INTELLIPORT DATA SHEET

1G Copper (RJ-45) 24-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.

Product Overview

Champion ONE's carrier-grade 1G Copper (RJ-45) Switch is high-density solution that is ideal as a data center top-of-rack switch, IPMI (Intelligent Platform Management Interface) switch, or for campus networking applications in which it can fully utilize existing Cat. 5 cable infrastructure. This switch features 24x10/100/1000Base-T ports, 4x10G SFP+ ports, and 2x20G QSFP+ stacking ports (subject to operating system support).

This switch comes with optional support for IEEE 802.3af and IEEE 802.3at Power-over-Ethernet (PoE and PoE+) on all 10/100/1000Base-T ports simultaneously, as well as Ultra PoE (UPoE) support. This option is ideal for applications that require interconnecting security devices, other wifi-enabled devices, and more.

This switch is built on a Broadcom Helix4 silicon chip. It comes loaded with the Open Networking 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.

Technical Specifications

PORT CONFIGURATION
(24) RJ-45 10/100/1000Base-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

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

WARRANTY
All feature a limited 3-year warranty

LEDS
GE RJ45 SFP Ports: Link Speed, Link Status, Activity
10G SFP+ Ports: Link Speed, Link Status, Activity
Ethernet Mgmt Port: Link Status, Activity
System: PRI, PSU1, PSU2, STK1, STK2, FAN, PoE

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

REGULATORY
EMI
CE Mark (EN55022 Class A)
FCC Part 15 Class A
VCCI Class A
BSMI (CNS13436, CNS13438)
CB, EN 60950
UL
Temperature: IEC 68-2-14
Shock: IEC 68-2-29
Vibration: IEC 68-2-36; 68-2-6
RoHS-6 Compliant
TAA Compliant

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 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 below

Performance Specifications

C1 Part Number	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)[1]	PoE Power Budget (W)[2]
C1-1G-24+6-R-BH4-AF	104	95	4 K	96 K	12	IPv4/IPv6: 96k/48k Unicast 48k/4k Multicast	4.0 (shared buffer pool)	100	960

1. Measured under the following conditions: line-rate, 48 GbE Cat 6, 4 10GBASE-SR connections.
2. For PoE support, add "-POE" to part number. Includes PoE (24 ports simultaneously at 15W/port), PoE+ (24 ports simultaneously at 30W/port), and UPoE (8 ports simultaneously at 60W/port).

Silicon and Memory

Parameter	Value
Switch Silicon	Broadcom BCM56342 Helix4
CPU Module	Dual-core ARM Cortex A9 1GHz
Memory	2 GB DDR3 SDRAM w/ EEC 8 MB SPI 8 GB NAND Flash

Software Compatibilty

Contact Champion ONE for specific version compatibility.

Supported Optics

Champion ONE's 1G switches support 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: https://www.championone.com/resources/data-sheets/transceivers/passport.

SFP+/SFP Transceivers		
Standard	Max. Rated Distances	Passport Part #
1000BASE-T / 100BASE-TX	100m	1000SFPT 1000SFPTR2 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	0.5 to 7m	CAB-QSFP-40G-DACP-xM-C1
40GBASE-CR4 / 4x10GBASE-CU DAC	0.5 to 5m	CAB-QSFP-4SFP10G-DACP-xM-C1
40GBASE-SR4	100m (OM3 MMF) 150 (OM4 MMF)	40GQSFP+E-SR4
40GBASE-LR4	10km	40GQSFP+E-LR4