10G 48+6-Port Open Networking Switch + 100G Uplinks

Champion ONE open networking switch solutions pair high-performance, reliable hardware with feature-rich network operating system (NOS) software to provide greater flexibility and control at lower costs than traditional closed layer 2 and layer 3 Ethernet switches.

Product Overview

Bolster your network with a carrier-grade 10G open networking switch from Champion ONE. This high-density solution provides full line-rate switching at Layer 2 or Layer 3 across 48x10GbE ports and 6x100GbE uplinks. These switches meet the high performance, availability, and network-scaling requirements of data centers, and can be deployed either as a Top-of-Rack switch or as part of a 40GbE or 100GbE distributed spine, forming a non-blocking folded CLOS data center fabric. The switch is mountable in either a standard 19" rack, or a 21" Open Rack via an Open Rack Switch Adapter.

This 10G switch is built on a Broadcom Qumran silicon chip. It comes loaded with the Open Networking Install Environment (ONIE) software installer, and can be bundled with industry-leading software. For more information, please refer to the "Software Compatibility" table on page 2.

Technical Specifications

PORT CONFIGURATION (FRONT OF SWITCH)
(48) 1/10GbE SFP+ ports
(6) 100GbE QSFP28 ports
Management ports on front panel:
(1) RJ-45 serial console
(1) RJ-45 100/1000BASE-T management
(1) USB Type A storage port

DIMENSIONS
Standard 19" Rack (WxDxH: 44cm x 54.8cm x 4.4cm); 8.5kg

POWER SUPPLIES AND FAN TRAY (REAR)
Redundant, load-sharing power supplies, AC or -48VDC
AC: 90 to 240 VAC
DC: -36 to -72 VDC,
Hot-swappable fan tray with 5+1 redundant fans

WARRANTY
All feature a limited 3-year warranty

ENVIRONMENTAL
Operating Temp. Range: 0 to 40° C
Storage Temp. Range: -40 to 70° C
Humidity Range: 5% to 95%

LEDs
10G SFP+ Ports: Link Speed, Link Status, Activity
100G QSFP28 Ports: Link Status, Activity
40G QSFP Breakout (24 LEDs, 4/ port): Link, Status, Activity
Ethernet Mgmt Port: Link Status, Activity
Console Port: Link Status
System: PSU1, PSU2, Diagnostic, Fans, Locator

REGULATORY
EMI
CE Mark
EN55032 Class A
EN55024
EN61000-3-2
EN61000-3-3
FCC Part 15 Subpart B Class A
VCCI Class A
BSMI
CB
UL/CUL
NEBS Level 1
RoHS 2.0 Compliant
WEEE Directive 2002/96/EC

Key Features Summary

- Cost-effective, bare-metal switch infrastructure for data center and carrier access

- 48 x SFP+ switch ports, supporting 10 GbE (DAC, AOC, 10GBASE-SR/LR) or 1 GbE (1000BASE-T/SX/LX)

- 6 x 100 QSFP28 switch ports, supporting 100GbE

- Expandable packet buffering for carrier access

- MPLS support for carrier access

- Layer 2 or Layer 3 forwarding of 800 Gbps

- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs

- All ports on front; PSUs, swappable 4+1 fan tray on rear

- Hot-swappable, load-sharing, redundant AC PSUs or -48VDC PSUs; or 12VDC power input

- Management: Ethernet and console RJ-45 ports; USB storage port

- Hardware switch pre-loaded with Open Networking Install Environment (ONIE) for automated loading of compatible independent SwitchOS software

- For compatible software options and versions, please refer to "Software Compatibility" below.

Performance Specifications

C1 Part Number[1]	Switching Capacity (Gbps)	Forwarding Rate (Bpps)	On-Chip Buffering	Deep DRAM Buffering	Jumbo Frames (bytes)	VLAN IDs[2]	MAC Address Table Size[2]	L3 Routes[2]
C1-10G-48+6-S-BQM-yz	800	1.6	16 MB	6 GB	9216	4 K	750 K	750 K (expandable to 8 million)

1. Refer to Ordering Information on Page 3 for details.
2. Subject to NOS restrictions.

Silicon and Memory

Parameter	Value
Switch Silicon	Broadcom BCM88370 Qumran MX
CPU Module	Intel Rangeley C2538 quad-core 2.4GHz processor
Memory	8 GB SO-DIMM DDR3 RAM x2 32 GB mSATA

Software Compatibilty

ipinfusion™

Contact Champion ONE for specific version compatibility.

Supported Optics

Champion ONE's 10G switches support the following standards for transceivers, which include Champion ONE's own Passport™ line of universal transceivers. For more technical information on Champion ONE transceivers, please visit: https://www.championone.com/resources/data-sheets/transceivers/passport.

SFP+/SFP Transceivers

Standard	Max. Rated Distances	Passport Part #
10GBASE-CR	0.5 to 10m	CAB-SFP-10GB-DACP-xM-C1
10GBASE-SR/SRL	100m or 300m (OM3 MMF)	10GSFP+E-SR
10GBASE-LR	10km	10GSFP+E-LR 10GSFP+E27B10L (bi-di) 10GSFP+E33B10L (bi-di)
1000BASE-SX	550m	1000SFP055
1000BASE-LX	10km	1000SFP10
1000BASE-T	100m	100SFPT

QSFP+/QSFP28 Transceivers

Standard	Max. Rated Distances	Passport Part #
40GBASE-CR4 DAC	0.5 to 7m	CAB-QSFP-40G-DACP-xM-C1
40GBASE-CR4 / 4x10GBASE-CU DAC	0.5 to 5m	CAB-QSFP-4SFP10G-DACP-xM-C1
40GBASE-SR4	100m (OM3 MMF) 150 (OM4 MMF)	40GQSFP+E-SR4
40GBASE-LR4	10km	40GQSFP+E-LR4
100GBASE-SR4	70m (OM3) 100m (OM4)	100GQSFP28E-SR4
100GBASE-LR4	10km	100GQSFP28E-LR4
100G QSFP28 AOC	Up to 30m	CAB-QSFP28-QSFP28-AOC-xM-C1

Ordering Information

PART NUMBER SCHEMA:

C1-10G-48+6-S-BT2P-YZ

Y	Power Option
A	AC Power
48D	48VDC Power

Z	Airflow Option
F	Port-to-Power Airflow
B	Power-to-Port Airflow