

## Product Highlights

### Power over Ethernet plus 10G

#### 710HXP-28TXH-4S (1RU rack mount)

- 24x 10M-1GbE RJ45 @ 60W
- 4x 100M-10GbE RJ45 @ 90W
- 4 x 1/10G SFP+ Uplinks

#### 710HXP-20TNH-4S (DIN rail mount)

- 16x 10M-1GbE RJ45 @ 30W
- 4x 100M-5GbE RJ45 @ 90W
- 4 x 1/10G SFP+ Uplinks

### Hardware

- Fanless for silent operation
- Mode button for user reset
- Secureboot system with Hardware Root of Trust

### Operational Simplicity

- Zero Touch Provisioning
- On-Prem or Cloud Managed

### Traffic and Flow Monitoring

- sFlow
- IPFIX

### Segmentation and Overlay

- 802.1Q VLANs
- IPv4/v6 VRFs
- VXLAN networks\*
- EVPN L2 (type 2)\*

### Cognitive Campus Resilience \*

- Active/Active MLAG aggregation
- Dynamic uplink load balancing
- SSU for software upgrades and hitless patching

### Arista Extensible Operating System (EOS®)

- Fine-grained truly modular network OS
- Stateful Fault Containment (SFC)
- Stateful Fault Repair (SFR)
- Full access to Linux shell and tools
- Extensible platform - bash, python, C++ , GO

## Overview

The Arista CCS-710HXP fanless ruggedized power over ethernet switch series is designed to extend the Cognitive Campus network into an industrial network infrastructure where extended temperature and vibration proof working conditions are required. These switches are also rated for the IP30 that offers protection against 2.5 mm particles entering inside the switch. With multiple mounting options, the CCS-710HXP series switches are well suited for any deployment where sound and space are as important as reliable network operations.



1RU rack mount: Arista CCS-710HXP-28TXH-4S



DIN rail mount: Arista CCS-710HXP-20TNH-4S, external power supply

## Arista EOS

The Arista CCS-710HXP series runs the same Arista EOS software as all Arista routing and switching products, simplifying network administration and software life cycle management.

Arista EOS is a modular operating system with an architecture that separates state from protocol processing and application logic. Built on top of a hardened Linux kernel, all EOS processes run in protected memory spaces and exchange state through an in-memory database. This multi-process state sharing architecture provides the foundation for smart system updates and self-healing resiliency. With Arista EOS, Linux based tools for monitoring and automation can be run natively on the switch.

\*Not currently supported in EOS

## CloudVision

CloudVision is Arista's management plane solution for simplifying network operations. Built on a modern state-streaming architecture, CloudVision is a multi-function software platform that enables a suite of capabilities for automated provisioning, change control, continuous compliance, real-time telemetry, predictive analytics and 3rd party management plane orchestration. As a multi-domain solution, CloudVision is a single management platform across data center, campus, WiFi, multi-cloud, and routing interconnect use-cases. CloudVision is offered as an on-premise appliance (virtual or physical) as well as a SaaS solution, CloudVision-as-a-Service.

## CloudVision Cognitive Unified Edge

The Arista CCS-710HXP also supports CloudVision CUE, a SaaS-based management platform delivering a simplified CloudVision experience focused on the network edge to the commercial market space. This 'Edge as-a-Service' approach provides streamlined dashboards to manage both wired and wireless connectivity, with plug and play Zero Touch Provisioning and AI-powered insights to simplify the network edge with a turnkey solution.

## Cognitive Campus

Arista's family of switching and WiFi platforms are managed through a single Cognitive Management Plane in CloudVision. Real time telemetry, time series database for after the fact troubleshooting with sub second granularity, and AI/ML powered analytics to monitor the infrastructure, users and applications on the Network. Rich change control used to simplify and automate the deployment and maintenance of campus infrastructure.

## Cognitive Segmentation

The CCS-710HXP compact series supports industry standard 802.1X and RADIUS authentication and interoperates with leading authentication solutions. Authorized users and devices can be placed into policy assigned 802.1Q or EVPN VXLAN segments in the network, automating the network layer of zero trust architecture.

## Cognitive Continuous PoE

Continuous PoE enables powering downstream devices even when the system is rebooted on a per port basis. Providing uninterrupted power to a devices and eliminates the need for a backup power source.

## POE for Workspaces

The CCS-710HXP delivers PoE networking in a light weight and fanless form factor. It supports new scenarios for deploying powered ethernet outside the wiring closet and into factor floors and in other OT environments.

## Power supply

The CCS-710HXP-28TXH will have two internal power supplies of 400W AC while the CCS-710HXP-20TNH will have two external PSUs - 480W AC or 290W DC.

## Arista Optics and Cables

The Arista 710HXP series supports a wide range of 1G and 10G pluggable optics and cables. For details about the different optical modules and the minimum EOS Software release required for each of the supported optical modules, visit <https://www.arista.com/en/products/transceivers-cables>

## Mounting Options

The CCS-710HXP-28TXH can be mounted on a 19" rack with 2-post (default) or 4-post brackets. The optional wall mount allows the switch to be mounted on a wall.

The CCS-710HXP-20TNH includes a default bracket for the DIN rail mounting. The optional spare mount kit contains spare DIN brackets and DIN rails, which can be used to mount the switch to a wall or inside a cabinet. There is also an optional DIN rail rackmount kit to mount the switch on a standard 19" rack.

## Operating Environment

The CCS-710HXP's operating temperature is from -40 C to 75C (-40 to 167F).

## Layer 2 Features

- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- Rapid Per VLAN Spanning Tree (RPVST+)
- 4096 VLAN IDs, 256 active VLANs
- Q-in-Q
- 802.3ad Link Aggregation/LACP
  - MLAG (Multi-Chassis Link Aggregation)\*
    - Uses IEEE 802.3ad LACP
- 802.1Q VLANs/Trunking
- 802.1AB Link Layer Discovery Protocol
- 802.3x Flow Control On Uplinks\*
- Jumbo Frames (9216 Bytes)
- IGMP v1/v2/v3 snooping
- Storm Control

## Layer 3 Features

- Routing Protocols: OSPF, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2
- 64-way Equal Cost Multi-path Routing (ECMP)
- Bi-Directional Forwarding Detection (BFD)
- VRF
- Route Maps
- IGMP v2/v3
- PIM-SM\* / PIM-SSM\* / PIM-BIDIR\*
- Anycast RP (RFC 4610)\*
- VRRP
- Virtual ARP (VARP)\*
- Policy Based Routing (PBR)\*
- Selective Route Download

## Industrial Ethernet (IE) Protocols

- PROFINET\*
- MODBUS\*
- Ethernet Ring Protection Switching (ERPS)\*

## Advanced Monitoring and Provisioning

- Latency Analyzer and Microburst Detection (LANZ)\*
- Zero Touch Provisioning (ZTP)
- Integrated packet capture/analysis with TCPDump
- Advanced Mirroring - Port Mirroring (4 sessions)
  - Enhanced Remote Port Mirroring
  - L2/3/4 Filtering on Mirror Sessions
- Advanced Event Management suite (AEM)
  - CLI Scheduler
  - Event Manager
  - Event Monitor
- Linux tools
- Sampled FlowTracking
- RFC 3176 sFlow
- IPFIX support
- Restore & configure from USB
- eAPI
- IEEE 1588 PTP (Transparent Clock and Boundary Clock)\*

\* Not currently supported in EOS

For detailed EOS feature support visit <https://www.arista.com/en/support/product-documentation/supported-features>

## Virtualization Support

- VXLAN Tunnel Virtual Port Termination\*
- VXLAN Bridging\*
  - EVPN type 2\*

## Security Features

- Service ACLs
- Control Plane Protection (CPP)
- Ingress / Egress ACLs using L2, L3, L4 fields
- Ingress / Egress ACL Logging and Counters
- MAC ACLs
- 802.1X Enhancements
  - Multi-Host 802.1X AUTH
  - MAC-Based AUTH (MAB)
  - Dynamic VLAN assignment
  - Named VLAN support
- ACL Deny Logging
- ACL Counters
- Atomic ACL Hitless restart\*
- DHCP Relay
- MAC access list security
- TACACS+
- RADIUS
- RadSec\*
- ARP trapping and rate limiting

## Quality of Service (QoS) Features

- Up to 8 queues per port
- 802.1p based classification
- DSCP based classification and remarking
- Explicit Congestion Notification (ECN)\*
- QoS interface trust (COS / DSCP)
- Strict priority queueing
- Weighted Round Robin (WRR) Scheduling
- Per-Priority Flow Control (PFC)\*
- ACL based DSCP Marking
- ACL based Policing
- Policing/Shaping
- Rate limiting

## PoE Capabilities

- LLDP enhancements for PoE including Media Endpoint Discovery (MED) attributes reporting
- PoE Controls
- VLAN for VoIP, QoS
- Cognitive PoE

## Network Management

- Dedicated Management plane Ethernet port
- CloudVision
- Configuration session commit and rollback
- RS-232 Serial Console Port

- USB Port
- SNMP v1, v2, v3
- Management over IPv6
- Telnet and SSHv2
- Syslog
- AAA
- Industry Standard CLI
- Beacon LED for system identification
- System Logging
- Environment monitoring
- MLAG ISSU\*
- Maintenance mode

## Extensibility

- Linux Tools
  - Bash shell access and scripting
  - RPM support
  - Custom kernel modules
- Programmatic access to system state
  - Python
  - C++

## Standard Compliance

- 802.1D Bridging and Spanning Tree
- 802.1p QoS/COS
- 802.1Q VLAN Tagging
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- 802.1AB Link Layer Discovery Protocol
- 802.3ad Link Aggregation with LACP
- 802.3az Energy Efficient Ethernet (EEE)\*
- 802.3x Flow Control
- 802.3u 100BASE-TX
- 802.3ab 1000BASE-T
- 802.3z Gigabit Ethernet
- 802.3ae 10 Gigabit Ethernet
- 802.3af/at 15W/30W Power over Ethernet (PoE)
- 802.3bt 60W Power over Ethernet (PoE)
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2462 IPv6 Stateless Address Auto-configuration
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- IEEE 1588-2008 Precision Time Protocol\*
- IP30

## SNMP

- RFC 3635 EtherLike-MIB
- RFC 3418 SNMPv2-MIB
- RFC 2863 IF-MIB
- RFC 2864 IF-INVERTED-STACK-MIB
- RFC 2096 IP-FORWARD-MIB
- RFC 4363 Q-BRIDGE-MIB
- RFC 4188 BRIDGE-MIB

- RFC 2013 UDP-MIB
- RFC 2012 TCP-MIB
- RFC 2011 IP-MIB
- RFC 2790 HOST-RESOURCES-MIB
- RFC 3636 MAU-MIB
- RMON-MIB
- RMON2-MIB
- HC-RMON-MIB
- LLDP-MIB
- LLDP-EXT-DOT1-MIB
- LLDP-EXT-DOT3-MIB
- ENTITY-MIB
- ENTITY-SENSOR-MIB
- ENTITY-STATE-MIB
- ARISTA-ACL-MIB
- ARISTA-QUEUE-MIB
- RFC 4273 BGP4-MIB
- RFC 4750 OSPF-MIB
- ARISTA-CONFIG-MAN-MIB
- ARISTA-REDUNDANCY-MIB
- RFC 2787 VRRPv2MIB
- MSDP-MIB
- PIM-MIB
- IGMP-MIB
- IPMROUTE-STD-MIB
- SNMP Authentication Failure trap
- ENTITY-SENSOR-MIB support for DOM (Digital Optical Monitoring)
- User configurable custom OIDs

## Table Sizes

Ingress / Egress ACLs	1K / 512
MAC addresses	16K
IPv4/v6 Hosts	8K / 4K
IPv4/v6 Routes	2K / 512
ECMP	64-way
IGMP Groups	1024

See EOS release notes for Supported MIBs

\*Not currently supported in EOS

## Specifications

Feature/Model	710HXP-28TXH-4S	710HXP-20TNH-4S
Ports	24x1G RJ45, 4x 10mG 4x 1/10G SFP	12x1G RJ45, 4x 5mG 4x 1/10G SFP
10M-1G UTP (30W) <sup>1</sup>		12
10M-1G UTP (60W) <sup>2</sup>	24	
mGig UTP (90W) <sup>2</sup>	4x 10mG	4x 5mG
10G SFP+	4	4
Throughput (FDX)	208 Gbps	144 Gbps
Packets/Second	95 Mpps	95 Mpps
Latency (RJ-45)		1.8 microseconds
CPU		Quad Core ARM
System Memory		8 GB
System Flash		20 GB
Packet Buffer		1.5 MB
USB Ports	1	1
Console Ports	1	1
Power (Max, excluding PoE)	80W	80W
Power Input	2x 400W AC (internal)	480W AC (external) or 290W DC (external)
Size (WxHxD)	17.4"x1.73"x15.6"	5.9"x6.3"x6.3"
Weight	TBD	TBD
EOS License Group (LIC-FIX)	G2	G2
CloudVision License Group	G2	G2
Minimum EOS	TBD	TBD

1: 802.3af/at

2: 802.3bt

## Arista Optics and Cables

The Arista CCS-710HXP Series supports a wide range of 1G and 10G pluggable optics and cables in the SFP ports. For details about the different optical modules and the minimum EOS Software release required for each of the supported optical modules, visit <https://www.arista.com/en/products/transceivers-cables>

### Supported Optics and Cables

Interface Type	Distance
10GBASE-CR	SFP+ to SFP+: 0.5m-5m
10GBASE-AOC	SFP+ to SFP+: 3m-30m
10GBASE-SRL	100m
10GBASE-SR	300m
10GBASE-LRL	1km
10GBASE-LR	10km
10GBASE-ER	40km
100Mb TX, 1GbE SX/LX/TX	Yes
SFP-1G-LX-H	TBD
SFP-10G-SR-H	TBD
SFP-10G-LR-H	TBD

### Power Supply Specifications

Supply	PWR-461-AC-H	PWR-462-AC-ADP-H	PWR-462-DC-ADP-H
PoE Power available	720W (dual PSUs)	400W	210W
Input Voltage	100-240V AC, 88-300V DC	100-240V AC, 127-375V DC	18-60V DC
Input Current	2.78-5.18A	2.4-4.7A	5.5-19A
Input Frequency	50-60Hz	50-60Hz	N/A
Input Connector	Terminal Block	Terminal Block	Terminal Block
Efficiency (Typical)	90%	91.5%	90%

### Environmental Characteristics

Operating Temperature <sup>1</sup>	Fan Equipped enclosure: -40 to 75°C (-40 to 167°F) Ventilated enclosure: -40 to 70C (-40 to 158°F) Sealed enclosure: -40 to 60C (-40 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 90%
Operating Altitude	0 to 15,000 ft, (0-4572m)

1. Certain airflow configurations or the use of higher power or reduced temperature range optics may reduce maximum operating temperature.

## Emissions and Safety Compliance

EMC	47 CFR FCC 15B Class A
	ICES-003 Issue 7
	EN 55032: 2015 +A11: 2020
	EN IEC 61000-3-2: 2019 +A1: 2021
	EN 61000-3-3: 2013 + A2: 2021
	EN 50121-4: 2016
	EN 61326
	IEC 61850
	IEEE 1613
	KS C 9832
	VCCI-CISPR 32:2016
	AS/NZS CISPR 32:2015 +A1 2020 (incl. CISPER 11)
	EN 300 386
	TEC/SD/DD/EMC-221
	CNS 15936
	BS EN 55032:2015+A11:2020
BS EN IEC 61000-3-2: 2019 +A1: 2021	
BS EN 61000-3-3: 2013+ A2: 2021	
Immunity	EN 55035:2017+A11:2020
	EN 300 386
	EN 50121-4: 2016
	EN 61326
	IEC 61850
	IEEE 1613
	EN 61000-4-2: 2009
	EN IEC 61000-4-3: 2020
	EN 61000-4-4: 2012
	EN 61000-4-5: 2014 +A1: 2017
	EN 61000-4-6: 2014
	EN IEC 61000-4-6: 2023
	EN 61000-4-8: 2010
	EN IEC 61000-4-11: 2020
	EN 61000-4-29: 2000
	EN 61000-6-1: 2019
EN 61000-6-2: 2019	
KS C9835	
BS EN 55035:2017+A11:2020	
Safety	EN 62368-1:2020 + A11:2020
	EN 62368-1:2014 + A11:2017
	IEC-62368-1:2018
	Korea KC Safety KC 62368-1 (2021-08)
	CSA/UL 62368-1:2019
	NOM 019-SCFI-1998
CNS 15598-1	
AS/NZS 62368.1:2022	

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**Emissions and Safety Compliance**

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<b>Certifications</b>	BSMI (Taiwan)
	FCC SDoC Class A (United States)
	ICES-003 (Canada)
	CE (European Union)
	KCC (South Korea)
	NRTL (North America)
	RCM (Australia/New Zealand)
	UKCA (United Kingdom)
	VCCI (Japan)
	TEC (India)
	ANATEL (Brazil)
ICASA (South Africa)	
NOM-019 Safety Equivalency (Mexico)	

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<b>European Union Directives</b>	2014/35/EU Low Voltage Directive
	2014/30/EU EMC Directive
	2012/19/EU WEEE Directive
	2011/65/EU RoHS Directive
	2015/863/EU Commission Delegated Directive

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<b>Further Information</b>	<a href="#">Product Certification Portal</a>
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Product Number	Product Description
CCS-710HXP-28TXH-4S	Arista 710HXP, 24x 1G 60W PoE, 4x 10 mGig 90W PoE, 4x10G SFP+ fanless switch, 2 x 400W AC/HVDC, standard rack mount
CCS-710HXP-20TNH-4S	Arista 710HXP, 16x 1G 30W PoE, 4x 5 mGig 90W PoE, 4x10G SFP+ fanless switch, DIN rail mount (power adapter sold separately)
PWR-461-AC-H	Spare 400W AC/HVDC Power Supply for 710HXP rack mount series
PWR-462-AC-ADP-H	Spare 480W AC Power Adapter for 710HXP DIN rail mount series
PWR-462-DC-ADP-H	Spare 290W DC Power Adapter for 710HXP DIN rail mount series
KIT-CCS-710HXP-WALL	Wallmount Bracket Kit for Arista 710HXP rack mount series
KIT-CCS-710HXP-DIN	Spare DIN Rail Bracket Kit for Arista 710HXP DIN rail mount series
KIT-CCS-710HXP-DIN-RM	DIN Rail Rackmount Kit for Arista 710HXP DIN rail mount series
LIC-FIX-G2-E	Enhanced License for Arista Fixed 1G/mG Group 2 Ethernet Switches (OSPF, ISIS, BGP, PIM)
LIC-FIX-G2-FLX-L	FLX-Lite License for Arista Fixed 1G/mG Group 2 Ethernet Switches - Full Routing upto 32K routes, EVPN, VXLAN (includes E Features)
LIC-FIX-G2-V2	EOS Segmentation and 3rd Party Integration Services license for Arista Fixed 1G/mG Group 2 Ethernet Switches
SS-CV-G2-SWITCH-1M	CloudVision Subscription Lic for 1-Month for 1 Switch. Arista 1G/mG. Group 2 Platforms. Delivered via download only. Includes E, FLX-L
SS-CV-LT-G2-SWITCH-1M	CloudVision Lite Subscription Lic for 1-Month for 1 Switch. Arista Fixed1G/mG Group 2 Platforms. Delivered via download only.
SS-CVS-G2-SWITCH-1M	CloudVision as-a-Service Subscription Lic for 1-Month for 1 Switch. Arista Fixed 1G/mG Group 2 Platforms. Includes E, FLX-L.
SS-CVS-LT-G2-SWITCH-1M	CloudVision Lite as-a-Service Subscription Lic for 1-Month for 1 Switch. Arista Fixed 1G/mG Group 2 Platforms.

## Warranty

The Arista CCS-710HXP switches come with a one-year limited hardware warranty, which covers parts, repair, or replacement with a 10 business day turnaround after the unit is received.

## Service and Support

Support services including next business day and 4-hour advance hardware replacement are available. For service depot locations, please see: <http://www.arista.com/en/service>

### Headquarters

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