ANZ High-Performance Switches For Data Center

Overview

ANZ LEAF and SPINE switches have 25 and 100 Gigabit Ethernet interfaces for high-performance data centers. With performance up to 3.2 Tbit/s, the switches support hardware processing of L2 and L3 traffic and MPLS and VxLAN technologies. The traditional feature set for data centers—OSPF, BGP, ECMP, VRRP, MLAG—and management interfaces SSH, SNMP, and REST API—allows the implementation of any service model for data center network infrastructure.

Hardware features

- Change airflow direction(port-to-power/power-to-port)
- All ports in front and power and cooling in the rear side
- Two redundant hot-swappable power supplies
- 5 + 1 hot-swappable fans

High Performance

Powerful ASIC packet processors allow you to build data center networks without oversubscriptions and performance losses. The 32 MB packet buffer size ensures reliable packet forwarding in the presence of network congestion.

Versatility

Switches are optimized for operation as part of a CLOS architecture. 48 SFP28 interfaces connect servers, and 8 QSFP28 interfaces on the LEAF switch allow connections to SPINE top-level switches with 32 QSFP28 interfaces. If necessary, QSFP28 interfaces can also connect servers via splitters.

Reliability

Support for VRRP, MLAG, and BFD protocols allows for a fault-tolerant redundant network architecture. Hardware fault tolerance capabilities of power supplies and cooling are a traditional approach for this class of devices.

Use Cases

- Hyperscale Datacenters
- High-performance computing networking
- Enterprise networking

Modular software architecture

Software redundancy and reliability are implemented using containerization, which allows for rapid updates of both the containers themselves and the components inside them. This architecture ensures continuous operation of the network stack while operating under load. Container architecture ensures complete isolation of services from each other, and the failure of one does not affect the operation of the others.

Technical Specification

	LEAF		SPINE
	1RU, for 19-inch rack		
CPU	1 × Intel Xeon 1712TR		
Memory	DDR4: SODIMM 8 GB x 2 SPI Flash: 32MB m.2 SSD: 120GB		
Storage	SPI Flash: 32MB m.2 SSD: 120GB		
Interfaces	48 x 10/25 GbE SFP28 And 8 x 25/40/100 GbE QSFP28	Management Ports 1 x RJ-45 serial console 1 x RJ-45 1GOOB management 2 x SFP+ 1G/10G OOB management 1 x USB Type A storage	32 x 25/40/100GbE QSFP28 Ports
ASIC	Broadcom BCM568873 Trident III 2.0 Tbps		Broadcom BCM56870 Trident III 3.2 Tbps
Software	ONIE loader ANZ NOS		
Performance	• Forwarding: 2 Tbps • TACACS+ and RADIUS authentication protocols • VLAN IEEE 802.1Q • LACP link aggregation protocol • LLDP • ARP • MCLAG technology • Static routing IPv4 • VRF-lite technology • Dynamic routing protocols BGP, OSPF • NTP • VRRP • LAG link aggregation protocol • SPAN • QoS • sFlow • SNMP • DHCP Relay • Command-line interface • Monitoring and telemetry services for the hardware platform of a network device • Managing access lists • Logging of events of user actions and the operation of a network device • Maximum size of Jumbo packets: 9K Bytes • Buffer Capacity: 32 MB integrated packet buffer • Number of MAC addresses: up to 32K max • Number of ARP – 16K entries • Number of interfaces in LAG max.: 256 • Virtual Routing and Forwarding (VRF): 16K		3.2 Tbps
Power	Power supplies: 2 pcs, 800W each, with redundancy and hot-swap support AC input voltage: 100–240 VAC		
LED	SFP28 port LED: Status, activity, speed QSFP28 port LED: Status, activity, speed LED control port: Status, Activity System LED: Diagnostics, power supply, and fan status		
Cooling	5+1 redundancy, hot-swappable		
Operation	• Temperature: from 10 °C to 35 °C • Humidity: from 40% to 80% (at 25 °C)		
Dimensions	434 mm x 536 mm x 44 mm		
Net weight	10 kg, with two power supplies		