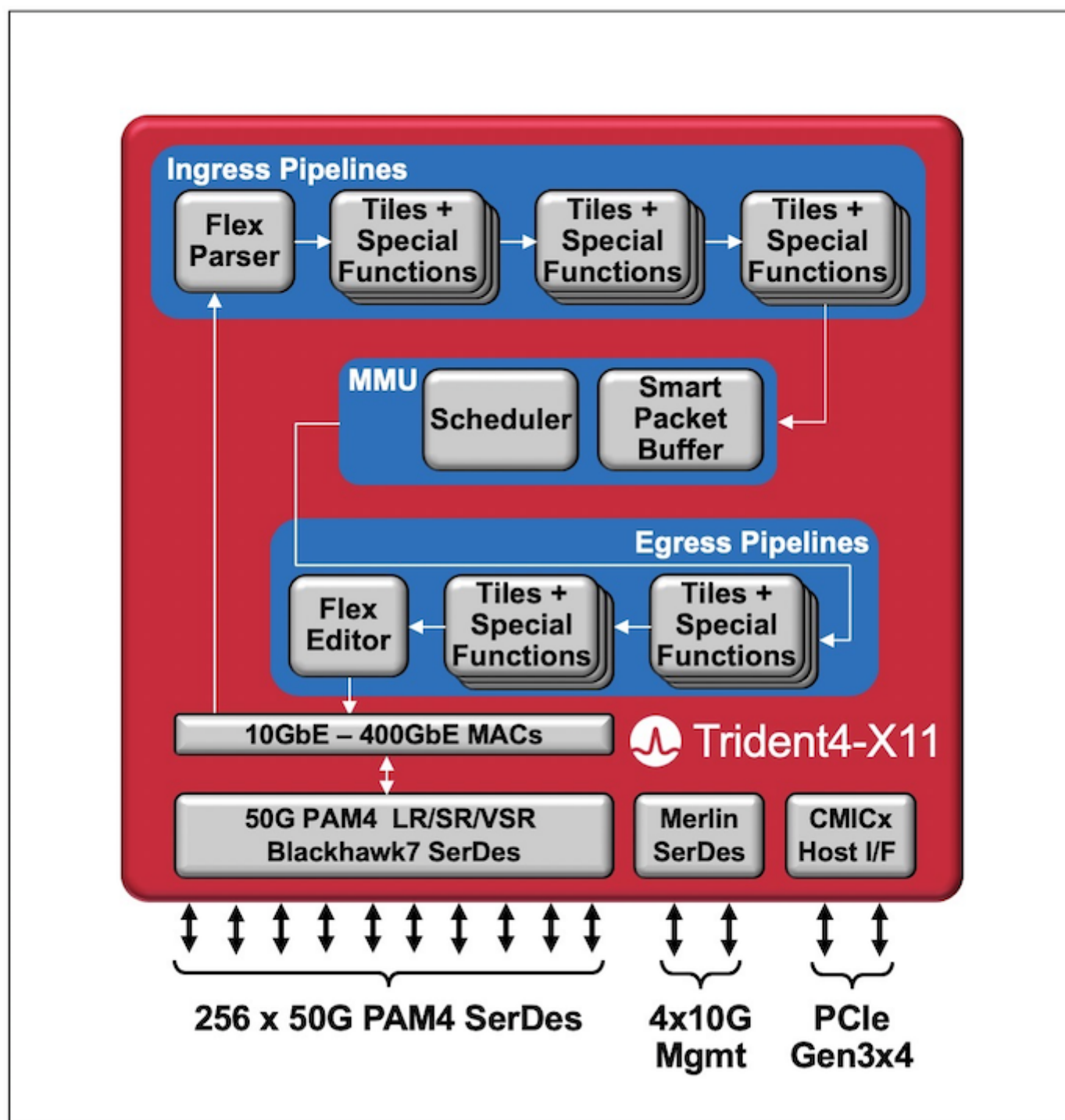
To enable high network utilization, Trident 4 features a wide variety of load balancing and congestion management technologies including Dynamic Load Balancing, Dynamic Group Multipathing, Resilient Hashing, Latency-Based ECN marking, and Elephant Flow detection/re-prioritization.

Trident 4 is programmed using the NPL high-level language. For more information on NPL, please visit https://nplang.org/.

Features

Key attributes and benefits of the new StrataXGS Trident 4 series include:

- Enables the next major advancement in enterprise data center and campus networks, supporting up to 128x100GbE or 32x400GbE switching and routing with a compiler-programmable architecture
- Provides the flexibility to implement both standard Ethernet switch/routing and advanced network functionality such as DDoS protection, application load balancing, and large-scale NAT
- An extremely rich, enterprise-grade feature set with a high degree of feature concurrency
- Industry-leading packet buffer and database sizes
- Extensive programmable in-band telemetry including support for IFA 2.0 (In-band Flow Analyzer version 2)
- Four GHz-class processors on chip enabling powerful out-of-band (streaming) telemetry and a variety of Broadcom-provided embedded applications
- A wide variety of load balancing and congestion management features including Dynamic Load Balancing, Dynamic Group Multipathing, Resilient Hashing, Latency-Based ECN marking, and Elephant Flow detection and re-prioritization
- Architecture scalability for bandwidth requirements throughout the enterprise network: SKUs available at 2.0T to 12.8T, all supported with the same NOS and hardware code base
- Broadview™ Gen 4 integrated network instrumentation feature set and software suite, providing full visibility to network operators into packet flow behavior, traffic management state, and switch internal performance
- Robust connectivity using up to 256 instances of the industry's best performing, longest-reach 50G PAM-4 integrated SerDes core, enabling a wide variety of optical and direct attached copper (DAC) links
- Industry's first switch chip implemented all in 7nm process technology

Applications

- Datacenter programmable ToR (Top-of-Rack)
- Datacenter leaf/spine
- Core aggregation
- Switch blade in a server chassis
- Line card and fabric in a switch chassis
- Border/Data Center Interconnect (DCI)
- Gateway
- DDoS protection
- Application Load Balancing
- Large Scale NAT

Lifecycle Status

Active

Specifications

Specification	Value
Lifecycle	Active
Distrib. Inventory	No
Fabric	NA

PREVIOUSLY VIEWED

BCM56870 SERIES

High-Capacity StrataXGS® Trident 3 Ethernet Switch Series

BCM53570

1G/2.5G/10G/25G TSN Connectivity Switch

FASTPATH

FASTPATH® Networking Software