

**INTELLIPOINT DATA SHEET**

# 100G Coherent Open Networking Switch



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

Champion ONE's 100G Coherent Open Networking Switch enables network operators to easily extend and migrate existing metro and long-haul Dense Wavelength Division Multiplexing (DWDM) networks to add new 100G capacities and extend inter-data center and Layer3 services.

The switch features a 1.5RU form factor with system throughput of 3.2Tbps based on Broadcom Tomahawk Plus switch silicon. The design offers 16 fixed 100G Ethernet QSFP28 ports, plus 8 linecard slots for CFP2 Coherent DCO transceivers.

All 100G switches from Champion ONE come loaded with Open Network Install Environment (ONIE), and support several leading network operating systems (NOS). Please refer to the table on page 2 for specifics on compatibility.

## Technical Specifications

### PORT CONFIGURATION (FRONT OF SWITCH)

- (16) QSFP28 ports (supports 1x40/100 GbE)
- (8) Coherent CFP2 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

19" Rack 1.5RU (WxDxH):  
44.25cm x 55cm x 6.6cm);  
Weight: 12kg

### POWER SUPPLIES AND FAN TRAY (REAR)

- Redundant, load-sharing power supplies, AC or -48 VDC
- AC input voltage : 90 – 240 VAC at 50-60Hz
- Up to 93% PSU efficiency
- DC: -36 to -72 VDC
- Hot-swappable fan tray with 5+1 redundant fans

### WARRANTY

All feature a limited 3-year warranty

### ENVIRONMENTAL

- Operating temperature: 0 – 45°C
- Storage temperature: -40 – 70°C
- Operating humidity: 5% – 95%

### LEDS

- Port LEDs: Link Status, Activity, Speed
- Ethernet Mgmt Port LED: Link Status, Activity
- System LEDs: Diagnostic, Locator, PSU and Fan Status

### REGULATORY

- EMI
- CE Mark
- EN55032 Class A
- EN55024
- EN61000-3-2
- EN61000-3-3
- FCC Part 15 Subpart B Class A
- VCCI Class A
- Safety
- CB
- UL/CUL
- Environmental:
  - Temperature: IEC 68-2-14
  - Vibration: IEC 68-2-36, IEC 68-2-6
  - Shock: IEC 68-2-29
  - Drop: ISTA 2A
- RoHS 2.0 Compliant
- TAA Compliant

## Key Features Summary

- Cost-effective, bare-metal switch infrastructure for data center fabric.
- Deployable as TOR switch supporting 10 or 25 GbE to servers, with 40 or 50 100GbE uplinks, or as spine switch supporting 40, 50, or 100 GbE ToR and spine interconnects.
- 32 x QSFP28 switch ports, each supporting either 1x100GbE or 1x40GbE, or (via breakout cables) 2x50GbE, 4x25GbE, or 4x10GbE.
- Full line-rate Layer 2 or Layer 3 forwarding of up to 6.4 Tbps (full duplex).
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front; PSUs, fan tray on rear.
- Hot-swappable, load-sharing, redundant AC PSUs or -48VDC PSUs; or 12VDC power input.
- Redundant, hot-swappable fan tray with 5+1 fans.
- 550W maximum power consumption without pluggable optics
- Hardware switch pre-loaded with diagnostics software and Open Network Install Environment (ONIE) for automated loading of compatible independent switch OS software.

## Performance Specifications

C1 Part Number	Switching Capacity (Tbps)	MAC Addresses (min/max) <sup>1</sup>	VLAN IDs	Jumbo Frames Support (bytes)	IPv4 <sup>2</sup>	IPv6 <sup>2</sup>
C1-100G-16-CO-BTMP-yz	6.4	8 K / 136 K	4 K	9216	8k min/84k max host entries; 16k LPM entries (TCAM-only mode)	4k min/36k max host entries; IPv6/64 = 8k (TCAM-only mode)

1. Refer to Ordering Information on Page 3 for details.
2. Subject to limitations of the network operating system.

## Silicon and Memory

Parameter	Value
Switch Silicon	Broadcom BCM56965 Tomahawk Plus
CPU Module	Intel® Xeon® D-1518 quad-core x86 Processor
Memory	DDR4: SO-DIMM 8 GB x 2 SPI Flash: 16MB m.2 SSD: 32 GB MLC

## Software Compatibility



Contact Champion ONE for specific version compatibility.

## Supported Optics

Champion ONE's 100G coherent 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>.

QSFP28 Transceivers		
Standard	Max. Rated Distances	Passport Part #
100GBASE-SR4	70m (OM3) 100m (OM4)	100GQSFP28E-SR4
100GBASE-PSM IR4	2km	100GQSFP28E-PSMIR4
100GBASE-CWDM4	2km (w/FEC)	100GQSFP28E-CW4
100GBASE-LR4	10km	100GQSFP28E-LR4
100G QSFP28 AOC	Up to 30m	CAB-QSFP28-QSFP28-AOC-xM-C1

Coherent CFP2 Transceivers		
Standard	Max. Rated Distances*	Passport Part #
100G/200G DCO	800km (200G) 2000km (100G)	100GCFP2C-DCO01

\*Distances can be achieved with in-line amplification.

## Ordering Information

PART NUMBER SCHEME:

# C1-100G-16-CO-BTMP-**YZ**

Y	Power Option
A	AC Power
48D	48VDC Power

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