Release Notes for Cisco IE3500 Series Switches, Release 17.17.x

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Cisco IE3500 Series Switches, Release 17.17.x

This document provides release information for the Cisco Industrial Ethernet (IE) switches.

Cisco IE3500/IE3505 Series Switches

These are ruggedized switching platforms and provides superior bandwidth and high-PoE power with proven Cisco IOS XE Software for industrial environments. They are hardened to withstand temperatures ranging from freezing cold to extreme heat (-40°C to +75°C or -40°F to 167°F), as well as severe shock and vibration.

The IE3500 switch is designed to cater deployments where hardened products are required, including factory automation, smart cities, energy and process control, Intelligent Transportation Systems (ITS), energy production sites, smart city programs, and mining. They bring improved scale performance, built-in security feature set, and simplified management options for the switch. For more information, refer to the Datasheet.

Cisco IE3500H/IE3505H Series Switches

These are the next-generation managed IP67 switches powered by Cisco IOS XE and are ideal for deployment in the harshest environments. They are IP67-rated for water and dust resistance and are hardened to withstand temperatures ranging from freezing cold to extreme heat (-40°C to +75°C or -40°F to 167°F), as well as severe shock and vibration.

These switches are available with up to 24 ports. Fast Ethernet is supported through Fast Ethernet PIDs, and 1G PIDs can also be configured to operate at 100M speed. For a list of supported SFPs, refer the Datasheet. These switches can be wall-mounted and deployed without a housing cabinet. They offer a power budget of 240W, and supports Power over Ethernet (PoE), PoE+, and Universal Power over Ethernet (UPOE) at 60W.

These switches are equipped with advanced network-based security, segmentation, and visibility features for the most demanding industrial environments. They extend the power of intent-based networking to the harshest Internet of Things (IoT) edge, with use cases in industries such as mining, railways, and manufacturing. The switches can be wall mounted and deployed without a housing cabinet. For more information, refer to the Datasheet.

New hardware features

Table 1. New hardware features

Product Impact	Feature	License Level	Description
Base Functionality	Cisco IE3500 Rugged Series Switches	Network Essentials and Network Advantage	These are ruggedized switching platforms and provides superior high-bandwidth switching and are suitable for industrial environments. This release supports the following SKUs: • IE-3500-8T3S • IE-3500-8P3S • IE-3500-8T3X • IE-3500-8U3X

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Product Impact	Feature	License Level	Description
Base Functionality	Cisco IE3505 Rugged Series Switches	Network Essentials and Network Advantage	These are ruggedized switching platforms that provide superior high-bandwidth switching, incorporate FPGA technology for enhanced programmability, and are suitable for industrial environments. This release supports the following SKUs: • IE-3505-8T3S • IE-3505-8P3S
Base Functionality	Cisco IE3500 Heavy Duty Series Switches	Network Essentials and Network Advantage	These switches are the next-generation managed IP67 PoE switches and are ideal for deployment in the harshest environments. This release supports the following SKUs: • IE-3500H-8T • IE-3500H-16T • IE-3500H-24T • IE-3500H-12FT4T • IE-3500H-20FT4T • IE-3500H-14P2T • E-3500H-12P2MU2X
Base functionality	Cisco IE3505 Heavy Duty Series Switches	Network Essentials and Network Advantage	These switches are the next-generation managed IP67 PoE switches and are ideal for deployment in the harshest environments. This release supports the following SKUs: • IE-3505H-16T
Base Functionality	IEM-IE3500-8S Module Support	Network Essentials and Network Advantage	On the Cisco IE3500 Rugged Series Switches, the pure fiber expansion module (IEM-3500-8S) is supported with One-Gigabit (1G) Ethernet speed.
Base Functionality	Expansion modules		Common expansion modules inherit the feature set of the base switch*

*HSR, PRP, DLR don't work with IEM-3500-4MU= expansion module.

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.

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Known issues

There are no known issues in 17.17.1 release.

Supported hardware

Table 2. Supported SKUs

PID	Uplink Ports			Downlink Ports		
	Type	Ports	Interface name	Type	Ports	Interface name
IE-3500-8T3S	SFP/ SFP+	3	Gigabit Ethernet 1/1-3	Copper	8	Gigabit Ethernet 1/4-11
IE-3500-8P3S						
IE-3505-8T3S						
IE-3505-8P3S						
IE-3500-8U3X			TenGigabit Ethernet 1/1-3			
IE-3500-8T3X						

Table 3. Supported IE3500H SKUs

System	PIDs	SW	Uplinks	Downlinks	Data Path FPGA	PoE	Alternate PIDs (TAA and COO)
All Gig Copper	IE-3500H-8T	Network Essentials or Network Advantage	4x1G Copper	4x1G Copper	No	No	none
	IE-3500H-16T			12x1G Copper			none
	IE-3500H-24T			20x1G Copper			
Mixed Gig/GE Copper	IE-3500H-12FT4T			12xFE Copper	No	No	none
	IE-3500H-20FT4T			20xFE Copper			
Advanced Copper	IE-3505H-16T			12x1G Copper	Yes	No	none
POE	IE-3500H-14P2T		2x1G Copper	14x1G Copper	No	Yes	none
	IE-3500H-12P2MU2X		2x10G SFP	12x1G POE and 2xMGig UPOE			

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Supported expansion modules

Table 4. Supported expansion modules

PID	Downlink Ports		
	Type	Ports	Interface name
IEM-3500-16P	Copper RJ45	16	Gigabit Ethernet 2/1-16
IEM-3500-16T		16	Gigabit Ethernet 2/1-16
IEM-3500-8P		8	Gigabit Ethernet 2/1-8
IEM-3500-8T		8	Gigabit Ethernet 2/1-8
IEM-3500-4MU		4	Gigabit Ethernet 2/1-4
IEM-3500-8S	SFP/ SFP+	8	Gigabit Ethernet 2/1-8
IEM-3500-14T2S	Copper RJ45/ SFP/SFP+	Copper RJ45: 14 SFP: 2	Gigabit Ethernet 2/1-16
IEM-3500-6T2S		Copper RJ45: 6 SFP: 2	Gigabit Ethernet 2/1-8

Web UI System Requirements

The WebUI is a web browser-based switch management tool that runs on the switch. The following subsections list the hardware and software required to access the WebUI.

Minimum hardware requirements

Table 5. Minimum hardware requirements

Processor Speed	DRAM	Number of colors	Resolution
233 MHz minimum We recommend 1 GHz	512 MB We recommend 1 GB DRAM	256	1280 x 800 or higher

Operating systems

- Windows 10 or later
- Mac OS X 10.9.5 or later

Browsers

- Google Chrome: Version 59 or later (On Windows and Mac)
- Microsoft Edge
- Mozilla Firefox: Version 54 or later (On Windows and Mac)

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- Safari: Version 10 or later (On Mac)

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's 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

The following table provides the file names for the IOS XE 17.17.x software images for Cisco Catalyst IE3500 Series Switches.

Table 6. Software package for Cisco Catalyst ESS-9300-8X16T of the CURTISS-WRIGHT VPX3-623 Embedded Series Switches, release 17.17.x

Release	Image Type	Platform	File Name
Cisco IOS XE.17.17.1	Universal	IE3500 and IE3505	ie35xx-universalk9.17.17.01.SPA.bin

Automatic boot loader upgrade

When you upgrade from the existing release on your switch to a later or newer release for the first time, the boot loader may be automatically upgraded, based on the hardware version of the switch. If the boot loader is automatically upgraded, it will take effect on the next reload.

For subsequent Cisco IOS XE releases, if there is a new bootloader in that release, it may be automatically upgraded based on the hardware version of the switch when you boot up your switch with the new image for the first time.

Caution: Do not power cycle your switch during the upgrade.

Software installation commands

Note: For the **install** command to be successful, it is recommended to have a minimum of free space that is twice the size of the image in flash. If there is not enough space available in flash, you are advised to free up space in flash either by issuing the **install remove inactive** command or to manually clean up the flash by removing unwanted core files or any other files that occupy a large amount of space in flash.

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

Table 7. Summary of software installation commands for install mode

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Command	Description
add file tftp: *filename*	Copies the install file package from a remote location to the device and performs a compatibility check for the platform and image versions.
activate [auto-abort-timer]	Activates the file, and reloads the device. The **auto-abort-timer** keyword automatically rolls back image activation.
commit	Makes changes persistent over reloads.
remove	Deletes all unused and inactive software installation files.

Related resources

Table 8. Additional content for Cisco IE3500 Rugged Series Switch

Document	Description
Cisco Warranty Finder	Provides warranty information for a specific product or product family.
Cisco Validated Designs	Provides Cisco validated designs
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 support community	You can ask and answer questions, share suggestions, and collaborate with your peers.
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.
Documentation Feedback	To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.

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