



## **24-PORT FAST ETHERNET AND 2-PORT 1G/2.5G ETHERNET MULTILAYER SWITCH WITH TWO 10-GbE/HiGig2™ PORTS**

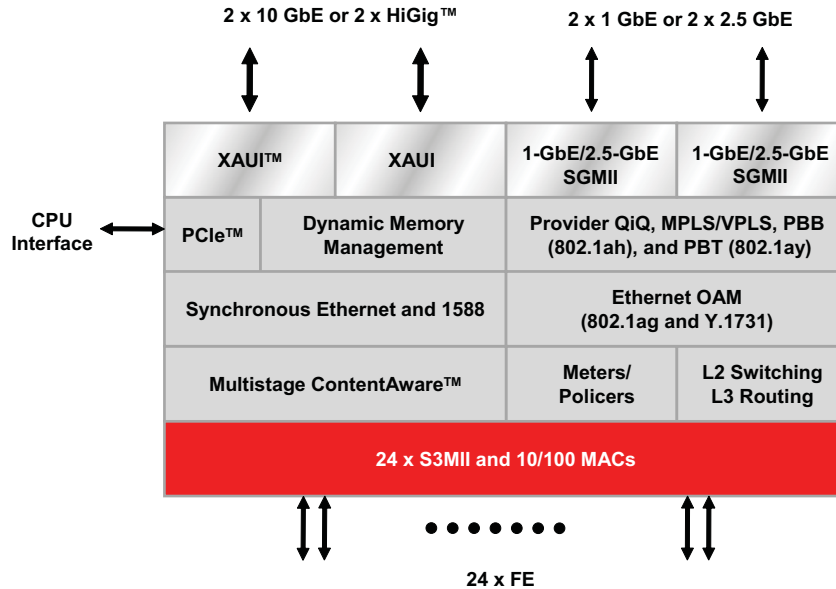
### **FEATURES**

- Highly integrated 24-port 10/100-Mbps Ethernet switch device
- Two ports of 1 or 2.5 Gigabit Ethernet (GbE), and two ports of 10 GbE uplink/stacking
- HiGig2™ stacking over 2.5 GbE (HGL) or 13 GbE (HG[13])
- Fully integrated packet buffer
  - Intelligent Memory Management Unit (MMU) optimized for handling bursty data traffic
- Advanced multistage TCAM-based ContentAware™ engine
  - L2, IPv4/IPv6 L3 packet classification
  - Flow-based classification, metering, and marking of frames
  - Flexible Access Control List (ACL)
  - Parallel lookup engines
- Full IPv4 and IPv6 L3 routing
- Key Carrier Ethernet features:
  - 802.1ad Provider Bridging
  - Flexible VLAN Translation
  - MPLS/VPLS, pseudowire
  - PBB/PBT
  - 802.1ag and Y.1731 Ethernet OAM
  - IEEE 1588 Synchronous Ethernet

### **SUMMARY OF BENEFITS**

- Based on industry-leading and market-proven StrataXGS® IV architecture
- Single-chip switch System-on-a-Chip (SoC) optimized for Carrier Ethernet access market
- Seamless connection to XGS fabric via HiGig2 protocol
- Provider Edge features at access economics
- Purpose-build to provide wirespeed packet processing performance
- Eight flexible Class of Service (CoS) queues per port assure the lowest latency to high-priority traffic. This capability supports a wide variety of delay-sensitive video and audio multicast applications.
- IPv6 support provides future proofing.
- MPLS tunneling enables L2 and L3 VPN services.
- Hardware-based OAM provides carrier grade performance management
- Flow-based classification, policing, marking, and queuing deliver carrier class SLA
- Synchronous Ethernet to provide timing accuracy for delay sensitive applications such as voice and video

## OVERVIEW



**BCM56130 Block Diagram**

The BCM56130 family is a highly integrated 24-port multilayer FE switch with two ports of 10-GbE XAUI™ uplinks and two ports of 1GbE/2.5 GbE uplinks. The FE ports support S3MII connectivity, while the 1 GbE and 2.5 GbE offer SGMII and SerDes respectively.

The BCM56130 is purpose-built for next-generation enterprise and Metro Ethernet access platforms. Two BCM56130 can be connected together by two ports of 2.5 GbE or one port of 13G XAUI over HiGig2 stacking protocol to create a nonblocking 48-port switch.

The BCM56130 family supports nonblocking L2 switching and L3 routing, which are key features for carrier Ethernet and enterprise networking applications.

The BCM56130 family delivers key Metro Ethernet features:

- Standardized Services
  - Q-in-Q, 802.1ad Provider Bridging, MPLS/VPLS, VPWS, pseudowire, and PBB/PBT support
  - L2 and L3 VPNs
  - STP for control protocol

- Scalability
  - Supports platforms from eight ports to 48 ports GbE
  - 10 GbE ports for aggregation
- Reliability
  - Hardware support of STP, MSTP, RSTP
  - 802.1ag and ITU Y.1731 Ethernet OAM for link-failure detection
- Quality of Service
  - Per flow Metering capability with multistage ContentAware engine
  - VLAN shaping, ensuring provider-class SLA
  - Highly optimized packet buffer architecture for burst absorption and multicast traffic
- Service Management
  - 802.1ag Ethernet OAM message support
  - Multistage ContentAware engine enables class-based classification
  - VRF

The BCM56130 family can be managed by host CPU via PCIe™ or I<sup>2</sup>C.

Ordering Information:

- BCM56132 (24 FE + 2 x 1GbE/2.5GbE + 2 x 10-GbE/HG[13])

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