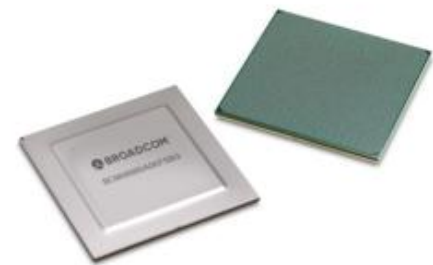# BCM56980 SERIES
## 12.8 Tbps StrataXGS® Tomahawk® 3 Ethernet Switch Series

## OVERVIEW



The Hyperscale Cloud continues to drive up data center scale and bandwidth. The next wave of Hyperscale buildout necessitates 400GbE and 200GbE data center fabrics in order to avoid costly fiber plant topology changes and to support newly emerging workloads such as Deep Learning and NVMe Storage Disaggregation. Tomahawk 3 introduces 56G-PAM4 SerDes to the industry-leading Tomahawk line, supporting up to 12.8 Tbps of switch chip bandwidth along with the new 400GbE and 200GbE IEEE standards.

With support for up to 32 ports of 400GbE, the StrataXGS Tomahawk 3 switch series can be used to build highly scalable Top-of-Rack, Aggregation and Spine switches. Instrumentation is the key to managing the massive scale and bandwidth of the upcoming hyperscale cloud data centers. Tomahawk 3 introduces Broadview™ Gen3, which includes the latest cloud-scale instrumentation and telemetry features, such as inband telemetry, latency distribution histograms and more.

---

**Features**

- Provides 256 integrated SerDes with 56G-PAM4, supporting 200GbE and 400GbE
- Up to 32x400GbE, 64x200GbE or 128x100GbE ports

- New instrumentation features such as inband telemetry, latency histograms, switch ultization monitors and more
- New Elephant Flow feature can detect high-bandwidth, long-lived flows and take QoS actions to protect Mice Flows
- More than doubles the IP route forwarding scale compared to previous Tomahawk devices
- Dynamic Load Balancing and Dynamic Group Multipathing enhance ECMP
- New shared-buffer architecture offers 4X higher burst absorption and improved performance for ROCEv2 workloads
- PCIe Gen3 x4 host CPU interface with on-chip accelerators improves control-plane performance by up to 5X
- Compatibility with previous generation Tomahawk and Tomahawk 2 devices

## Applications

- Single-chip solution for data center Top-of-Rack, Aggregation and Spine Switches
- Data center Fixed and Chassis/Modular switches
- Deep Learning networks
- NVMe Storage Disaggregation

## Lifecycle Status

Active

# SPECIFICATIONS

| Specification | Value |
| --- | --- |
| Lifecycle | Active |
| Distrib. Inventory | No |

# DOCUMENTATION