

INTELLIPOINT DATA SHEET

10G 48+6-Port Open Networking Switch + 40G 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 Champion ONE's carrier-grade 10G open network switch. This high-density solutions provide full line-rate switching at Layer 2 or Layer 3 across 48x10GbE ports and 6x40GbE uplinks. Port grouping allows the user to group 4x10GbE ports into one 40G port at the physical layer for maximum bandwidth utilization (and 300m reach over multi-mode fiber). All of this comes in a compact 1RU enclosure that also supports VXLAN and NVGRE tunneling functions in hardware.

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 10GbE or 40GbE distributed spine, forming a non-blocking folded CLOS data center fabric.

These 10G switches are built on a Broadcom Trident-series silicon chips. They come loaded with the Open Network 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) 4x10GbE/40GbE QSFP 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: 43.8cm x 47.3cm x 4.34cm); 8.5kg

POWER SUPPLIES AND FAN TRAY (REAR)

Redundant, load-sharing power supplies, AC or -48VDC
 AC: 90 to 264 VAC at 50-60Hz, max 6.0A at 100/120 VAC
 Up to 93% PSU efficiency
 DC: -48 to -72 VDC, 10.0A at -72 VDC
 12VDC power input option
 Hot-swappable fan tray with 4+1 redundant fans
 Max Power Consumption: 282 W

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
 40G QSFP+ Ports: Link Status, Activity for 40G Status
 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 (EN55022 Class A)
 FCC Part 15 Class A
 VCCI
 CB, EN 60950
 UL/CUL
 Temperature: IEC 68-2-14
 Drop: ISTA 2A
 Vibration: IEC 68-2-36, IEC 68-2-6
 Shock: IEC 68-2-29
 RoHS-6 Compliant
 TAA Compliant

Key Features Summary

- Cost-effective, bare-metal switch infrastructure for data center fabric.
- 48 x SFP+ switch ports, supporting 10 GbE (DAC, 10GBASE-SR/LR) or 1 GbE (1000BASE-T/SX/LX).
- 6 x 40 QSFP+ switch ports, supporting 40 GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10 GbE (DAC or fiber breakout cable).
- Port Grouping to group 4 x 10G ports into one 40G port at the physical layer for maximum bandwidth utilization, and for 300m optical reach over MMF (subject to limitations from NOS).
- PHY-less, retimer-less design
- Full line-rate Layer 2 or Layer 3 forwarding of 720 Gbps
- VXLAN and NVGRE tunneling support in hardware for network
- 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 Network Install Environment (ONIE) for automated loading of compatible independent Switch OS 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) | Packet Buffer Size (MB) | Jumbo Frames (bytes) | VLAN IDs ² | MAC Address Table Size ² | L3 Routes ² | ECMP Group (Bytes) ² |
|-----------------------------|---------------------------|------------------------|---------------------------------|----------------------|-----------------------|-------------------------------------|---|---------------------------------|
| C1-10G-48+6-S-BT2P-xyz | 1440 | 1.0 | 16.0 (integrated packet buffer) | 9216 | 4 K | 32 K (min) / 288 K (max) | IPv4 16K (min) / 112K (max) IPv6 8K (min) / 56K (max) IPv6/64=8K (TCAM only mode) | 4096 |

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

Silicon and Memory

| Parameter | Value |
|----------------|--|
| Switch Silicon | Broadcom BCM56854 Trident II+ 720Gbps |
| CPU Module | Intel Atom C2538 quad-core 2.4GHz x86 processor |
| Memory | 8 GB SO-DIMM DDR3 RAM w/ ECC 16 MB SPI 8 GB NAND flash |

Software Compatibility



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+ 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 |

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 |