

INTELLIPOINT DATA SHEET


10G Copper 48+6-Port 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.

Performance Overview

Bolster your network with Champion ONE's carrier-grade 10G Copper (RJ-45) Switch. These high-density solutions provide full line-rate switching at Layer 2 or Layer 3 across 48 10GbE ports and 6 40GbE uplinks. All of this comes in a compact 1RU enclosure with redundant, hot-swappable AC power supplies and supports hot/cold aisle configurations with port-to-power or power-to-port airflow options. These switches support VXLAN and NVGRE tunneling functions in hardware, while using already-deployed Cat 5e/6/6A/7 cabling infrastructure that reduces future investment.

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 II+ silicon chip. They come loaded with the Open networking Install Environment (ONIE) software installer, and can be bundled with industry-leading software, including Cumulus® Linux 3.0.0. For more information on software compatibility, please refer to the "Software Compatibility" table on page 2.

Technical Specifications

PORT CONFIGURATION (FRONT OF SWITCH)

(48) 100Mb/1G/10Gb RJ45 ports
(6) 4x10GbE/40GbE QSFP ports
Management ports on front panel:
(1) RJ-45 serial console
(1) RJ-45 100/1000BASE-T management

DIMENSIONS

Standard 19" Rack (WxDxH:
44.25cm x 47.3cm x 4.39cm);
9.5kg

POWER SUPPLIES AND FAN TRAY (REAR)

Redundant, load-sharing power supplies
AC: 90 to 264 VAC at 50-60Hz, max 6.0A at 100/120 VAC
Up to 93% PSU efficiency
Hot-swappable fan tray with 4+1 redundant fans
Max Power Consumption: 348W

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 10G links with 4x10G breakout
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 fabric.
- (48) RJ-45 Copper switch ports, supporting 10GBASE-T, 1000BASE-T, and 100BASE-TX Ethernet on Cat 6, Cat 6A, and Cat 7 twisted-pair cables (Cat 5e UTP cables support 1000BASE-T and 100BASE-TX only)
- (6) 40 QSFP switch ports, supporting 40 GbE (DAC, 40GBASE-SR4/LR4) or 4x10 GbE (DAC or fiber breakout cable).
- 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, hot swappable 4+1 fan tray on rear.
- Hot-swappable, load-sharing, redundant AC PSUs
- 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 the "Software Compatibility" table on page 3.

Performance Specifications

C1 Part Number	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-Az	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 below for details.
 2. Subject to NOS restrictions.

Silicon and Memory

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 NOR flash 8 GB NAND flash Reserve mSATA connector

Software Compatibility



Contact Champion ONE for specific version compatibility.

Supported Optics

Champion ONE's 10G switch supports the following standards for transceivers, which include Champion ONE's own Passport™ line of universal transceivers.

SFP+/SFP Transceivers		
Standard	Max. Rated Distances	Passport Part #*
10GBASE-T	30m	10GSFP+E-T
1000BASE-T	100m	1000SFPT
100BASE-TX		1000SFPTR2 MR-SFPGT(-H)

QSFP+ Transceivers		
Standard	Max. Rated Distances	Passport Part #*
40GBASE-CR4 DAC	0.5m to 7m (Passive and active)	40GQSFP+E-DA01 40GQSFP+E-DA03 40GQSFP+E-DA05 40GQSFP+E-DA07
40GBASE-CR4 / 4x10GBASE-CU DAC	0.5m to 7m	40GQ-4X10S-BO01 40GQ-4X10S-BO03 40GQ-4X10S-BO05
40GBASE-SR4	100m (OM3 MMF) 150 (OM4 MMF)	40GQSFP+E-SR4
40GBASE-LR4	10km	40GQSFP+E-LR4

Ordering Information

PART NUMBER SCHEME:

C1-10G-48+6-R-BT2P-AZ

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