



# 40G 32-PORT OPEN NETWORK SWITCH

**C1-40G-32-S-BT2-AF**  
**C1-40G-32-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 40G Ethernet switches, ideal for high-performance data center applications. In a compact 1RU form factor, the switches provide line-rate L2 and L3 switching across 32 x QSFP+ ports, supporting 32 x 40 GbE connections or 104 x 10 GbE (+6 x 40GbE) connections. These switches can be deployed as a TOR switch supporting 10 GbE or 40 GbE server connections, or as a spine switch supporting 10 GbE or 40 GbE spine interconnects.

Champion ONE's 40G switch comes loaded with Open Network Install Environment (ONIE) software installer, which supports several leading network operating systems. 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.
- ◇ 32 fixed 40GbE QSFP+ switch ports in compact 1RU form factor, each supporting 40 GbE or 4 x 10 GbE via breakout cables. Maximum 24 x 40GbE QSFP+ switch ports support breakout cables.
- ◇ Layer 2 or Layer 3 forwarding of 1.28 Tbps full duplex.
- ◇ Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- ◇ All ports on front. PSUs and fans inserted from rear.
- ◇ Hot swappable, load-sharing redundant AC PSUs.
- ◇ 4+1 redundant, hot-swappable fans modules.
- ◇ Energy Efficiency: 227 W typical power consumption under line rate traffic using 24 x passive QSFP DAC, 8 x 40GBASE-SR4.
- ◇ Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.
- ◇ Compatible with several leading network operating systems (see “Software Compatibility” on the following page)

## TECHNICAL OVERVIEW

## PORT CONFIGURATION (FRONT OF SWITCH)

**(32)** 40 GbE/4x10 GbE QSFP+ ports

Management ports on port side:

**(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); 9.65kg

## POWER SUPPLIES AND FAN TRAY (REAR)

Redundant, load-sharing power supplies, AC or -48VDC

AC: 90 to 264 VAC at 50-60Hz, max 10.0A at 100/120 VAC

Up to 93% PSU efficiency

DC: -48 to -72 VDC, 10.0A at -72 VDC

Hot-swappable fan tray with 4+1 redundant fans

## WARRANTY

All feature a limited 5-year warranty

## SILICON AND MEMORY

	C1-40G-32-S-BT2-AF	C1-40G-32-S-BT2P-AF
Switch Silicon	Broadcom BCM56850 Trident II 720 Gbps	Broadcom BCM56860 Trident II+ 720Gbps
CPU Module	Intel Atom C2538 quad-core 2.4GHz x86 processor	Intel Atom C2538 quad-core 2.4GHz x86 processor
Memory	8 GB SO-DIMM DDR3 RAM w/ ECC 16 MB SPI Flash 8 GB NAND flash	8 GB SO-DIMM DDR3 RAM w/ ECC 16 MB SPI 8 GB NAND flash

## PERFORMANCE SPECIFICATIONS

C1 PN	Switching Capacity (Tbps)	Forwarding Rate (Bpps)	VLAN IDs	MAC Address Table Size	Jumbo Frames (bytes)	L3 Routes (min/max)	Packet Buffer Size (MB)	Latency (RFC2544) (ns)	Power Consumption (W)	Operating (Storage) Temp. (°C)	Operating and Storage Humidity (%)
C1-40G-32-S-BT2-AF	1.28 (full duplex)	1.44	4 K	320 K	9216	IPv4 64K IPv6 20K	12.0 (shared buffer pool)	600 - 720 (cut thru)	227 (passive DAC) 261 (SR4) 370 (LR4) (max)	0 to 40 (-40 to 70)	5 to 95
C1-40G-32-S-BT2P-AF	1.28 (full duplex)	1.44	4 K	Min: 32K Max: 288K	9216	IPv4: 16K / 12K host entries <sup>1</sup> IPv6: 8K / 56K host entries <sup>2</sup>	16.0 (integrated packet buffer)	600 - 720 (cut thru)	227 (passive DAC) 261 (SR4) 370 (LR4) (max)	0 to 40 (-40 to 70)	5 to 95

1. 16K LPM entries with TCAM-only mode.

2. IPv6/64 = 8K with TCAM-only mode.

## SOFTWARE COMPATIBILITY

	C1-40G-32-S-BT2-AF	C1-40G-32-S-BT2P-AF
Open Network Linux	Yes	Yes
OpenSwitch	Yes	Yes
Cumulus Networks	Cumulus Linux r2.5.3	N/A
Pica8	PicOS r2.6.4	N/A
Big Switch	Switch Light OS Big Cloud Fabric Big Monitoring Fabric	Switch Light OS Big Cloud Fabric
IP Infusion	N/A	OcNOS
SnapRoute	FlexSwitch	N/A
Pluribus Networks	Open Netvisor Linux v2.5	N/A

## ADDITIONAL OPTIONS

PART NUMBER SCHEME: **C1-40G-32-S-BT2-YZ**  
**C1-40G-32-S-BT2P-YZ**

Y	Power Option
A	AC Power
D	DC Power (12V or 48V)

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

## SUPPORTED OPTICS

Champion ONE's 40G switch supports the following standards for transceivers, which include Champion ONE's own Passport™ line of universal transceivers, shown below:

QSFP+ Transceivers		
Standard	Max. Rated Distances	Passport Part #*
40GBASE-CR DAC	0.5m to 5m (Passive and active)	40GQSFP+E-DA01 40GQSFP+E-DA03 40GQSFP+E-DA05
40GBASE-CR / 4x10GBASE-CR DAC	0.5m to 5m	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](http://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.

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