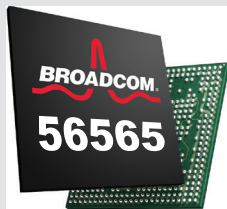


BCM56565

600 Gb/s Multilayer Switch



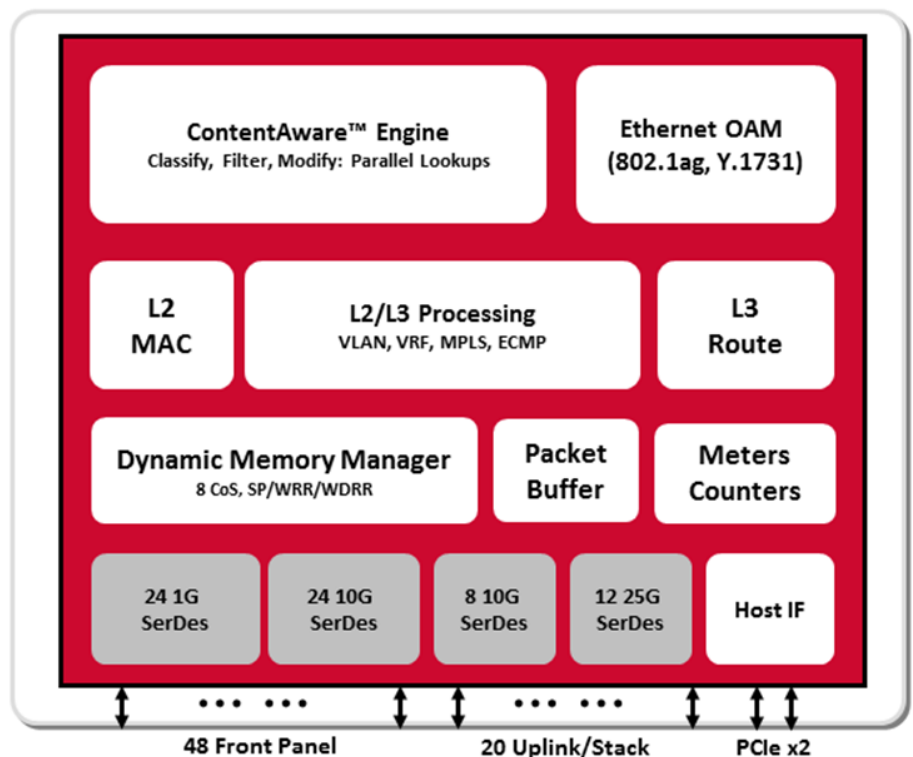
Key Features

- Native 25G and 100G support
- High performance QSFP-28 stacking
- Cloud-managed enterprise ready
- SmartNV: Infrastructure virtualization using network overlay technologies, such as VXLAN
- Flexible unified forwarding table
- Stacking/clustering through standard Ethernet for maximum investment protection
- Unified forwarding table for L2 vs. L3 scaling
- Ethernet OAM (802.1ag, Y.1731)
- IEEE 802.1BR E-Tag Port Extender support
- SmartBuffer: Ensures dynamic memory allocation and optimal performance levels

Overview

The Broadcom® BCM56565 is a purpose built device for access and aggregation deployment in the enterprise network which is experiencing unprecedented bandwidth growth driven by innovation in wireless access technology. BCM56565 provides nonblocking solutions for the new enterprise fixed/stackable market. The entire BCM56565 family offers complete flexibility with its high density on 1GbE, 2.5GbE, 5GbE, and 10GbE front panel ports. The BCM56565's native support for 25G and 100G on uplink and stacking ports is well suited for next generation enterprise switches as the industry transitions to these faster interfaces with the cost of 25G optics driven down by the data center market. Built on the field proven StrataXGS® architecture, the BCM56565 offers new features like VXLAN- based virtualization, IEEE 802.1BR port extender, and complete Y.1731 Ethernet OAM. The new features of the BCM56565 coupled with Broadcom's OFDPA software API provides a standard interface for external management, facilitating adoption of cloud-managed Enterprise services that will allow enterprise customers to reduce OPEX and increase service velocity.

Figure 1: BCM56565



Features

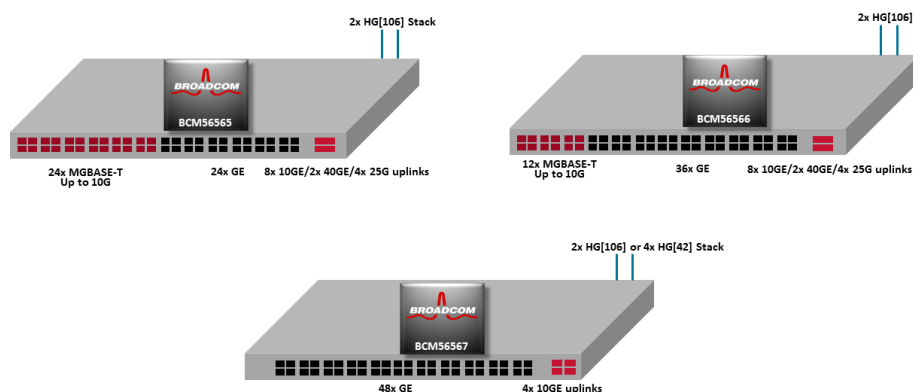
- Standards-based 100GbE, 40GbE, 25GbE, and 10GbE support.
- Single pass route into and out of VXLAN tunnels.
- Integrated SmartBuffer supports lossless performance guarantees and high burst absorption using innovative traffic load awareness and dynamic allocation schemes.
- ContentAware™ Engine for scalable, high-density ingress and egress packet classification.

- Supports Energy Efficient Ethernet including customizable, low-power idle (LPI) control policies.
- Advanced SmartHash engine for optimal and resilient load distribution across HiGig™, LAG, and ECMP trunk groups.
- IEEE 802.1BR Port Extender/Controlling Bridge.
- Ethernet OAM (802.1ag and Y.1731).

Benefits

- 25G technology for faster, low-cost stacking and uplinks.
- VXLAN virtualization for Wi-Fi mobility.
- Smart Buffer technology for excellent burst absorption.
- Power saving with Energy Efficient Ethernet.
- Dedicated meters and counters for effective performance monitoring.
- Unified Forwarding Table that allows resource “sharing and support” for increased route capacity using algorithmic LPM (ALPM).
- Fast time to market and reduced development complexity with common software API that maximizes software reuse.

Figure 2: BCM56565 Reference Systems



Ordering Information

| Part Number | Description |
|-------------|-------------------------------------------------------------------------------------|
| BCM56565 | 24x 10GbE + 24x 1GbE front panel. 2x 40GbE/8x 10GbE uplinks. 2x 100GbE HiGig stack. |
| BCM56566 | 12x 10GbE + 36x 1GbE front panel. 2x 40GbE/8x 10GbE uplinks. 2x 100GbE HiGig stack. |
| BCM56567 | 48x 1GbE + 4x 10GbE front panel. 2x 40GbE/8x 10GbE uplinks. 2x 100GbE HiGig stack. |