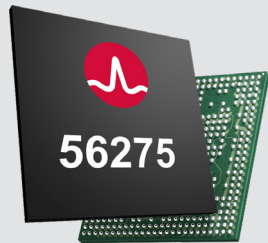**BROADCOM**®

Product Brief

BCM56275
244 Gb/s Programmable Multilayer Switch

56275

Key Features

- Fully integrated PHY for 24P GbE solution
- Multigigabit interfaces for IEEE 802.11ac and IEEE 802.11ax AP connectivity
- 25GbE/40GbE uplinks
- BroadScan2.0 flow-analytics engine
- FleXGS™ programmable pipeline
- Integrated MACsec engine for uplinks or downlinks
- Wired and wireless traffic separation
- Integrated Arm Cortex-A72 processor
- Backwards compatible with BCM5615X- and BCM5616X-based platforms

Overview

The Broadcom® BCM56275 is a stackable 48-port intelligent Ethernet switch with native VxLAN support, programmable pipeline, and advanced flow analytics engine. The BCM56275 addresses the need for security, bandwidth, and network intelligence at the edge of modern campus networks while delivering higher bandwidth for the front panels and uplinks needed for the new generation of IEEE 802.11ac and IEEE 802.11ax Wi-Fi access points.

The onset of enterprise Internet of Things devices opens up vulnerabilities to endpoints such as Smart LEDS driven by Power over Ethernet (PoE), security cameras, and others. It is therefore crucial to protect the integrity of the network. The BCM56275 device's integrated MACsec helps secure these endpoints and prevent intrusion. The BCM56275 ushers in a new era of advanced telemetry with BroadScan 2.0 that enables proactive network issue avoidance, as opposed to the traditional reactive resolution, and also stimulates customer software innovation in the field of malware threat detection and policy enforcement.

The BCM56275 is part of the end-to-end common Trident 3 (TD3) architecture that scales from wiring closet units to campus-cores, bringing feature and software programming consistency that translates into reduced development costs and quick time-to-market.

Figure 1: BCM56275 Block Diagram

Stackable Multigigabit Enterprise Access Switch
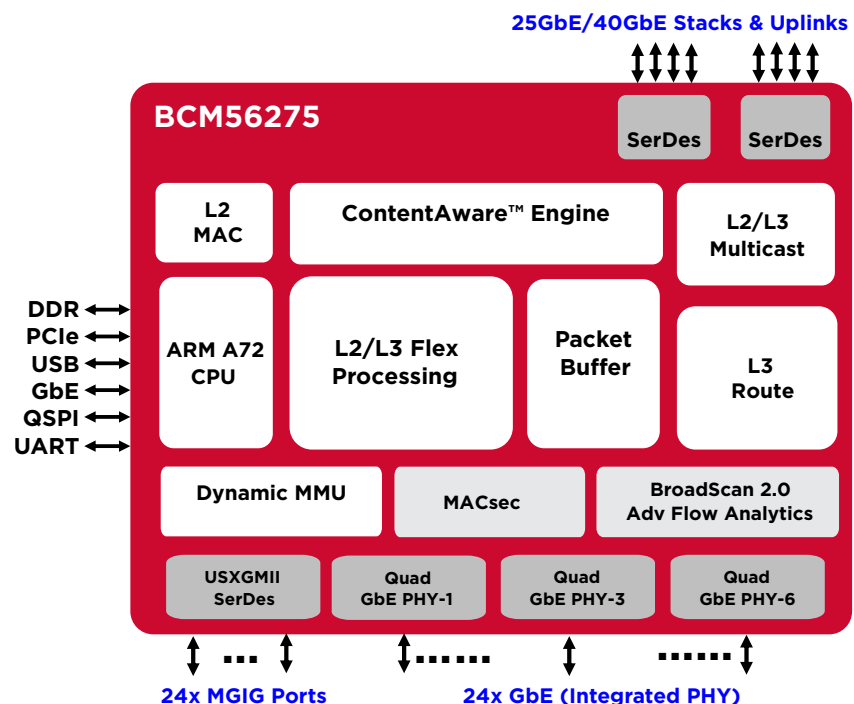
Benefits

- Fully integrated solution for 24P GbE solutions (external Flash and DDR).

- The TD3-x architecture feature set ensures uniform behavior and consistency across the entire enterprise network. It also protects the customer's capital investment with an in-field programmable pipeline.

- Multigigabit-capable front-panel ports suited for the latest Wi-Fi technologies, such as IEEE 802.11ac, IEEE 802.11ad, and IEEE 802.11ax with 25GbE uplinks.

- Hardware-based BroadScan 2.0 flow-analytics engine is built on BroadScan 1.0 that provided fine grained monitoring and policy enforcement. BroadScan 2.0 adds node and network level latency, jitter and performance monitoring on a per-flow basis. BroadScan 2.0 also tracks buffers on a per-flow basis enabling correlation with performance measurements.

- Integrated MACsec encryption engine supports flexible allocation of ports to encrypt/decrypt.

- Integrated Arm Cortex-A72 subsystem significantly saves customer platform development time and costs.

Figure 2: BCM56275 Typical Deployment Scenario
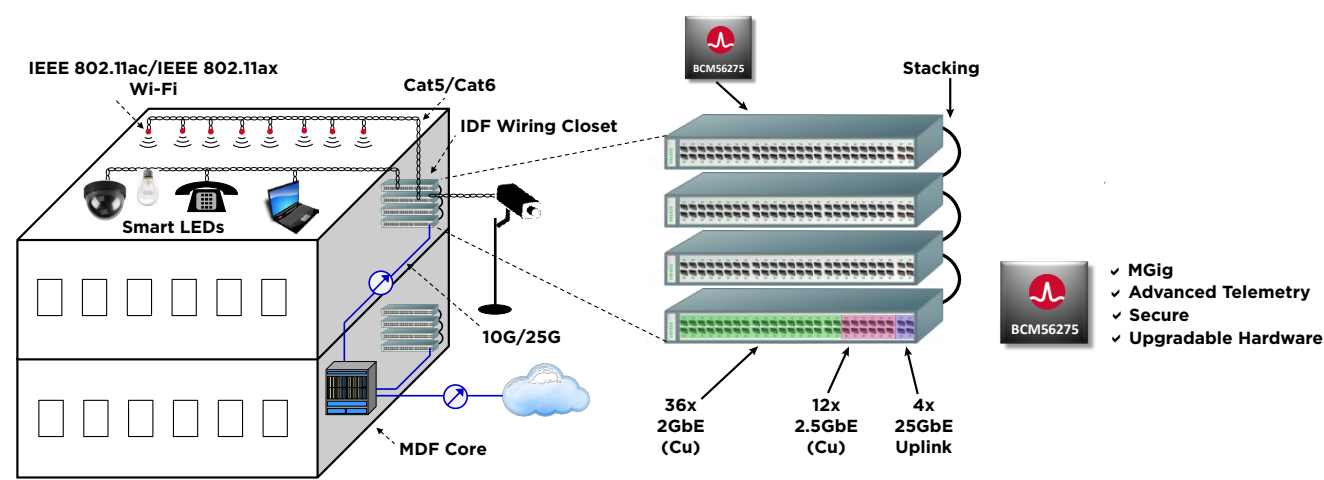
Ordering Information		
Part Number	**Description**	**BroadScan**
BCM56273	24 GbE Downlink Ports	Yes
BCM56274	48 GbE Downlink Ports	Yes
BCM56275	24P Multigigabit-Lite Ethernet Downlink Ports	Yes
BCM56276	24 GbE Downlink Ports	No
BCM56277	48 GbE Downlink Ports	No
BCM56278	24P Multigigabit-Lite Ethernet Downlink Ports	No