Release Notes for Cisco Catalyst ESS9300 Embedded Series Switches, Release 17.17.x

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Cisco Catalyst ESS9300 Embedded Series Switch, Release 17.17.1

This document provides release information for the Cisco Catalyst ESS9300 Embedded series switch. It is a Small Form Factor Ruggedized 10 GigE Embedded platform for tactical, outdoor, and mobile environments. The compact design simplifies integration and offers the system integrator the ability to use the Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switch in a wide variety of applications. It consists of one switch card. There is no cooling plates sold with it. It is up to the system integrator to design a thermal solution with it. Thermal power of the switch is 35 Watts.

Cisco Catalyst ESS9300 Embedded Series Switch

The Catalyst ESS9300 Embedded Series Switch is a ruggedized 10G embedded platform that is designed for embedded applications for tactical, outdoor, and mobile installations requiring low power, small size, and ruggedization.

New software features

This table provides a brief description of the new software features introduced in this release.

Table 1. New software features in Cisco IOS XE Release 17.17.1 for the Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switch

Product Impact	Feature	Description
Ease of Use	Alarms	The Cisco ESS 9300 software monitors the device conditions on a per-port or a switch basis. If the conditions present on the switch or a port do not match the set parameters, the Cisco ESS 9300 software triggers an alarm or a system message.
	Factory reset	Enables secure factory reset to remove complex or undesirable configurations, allowing the switch to be reconfigured or moved to a new network.
	Zeroization	Provides secure erasure of sensitive data, ensuring confidentiality and compliance during device decommissioning or repurposing.
Upgrade	Optical Ports	Specifies support for 6 x 10G optical SR interfaces in an external Plug-in Card Profile (PICP) conforming to Sensor Open Systems Architecture (SOSA) standards, with default initialization to SR mode
	Generic Online Diagnostics	Supports online diagnostics to test hardware on live networks, including on-demand, scheduled, and automatic health-monitoring tests for components, interfaces, and solder joints.

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Product Impact	Feature	Description
	Intelligent Platform Management Platform	Provides Intelligent Platform Management Interface (IPMI) for software reset and power-cycle management using SHUTDOWN_REQUEST and SHUTDOWN_READY GPIO pins during system reloads or power button actions
	Backplane Ports	Specifies support for 2 x 10G backplane KR interfaces in a high-speed internal connections between modules within the chassis, automatic speed adjustment, seamless communication setup through IEEE compliant auto-negotiation, and enhanced data reliability via Forward Error Correction (FEC).
	Power-on Self-Test	Verifies hardware integrity through boot firmware checks, port loopback tests, and ASIC integrity tests during power-up and IOS boot.
	ALT Boot	Provides a fallback mechanism for booting the Cisco ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 in cases where the primary IOS image is unavailable or corrupted. It ensures the device can boot using the emergency IOS image in ROMMON mode, enabling recovery and system troubleshooting.

Changes in behavior

There are no behavior changes in 17.17.1 release.

Resolved issues

There are no resolved issues in 17.17.1 release.

Open issues

There are no open issues in 17.17.1 release.

Known issues

There are no known issues in 17.17.1 release.

Compatibility

SSH Algorithms for Common Criteria Certification Limitation

Starting from Cisco IOS XE Release 17.10, the following Key Exchange and MAC algorithms are removed from the default list:

- Key Exchange algorithm:
    - diffie-hellman-group14-sha1
- MAC algorithms:

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- hmac-sha1
- hmac-sha2-256
- hmac-sha2-512

Note: You can use the **ip ssh server algorithm kex** command to configure the Key Exchange algorithm and the **ip ssh server algorithm mac** command to configure the MAC algorithms.

Table 2. Hardware feature mapping between Cisco ESS 9300-10X-E and Cisco ESS-9300-8X16T of the Curtiss-Wright VPX3-623:

Category	Feature	Cisco ESS-9300-10X-E	Cisco ESS-9300-8X16T of the Curtiss-Wright VPX3-623
Hardware	Single board	Yes	Yes
	Small form-factor with mezzanine card	Supported with 4.595 in.(H) x 2.904 in.(W)	Supported with 5.1 in.(H) x 2.9 in.(W)
	Ethernet management port	Optional	Not supported
	Optical ports	10X10 GE optical ports with Enhanced Small Form-Factor Pluggable (SFP+)	• 8x10GE interfaces. By default, 2x10GE interfaces are configured in backplane mode and 6x10GE interfaces in the optical mode. • 10X1 GE Copper ports
	RS-232 console	Supported	Supported
	USB console	Supported	Not supported
	Common +3.3VDC and +5VDC power inputs	Supported	Supported
	Low power—35W (typical)	Supported	Supported
	ARM Quad-Core A53	Supported	Supported
	Alarms	• Two—input • One— output	• Four—input • One— output
	4GB DDR4 DRAM with ECC	Supported	Supported
	Eight GB onboard eMMC flash storage (2.5 GB usable space)	Supported	Supported
	Input/Output	• SD-cards socket • Power input • RJ-45 (RS-232) console • Micro-USB console • USB-A host port	• Power input • RJ-45 (RS-232) console • USB-A host port

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Category	Feature	Cisco ESS-9300-10X-E	Cisco ESS-9300-8X16T of the Curtiss-Wright VPX3-623
Software	IOS-XE, Network Essentials and Network Advantage	Supported	Supported
Industrial temperature	-40° C to +85° C	Supported	Supported

Refer to Cisco IOS XE Migration Guide for IIoT Switches for the latest information about upgrading and downgrading switch software for Cisco Catalyst IE9300 Series Switches, Release 17.18.1.

Supported software packages

Finding the Software Version

- The package files for Cisco IOS XE software can be found on the system board's internal flash memory device (flash:) or an external USB, depending on the device configuration.
- You can use the show version privileged EXEC command to see the software version that is running on your switch.

Note: Although the show version output always shows the software image running on the switch, the model name shown at the end of this display is the factory configuration and does not change if you upgrade the software license.

You can also use the dir filesystem: privileged EXEC command to see the names and versions of other software images that you might have stored in flash memory.

Software Images for Cisco IOS XE 17.17.x

This table provides the filename for the IOS XE 17.17.x software image for Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches.

Table 3. Software package for Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches, release 17.17.x

Release	Image Type	Filename	Switch Models
Cisco IOS XE.17.17.1	Universal	ie9k_iosxe.17.17.01.SPA.bin	Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches

Software Installation Options

This table lists the options for the **install** command for the Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switch.

To install and activate the specified file, and to commit changes to be persistent across reloads, enter the following command: **install add file filename [activate commit]**

Table 4. Summary of software installation commands for install mode

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Bug ID	Description
abort	Abort the current install operation.
activate	Activate an installed package.
add	Install a package file to the system.
auto-abort-timer	Install auto-abort-timer.
autoupgrade	Initiate software auto-upgrade on all incompatible switches.
commit	Commit the changes to the load path.
deactivate	Deactivate an install package.
label	Add a label name to any installation point.
remove	Remove installed packages.
rollback	Rollback to a previous installation point.

Related resources

Table 5. Additional content for Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switch, Release 17.17.1

Document	Description
Cisco IOS XE	Provides information about Cisco IOS XE.
Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches	Provides information about Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches.
Cisco Validated Design documents	Provides Cisco validated designs
Cisco MIB Locator	Provides locating and downloading MIBs.
Cisco Profile Manager	To receive timely, relevant information from Cisco, sign up here.
Cisco Services	Provides the business impact you're looking for with the technologies
Cisco Support	You can submit a service request here.
Cisco DevNet	To discover and browse secure, validated enterprise-class apps, products, solutions, and services.
Cisco Press	To obtain general networking, training, and certification titles visit here.
Cisco Warranty Finder	Provides warranty information for a specific product or product family.
Cisco support community	You can ask and answer questions, share suggestions, and collaborate with your peers.

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Document	Description
Cisco TAC	Provides most up-to-date, detailed troubleshooting information. Go to Product Support and select your product from the list or enter the name of your product. Look under Troubleshoot and Alerts, to find information for the problem that you are experiencing.
Cisco Feature Navigator	Provides platform support details and license level information for features. The CFN also has a tab that provides a MIB Locator.
Documentation Feedback	To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.

Licensing

This section provides information about the licensing packages for features available on the Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switch.

Network Essentials and Network Advantage licenses are available for:

- Cisco ESS-9300-10X-E starting with release 17.10.1.
- Cisco ESS-9300-8X16T on Curtiss-Wright VPX3-623 starting with release 17.17.1.

License levels

The software features available on Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches fall under these base or add-on license levels.

Base licenses

- Network Essentials
- Network Advantage: Includes features available with the Network Essentials license and more.

Add-on licenses

Add-on licenses require a Network Essentials or Network Advantage as a prerequisite. The features available with add-on license levels provide Cisco innovations on the switch, and on the Cisco Catalyst Center.

- Catalyst Center DNA Essentials
- Catalyst Center DNA Advantage: Includes features available with the Catalyst Center DNA Essentials license and more.

Smart licensing using policy

Smart Licensing Using Policy, which is an enhanced version of Smart Licensing, is the default and the only supported method to manage licenses.

Smart Licensing using Policy provides a licensing solution that does not interrupt the operations of your network. Instead, it enables a compliance relationship to account for the hardware and software licenses you purchase and use.

With this licensing model, you do not have to complete any licensing-specific operations, such as registering or generating keys before you start using the software and the licenses that are tied to it. Only export-controlled and enforced licenses require Cisco authorization *before* use. License usage is recorded on your device with timestamps, and the required workflows can be completed later.

Multiple options are available for license usage reporting – this depends on the topology you implement. You can use the Cisco Smart Licensing Utility (CSLU) Windows application, or report usage information

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directly to Cisco Smart Software Manager (CSSM). A provision for offline reporting for air-gapped networks, where you download usage information and upload to CSSM, is also available.

Starting with this release, Smart Licensing Using Policy is automatically enabled on the device. This is also the case when you upgrade to this release.

By default, your Smart Account and Virtual Account in CSSM is enabled for Smart Licensing Using Policy.

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