



# 1G COPPER (RJ-45) 48-PORT OPEN NETWORK SWITCH

PART NUMBER: **C1-1G-48+6-R-BH4-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 1G Copper (RJ-45) Switch. This high-density solution is ideal as a data center top-of-rack switch or IPMI (Intelligent Platform Management Interface) switch or for campus networking applications where it can fully utilize existing Cat. 5 cable infrastructure. This switch features 48 10/100/1000Base-T ports, 4 10G SFP+ ports, and 2 20G QSFP+ stacking ports (subject to operating system support).

This switch is built on a Broadcom Helix4 silicon chip. It comes loaded with the Open Network Install Environment (ONIE) software installer, and can be bundled with industry-leading software. For more information on software compatibility, please refer to the "Software Compatibility" table on page 2.

## KEY FEATURES SUMMARY

- ◆ Cost-effective, bare-metal switch infrastructure for data center rack.
- ◆ 1GbE connections to server and storage nodes in rack, with 10GbE uplinks to spine network.
- ◆ Wire speed Layer 2 or Layer 3 forwarding
- ◆ All ports on front in ultra-dense configuration
- ◆ Hot-swappable, load-sharing, redundant AC PSUs
- ◆ 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 below.

## TECHNICAL OVERVIEW

### PORT CONFIGURATION

(48) RJ-45 100/1000Base-T ports  
 (4) 10G SFP+ ports (1G/10G)  
 (2) 20G QSFP+ stacking ports  
*Management ports:*  
 (1) RJ-45 100/1000BASE-T management port  
 (1) USB type A storage port  
 (1) Micro-USB serial console

### SWITCH SILICON AND MEMORY

Silicon: Broadcom BCM56340 Helix4  
 CPU: Dual-core ARM Cortex A9 1GHz  
 Memory: 2 GB DDR3 SDRAM w/ EEC  
 8 MB SPI  
 8 GB NAND Flash

### DIMENSIONS

Standard 19" Rack  
 (WxDxH: 44cm x 35cm x 4.5cm)

### POWER SUPPLIES AND FAN TRAY

Redundant, load-sharing AC power supplies  
 90 to 264 VAC at 50-60Hz,  
 max 13.0A at 100/120 VAC  
 Hot-swappable fan tray with redundant PSU fans

### STANDARDS AND REGULATIONS

FCC, CE, CB, UL, CCC, BSMI

### WARRANTY

All feature a limited 3-year warranty

## PERFORMANCE SPECIFICATIONS

C1 PN <sup>1</sup>	Switching Capacity (Gbps)	Forwarding Rate (Mpps)	VLAN IDs	MAC Address Table Size	Jumbo Frames (KB)	L3 Routes	Packet Buffer Size (MB)	Typical Power Consumption (W) <sup>1</sup>	Operating (Storage) Temp (°C)	Humidity
C1-1G-48+6-R-BH4-AF	128	131	4 K	96 K	12	IPv4/IPv6: 96k/48k Unicast 48k/4k Multicast	4.0 (shared buffer pool)	117	0 to 45 (-40 to 70)	5 to 95%

1. Measured under the following conditions: line-rate, 48 GbE Cat 6, 4 10GBASE-SR connections.

## SOFTWARE COMPATIBILITY

For optimal performance and support, Champion ONE recommends use of the following operating systems with this open network switch:

	Description
Cumulus	Linux® 2.5.4 and later
Pica8	PicOS r2.6.2 and later
IP Infusion	OcNOS v1.2

Software purchase includes a one-time licensing fee and 1 year of maintenance and support. The maintenance and support package includes:

- Technical support resources
- Software updates and upgrades (includes version changes with performance enhancements, security updates, bug fixes, etc)
- English-language email and phone support
- 24x7 access to Support web site including case management system.

Maintenance and support packages for additional years are also available for an added cost.

**NOTE:** Software license fees are sold on a one-to-one basis. To transfer your license to another switch, contact your Champion ONE account representative.

## SUPPORTED OPTICS

Champion ONE's 10G switch supports 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 [www.championone.com/data-sheets-passport](http://www.championone.com/data-sheets-passport).

SFP+/SFP Transceivers		
Standard	Max. Rated Distances	Passport Part #*
1000BASE-T	100m	1000SFPT
100BASE-TX		1000SFPT2 MR-SFPGT(-H)
10GBASE-SR/SRL	100m/300m (OM3)	10GSFFP+E-SR
10GBASE-LR	10km	10GSFP+E-LR
1000BASE-SX	550m	1000SFP055
1000BASE-LX	10km	1000SFP10

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

## 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.

## GLOBAL HEADQUARTERS

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