CHAMPION O·N·E™

INTELLIPORT™

10G 48+6-port Open Network Switch

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

Product Overview

Raise your network's IQ with Champion ONE's Intelliport™ optical networking products. From electric-to-optical media conversion and optical media extenders, to Smart Transceivers that allow you to actively monitor data transmission, to Ethernet switches supporting up to 100G, Intelliport covers everything you need to make your network bigger, stronger, and smarter.

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 48 10GbE ports and 6 40GbE 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 from Big Switch®, Pica8®, IP Infusion®, and more. For more information, please refer to the "Software Compatibility" table on page 3.

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 SwitchOS software

◊ For compatible software options and versions, please refer to the "Software Compatibility" table on page 3.

TECHNICAL OVERVIEW

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

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

ENVIRONMENTAL

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

DIMENSIONS

Standard 19" Rack (WxDxH: 43.8cm x 47.3cm x 4.34cm); 8.5kg

WARRANTY

All feature a limited 3-year warranty

SILICON AND MEMORY

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

Performance Specifications

C1 PN[1]	Switching Capacity (Gbps)	Forwarding Rate (Bpps)	Packet Buffer Size (MB)	Jumbo Frames (bytes)	Latency (RFC2544) (L2/L3, cut thru, full line rate)	VLAN IDs[1]	MAC Address Table Size[1]	L3 Routes[1]	ECMP Group (Bytes)[1]
C1-10G-48+6-S-BT2P-AF	1440	1.0	16.0 (integrated packet buffer)	9216	720 ns	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. Subject to NOS restrictions.

Software Compatibility

	C1-10G-48+6-S-BT2P-AF
Open Network Linux	Yes
OpenSwitch	Yes
Pica8	PicOS r2.8.0
Big Switch	Switch Light OS Big Cloud Fabric
IP Infusion	OcNOS v1.2

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+ Transceivers

Standard	Max. Rated Distances	Passport Part #*
10GBASE-CU DAC	0.5m to 7m (passive and active)	10GSFP+E-DA01 10GSFP+E-DA03 10GSFP+E-DA05 10GSFP+E-DA07
10GBASE-SR/SRL	100m or 300m (OM3 MMF)	10GSFP+E-SR
10GBASE-LR	10km	10GSFP+E-LR 10GSFP+E27B10L (bi-di) 10GSFP+E3310L (bi-di)
1000BASE-SX	55m	1000SFP055
1000BASE-LX	10km	1000SFP10
1000BASE-T	100m	1000SFPT

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

*For more information on compatible Champion ONE Passport™ transceivers (including full data sheets), visit www.championone.com.

Service and Support

Running a network or selling network services and products can be a highly competitive endeavor. To help differentiate your business and enable you to provide more cost effective infrastructure, you require a partner that provides competitive pricing and vertical market expertise. At Champion ONE we understand your needs. We leverage our skills and relationships to:

- Provide network design services and help you explore alternative network designs
- Provide technical and sales support when you need it
- Accept orders for same day shipment up to 3:00 PM EST
- Offer one of the longest warranties in the industry on all products
- Offer a 30-day return policy
- Build a long-term supplier partnership with you

You can rely on Champion ONE, not only for the highest levels of availability for the products you need, but the technical support, customer service and cost consideration you deserve. Our goal is your complete satisfaction.

The Champion ONE Commitment

For over twenty years, we at Champion ONE have been delivering great value to our customers through high-quality products at competitive prices. As one of the leading suppliers of compatible optical transceivers and a major supplier of optical networking solutions, we take great pride in building long-term relationships as a trusted partner. In this spirit, everything we bring to market bears the Champion ONE Shield™, which strengthens this trust through five core promises: Performance, Availability, Compatibility, Protection, and Value.

Product photos are representative samples only.

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