

# Aggregation Switch

## HSP-IO-48GE4XS-C3PA+

### 48-Port PoE+ L3 Managed Switch



## Overview

- Fully Managed L3 Switch with wire speed Non-Blocking Architecture
- All Gigabit Ethernet Access Ports with 10G Uplinks in a fixed 1U configuration
- 48x10/100/1000 PoE+ enabled Access Ports
- 4x1/10G SFP+ Uplink Ports that allow termination on either fiber or copper based on SFP module
- Powerful WebGUI with industry standard Command Line Interface
- Upto 176 Gbps Switching capacity and up to 130.944 MPPS of Full Duplex Throughput
- Comply with Energy Efficient Ethernet Standards (802.3az)
- Suitable as access or aggregation switch and deployment of Wi-Fi AP/CCTV/IP Phones

## Switch Ports

- 48x10/100/1000 Base-T PoE+ Gigabit Access Ports
- 4x1/10G SFP+ Uplink Ports (MSA Compliant)
- One Serial Console Port and One Out-of-Band Management Port
- Link, Activity, Speed, PoE Status LEDs
- System status LED and onboard RESET button

## Industry Standard Management with Automation

- **Management Interfaces:** CLI and WebGUI
- **Protocol Support:** Dual Stack (IPv4/IPv6), Telnet, SSHv2, SNMP v1/v2/v3, SMTP
- **Monitoring & Analytics:** RMON, sFlow, Port Mirroring, L2 and L3 Traceroute
- **Time Services:** NTP and Secure NTP
- **IP Services:** DHCP Server, Relay, and Client
- **File Transfer & Provisioning:** FTP, TFTP, SCP, SFTP, Zero Touch Provisioning
- **Diagnostics & Resiliency:** Time Domain Reflectometry, Dying Gasp

# HSP-IO-48GE4XS-C3PA+

## KEY FEATURE HIGHLIGHTS



### Rich L2 Features

- **VLANs:** Support up to 4094 VLAN IDs, Voice VLAN, IP-subnet VLAN, Protocol-based VLAN, Private VLAN, MAC-based VLAN, GVRP/MVRP for dynamic VLAN registration
- **Loop Avoidance & Resiliency:** STP (802.1D), RSTP (802.1w), MSTP (802.1s); STP Root and Edge Port Protection; ERPS (ITU-T G.8032); UDLD (Unidirectional Link Detection)
- **Multicast:** IGMP v1/v2/v3 Snooping, IGMP Filtering, IGMP Proxy, IGMP Querier, MLD Snooping and MVR (Multicast VLAN Registration)
- LACP-based LAG, Static LAG with load sharing and active-passive policies
- IEEE 802.1Q VLAN Tagging, QinQ (Port-based)
- **QoS:** Up to eight priority queues, Rate Limiting/Policing, Shaping (SP, WRR), Multi-Field (802.1p/DSCP) Classification and Remarking
- LLDP and LLDP-MED for end-point/VoIP device discovery
- **MAC Table:** 32K entries, Jumbo MTU: 10240 Bytes

### L3 Features

- IPv4 and IPv6 Static Routing
- RIP v1/v2 L3 Dynamic Routing
- OSPFv2/v3 L3 Dynamic Routing
- Inter-VLAN Routing
- IPv4/IPv6 Dual Stack

### PoE Features

- PoE Budget - 740W
- Per port PoE configuration and scheduling
- Auto PoE Check and reboot if device does not respond
- Persistent PoE and Power Delay (to let the device boot)

### Security Features

- L2/L3/L4 ACL with extended features
- 802.1X Port Security with RADIUS Accounting & Dynamic VLAN Assignment, Dynamic/Downloadable ACLs
- **AAA Support:** TACACS+, RADIUS and RADSec
- DHCP snooping, Dynamic ARP Inspection, DHCPv6 Guard
- Port Security, Sticky MAC, IP-MAC Binding
- PKI Key, Certificate, SSL IPv4/IPv6, IPv6 Source Guard
- Storm Control - Broadcast, Multicast and Unknown Unicast

### Advanced Features

- IEEE 802.3ah Link-level OAM
- IEEE 802.1ag Ethernet CFM (ITU-T Y.1731 Performance Monitoring)

### Switching / Forwarding Capacity

**Switching Capacity** 176 Gbps

**Forwarding Capacity** 130.944 MPPS

### Design Parameters

- Operating Temperature: -5°C to 50°C
- 1U fixed configuration
- Humidity: 5% to 95% non-condensing
- Altitude: 3000 Meters (10,000 Feet)
- Dimension (WxHxD): 442 x 44 x 375 mm

### Power Supply Options

- Integrated Single AC Power Supply (100-240 VAC)

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### Compliance & Certifications

<b>EMI/EMC (TEC)</b>	IEC 61000-4
<b>EMI/EMC (CE)</b>	EN55032 / EN55024
<b>FCC Compliance</b>	FCC Part-B
<b>Safety (CE)</b>	EN62368-1
<b>Reliability Test</b>	QM333 Cyclic
<b>Environmental Tests</b>	IEC 60068-2
<b>ESS Tests</b>	IEC 60068-2 (Vibration, Shock, Drop, Bump, High Altitude)
<b>MTCTE (India)</b>	Mandatory Testing & Certification of Telecom Equipment
<b>Trusted Portal</b>	Country-specific security/trust compliance
<b>RoHS</b>	Restriction of Hazardous Substances
<b>IPv6 Logo</b>	IPv6 Ready Logo Certification (Phase-2 Gold)

### Ordering Information

Model No.	Description
<b>HSP-IO-48GE4XS-C3PA+</b>	IO, 48-Port, PoE+, L3 Managed Switch, 4x1/10G SFP+ Uplinks, Single AC Power Supply
<b>HSP-IO-Cable-AC-IN</b>	AC Power Cable, 1.5M (India Plug)

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