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.

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**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)

**Switching Capacity (Gbps)**

128

**Forwarding Rate (Mpps)**

131

**VLAN IDs**

4 K

**MAC Address Table Size**

96 K

**Jumbo Frames (KB)**

12

**L3 Routes**

IPv4/IPv6: 96k/48k Unicast

48k/4k Multicast

**Packet Buffer Size (MB)**

4.0 (shared buffer pool)

**Typical Power Consumption (W)**

117

**Operating (Storage) Temp (°C)**

0 to 45 (-40 to 70)

**Humidity**

5 to 95%

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

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**Performance Specifications**

**Software Compatibility**

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulus</th>
<th>Linux® 2.5.4 and later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pica8</td>
<td>PicOS r2.6.2 and later</td>
<td></td>
</tr>
<tr>
<td>IP Infusion</td>
<td>OcNOS v1.2</td>
<td></td>
</tr>
</tbody>
</table>

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.
Data Sheet

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.

### Supported Optics

#### SFP+/SFP Transceivers

<table>
<thead>
<tr>
<th>Standard</th>
<th>Max. Rated Distances</th>
<th>Passport Part #*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000BASE-T</td>
<td>100m</td>
<td>1000SFP1T</td>
</tr>
<tr>
<td>100BASE-TX</td>
<td></td>
<td>1000SFPT</td>
</tr>
<tr>
<td>10GBASE-SR/SRL</td>
<td>100m/300m (OM3)</td>
<td>MR-SFPGT(-H)</td>
</tr>
<tr>
<td>10GBASE-LR</td>
<td>10km</td>
<td>1000SFP+</td>
</tr>
<tr>
<td>1000BASE-SX</td>
<td>550m</td>
<td>1000SFP055</td>
</tr>
<tr>
<td>1000BASE-LX</td>
<td>10km</td>
<td>1000SFP10</td>
</tr>
</tbody>
</table>

#### QSFP+ Transceivers

<table>
<thead>
<tr>
<th>Standard</th>
<th>Max. Rated Distances</th>
<th>Passport Part #*</th>
</tr>
</thead>
<tbody>
<tr>
<td>40GBASE-CR4 DAC</td>
<td>0.5m to 7m (Passive and active)</td>
<td>40GQSFP+E-DA01</td>
</tr>
<tr>
<td>40GBASE-CR4 / 4x10GBASE-CU DAC</td>
<td>0.5m to 7m</td>
<td>40GQSFP+E-DA03</td>
</tr>
<tr>
<td>40GBASE-SR4</td>
<td>100m (OM3 MMF)</td>
<td>40GQSFP+E-SR4</td>
</tr>
<tr>
<td>40GBASE-LR4</td>
<td>10km</td>
<td>40GQSFP+E-LR4</td>
</tr>
</tbody>
</table>

### 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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