



Cisco Nexus 3000 and 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I6(1)

This document lists the current and past versions of EPLD images and describes how to update them for use with the Cisco Nexus 3000¹ and 9000 Series switches. The Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I6(1) also applies to Release 7.0(3)I6(2).

The following table lists the changes to this document.

Date	Description
May 9, 2017	Created the release notes for Release 7.0(3)I6(1).
September 4, 2018	Updated to note that Release 7.0(3)I6(1) also applies to Release 7.0(3)I6(2).

¹ For these release notes the Cisco Nexus 3000 Series switches are those switches that run Cisco Nexus 9000 Series NX-OS software.

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Introduction

The Cisco Nexus 3000 and 9000 Series NX-OS mode switches contain several programmable logical devices (PLDs) that provide hardware functionalities in all modules. Cisco provides electronic programmable logic device (EPLD) image upgrades to enhance hardware functionality or to resolve known issues. PLDs include electronic programmable logic devices (EPLDs), field programmable gate arrays (FPGAs), and complex programmable logic devices (CPLDs), but they do not include ASICs. In this document, the term EPLD is used for FPGA and CPLDs.

The advantage of having EPLDs for some module functions is that when you need to upgrade those functions, you just upgrade their software images instead of replacing their hardware.

NOTE: EPLD image upgrades for a line card disrupt the traffic going through the module because the module must power down briefly during the upgrade. The system performs EPLD upgrades on one module at a time, so at any one time the upgrade disrupts only the traffic going through one module.

Cisco provides the latest EPLD images with each release. Typically, these images are the same as provided in earlier releases but occasionally some of these images are updated. These EPLD image updates are not mandatory unless otherwise specified. The EPLD image upgrades are independent from the Cisco In Service Software Upgrade (ISSU) process, which upgrades the system image with no impact on the network environment.

When Cisco makes an EPLD image upgrade available, these release notes announce their availability, and you can download the EPLD images from <https://software.cisco.com/download/navigator.html>.

Deciding When to Upgrade EPLDs

When new EPLD images are available, the upgrades are always recommended if your network environment allows for a maintenance period in which some level of traffic disruption is acceptable. If such a disruption is not acceptable at this time, then you might consider postponing the upgrade until a better time.

NOTE: The EPLD upgrade operation is a disruptive operation. You should execute this operation only at a programmed maintenance time. The system ISSU upgrade is a nondisruptive upgrade.

NOTE: Do not perform an EPLD upgrade during an ISSU system upgrade.

Switch Requirements

The Cisco Nexus 3000 and 9000 Series switch must be running the Cisco NX-OS operating system and include the following hardware:

- Supervisor modules (2) – each with at least 800 MB of available bootflash memory (Cisco Nexus 9504, 9508, and 9516 switches)
- System controller modules (2) (Cisco Nexus 9504, 9508, and 9516 switches)
- Line cards (Cisco Nexus 9504, 9508, and 9516 switches)
 - Cisco Nexus 9504 switch (1 to 4 line cards)
 - Cisco Nexus 9508 switch (1 to 8 line cards)
 - Cisco Nexus 9516 switch (1 to 16 line cards)
- Fabric modules (Cisco Nexus 9504, 9508, and 9516 switches)

Switch Requirements

- Fabric modules for 40-Gigabit line cards on a Cisco Nexus 9504, 9508, or 9516 switch (3-6 modules)
- Fabric modules for 100-Gigabit -E line cards on a Cisco Nexus 9504, 9508, or 9516 switch (4 modules)
- Fabric modules for 100-Gigabit -S line cards on a Cisco Nexus 9504 or 9508 switch (4 modules)
- Fan modules
 - Cisco Nexus 31128PQ-10GE, 3164Q-40GE, 3264Q, 92304QC, 9272Q, and 93120TX switches (2 modules)
 - Cisco Nexus 93128TX, 9396PX, and 9396TX switch (3 modules)
 - Cisco Nexus 31108PC-V, 31108TC-V, 3132Q-40GE, 3132Q-40GX, 3172PQ-10GE, 3172TQ-10GT, 3232C, 3524P-10G, 3524P-10GX, 92160YC-X, 9236C, 92300YC, 3108TC-EX, 93180LC-EX, 93180YC-EX, 9332PQ, 9372PX, 9372PX-E, 9372TX, or 9372TX-E switch (4 modules)
 - Cisco Nexus 9504, 9508, and 9516 switch (3 fan trays)
- Power supplies
 - 500-W AC, 930-W DC, or 1200-W HVAC/HVDC power supplies (2 for the Cisco Nexus 93180LC-EX switches)
 - 650-W AC, 930-W DC, or 1200-W HVAC/HVDC power supplies (2 for the Cisco Nexus 92160YC-X, 92304QC, 9236C, 93108TC-EX, 93180YC-EX, 9332PQ, 9372PX, 9372PX-E, 9372TX, 9372TX-E, 9396PX, and 9396TX switches)
 - 650-W AC or 1200-W HVAC/HVDC power supplies (2 for Cisco Nexus 92300YC switches)
 - 1200-W AC power supplies (2) or 930-W DC power supplies (2) for the Cisco Nexus 9272Q, 93120TX, and 93128TX switches
 - 3000-W AC power supplies or 3000-W Universal AC/DC or 3000-W DC power supplies for Cisco Nexus 9500 switches
 - Cisco Nexus 9504 switch (up to 4)
 - Cisco Nexus 9508 switch (up to 8)
 - Cisco Nexus 9516 switch (up to 10)
- Uplink module (Cisco Nexus 93128TX, 9396PX, and 9396TX switches only)
 - M4PC-CFP2
 - M6PQ
 - M6PQ-E
 - M12PQ

You must be able to access the switch through a console, SSH, or Telnet (required for setting up a switch running in NX-OS mode).

You must have administrator privileges to work with the Cisco Nexus 3000 and 9000 Series switch.

EPLD Upgrades Available for NX-OS Mode Releases 7.0(3)I4(6) through 7.0(3)I6(1)

Each EPLD image that you can download from <https://software.cisco.com/download/navigator.html> is a bundle of EPLD upgrades. To see the recent updated EPLD versions for the Cisco Nexus 3000 Series switches running Cisco Nexus 9000 NX-OS software, Cisco Nexus 9200, 9300, and 9300-EX platform switches, and the Cisco Nexus 9500 platform switches, see the following tables.

NOTE: All updates to an image are shown in boldface. If more than one release is shown for a column, the boldface applies to the first release listed for the column.

Available EPLD Images for the Cisco Nexus 3000 Series Switches

Component	EPLD Device	Release 7.0(3)I4(6)	Release 7.0(3)I5(1)	Release 7.0(3)I5(2)	Release 7.0(3)I6(1)
Cisco Nexus 31108PC-V (N3K-C31108PC-V)	IOFPGA	0x3 (0.003)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
Cisco Nexus 31108TC-V (N3K-C31108TC-V)	IOFPGA	0x2 (0.002)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
	MIFPGA	0x2 (0.002)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
Cisco Nexus 31128PQ-10GE CPU (N3K-C31128PQ-10GE)	IOFPGA	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 31128PQ-10GE I/O (N3K-C31128PQ-10GE)	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 3164Q (N3K-C3164Q)	IOFPGA	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)
	MIFPGA	0x24 (0.036)	0x24 (0.036)	0x24 (0.036)	0x25 (0.037)
Cisco Nexus 3232C (N3K-C3232C)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA	0x12 (0.018)	0x12 (0.018)	0x12 (0.018)	0x12 (0.018)
Cisco Nexus 3264Q (N3K-C3264Q)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA0	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA1	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)

Available EPLD Images for the Cisco Nexus 9200, 9300, and 9300-EX Platform Switches

Component	EPLD Device	Release 7.0(3)I4(6)	Release 7.0(3)I5(1)	Release 7.0(3)I5(2)	Release 7.0(3)I6(1)
Cisco Nexus 92160YC-X (N9K-C92160YC-X)	IOFPGA	0x9 (0.009)	0x17 (0.023)	0x17 (0.023)	0x17 (0.023)
	MIFPGA	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
Cisco Nexus 92300YC (N9K-C92300YC)	IOFPGA	N.A. ²	N.A. ²	N.A. ²	0x17 (0.023)
	MIFPGA0	N.A. ²	N.A. ²	N.A. ²	0x5 (0.005)
	MIFPGA1	N.A. ²	N.A. ²	N.A. ²	0x1 (0.001)
Cisco Nexus 92304QC (N9K-C92304QC)	IOFPGA	0x9 (0.009)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA0	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)
	MIFPGA1	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)
Cisco Nexus 9236C (N9K-C9236C)	IOFPGA	0x9 (0.009)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
	MIFPGA	0x6 (0.006)	0x8 (0.008)	0x8 (0.008)	0x9 (0.009)
Cisco Nexus 9272Q (N9K-C9272Q)	IOFPGA	0x10 (0.016)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA0	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
	MIFPGA1	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)
Cisco Nexus 93108TC-EX (N9K-C93108TC-EX)	IOFPGA	0x3 (0.003)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA	0x2 (0.002)	0x2 (0.002)	0x2 (0.002)	0x2 (0.002)
Cisco Nexus 93120TX (N9K-C93120TX)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
	MIFPGA1	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA2	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
Cisco Nexus 93128TX (N9K-C93128TX)	IOFPGA	0x10 (0.016)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
	MIFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
Cisco Nexus 93180YC-EX (N9K-C93180YC-EX)	IOFPGA	0x3 (0.003)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 9332PQ (N9K-C9332PQ)	IOFPGA	0x11 (0.017)	0x12 (0.018)	0x12 (0.018)	0x12 (0.018)
	MIFPGA	0x16 (0.022)	0x17 (0.023)	0x17 (0.023)	0x17 (0.023)

² Not available with this release.

Cisco Nexus 9372PX (N9K-C9372PX)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
	MIFPGA	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372PX-E (N9K-C9372PX-E)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
	MIFPGA	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372TX (N9K-C9372TX)	IOFPGA	0x5 (0.005)	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)
	MIFPGA	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372TX-E (N9K-C9372TX-E)	IOFPGA	0x5 (0.005)	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
Cisco Nexus 9396PX (N9K-C9396PX)	IOFPGA	0x15 (0.021)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA	0x14 (0.020)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9396TX (N9K-C9396TX)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x9 (0.009)	0x9 (0.009)
4-port 100-Gigabit optical uplink module (N9K-M4PC-CFP2)	MIFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
6-port 40-Gigabit optical uplink module (N9K-M6PQ and N9K-M6PQ-E)	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
12-port optical uplink module (N9K-M12PQ)	MIFPGA	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)

Available EPLD Images for the Cisco Nexus 9500 Platform Switches

Component	EPLD Device	Release 7.0(3)I4(6)	Release 7.0(3)I5(1)	Release 7.0(3)I5(2)	Release 7.0(3)I6(1)
Supervisor A (N9K-SUP-A)	IOFPGA	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)
Supervisor B (N9K-SUP-B)	IOFPGA	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)
System Controller (N9K-SC-A)	IOFPGA	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)
8-port 100-Gigabit CFP2 line card (N9K-X9408)	IOFPGA	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
	MIFPGA	0x8 (0.008)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
32-port 100-Gigabit QSFP28 line card (N9K-X9732C-EX) (for –E fabric modules)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA	0x6 (0.006)	0x6 (0.006)	0x7 (0.007)	0x7 (0.007)
32-port 100-Gigabit QSFP28 line card (N9K-X9732C-S) (for –S fabric modules)	IOFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
32-port 100-Gigabit QSFP28 line card (N9K-X9432C-S)	IOFPGA	0x14 (0.020)	0x14 (0.020)	0x14 (0.020)	0x14 (0.020)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
32-port 40-Gigabit QSFP+ line card (N9K-X9432PQ)	IOFPGA	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
36-port 40-Gigabit QSFP+ aggregation line card (N9K-X9636PQ)	IOFPGA	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
36-port 40-Gigabit QSFP+ line card (N9K-X9536PQ)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)
36-port 100-Gigabit QSFP28 line card (N9K-X9736C-EX)	IOFPGA	N.A. ³	N.A. ³	N.A. ³	0x11 (0.017)
	MIFPGA	N.A. ³	N.A. ³	N.A. ³	0x7 (0.007)
48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9464TX)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)

³ Not available in this release.

48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9564TX)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9564TX2)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
48-port 1-/10-Gigabit SFP+ and 4-port 40-Gigabit QSFP+ line card (N9K-X9564PX)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
48-port 1-/10-Gigabit SFP+ and 4-port 40-Gigabit QSFP+ line card (N9K-X9464PX)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
Fabric module for 40-Gigabit line cards in Cisco Nexus 9504 chassis (N9K-C9504-FM)	IOFPGA	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)
Fabric module for 100-Gigabit –EX line cards in the Cisco Nexus 9504 chassis (N9K-C9504-FM-E)	IOFPGA	0x12 (0.018)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
Fabric module for 100-Gigabit –S line cards in the Cisco Nexus 9504 chassis (N9K-C9504-FM-S)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
Fabric module for 40-Gigabit line cards in the Cisco Nexus 9508 chassis (N9K-C9508-FM)	IOFPGA	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)
Fabric module for 100-Gigabit –EX line cards in the Cisco Nexus 9508 chassis (N9K-C9508-FM-E)	IOFPGA	0x12 (0.018)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
Fabric module for 100-Gigabit –S line cards in the Cisco Nexus 9508 (N9K-C9508-FM-S)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
Fabric module for 40-Gigabit line cards in the Cisco Nexus 9516 chassis (N9K-C9516-FM)	IOFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
Fabric module for 100-Gigabit –EX line card in Cisco Nexus 9516 chassis (N9K-C9516-FM-E)	IOFPGA	N.A. ³	N.A. ³	N.A. ³	0x6 (0.006)

Determining Whether to Upgrade EPLD Images

To determine which devices need upgraded EPLDs, use the `show install impact epld bootflash:` command for a device and indicate the latest EPLD image file (`n9000-epld.7.0.3.I6.1.img`). The output for this command indicates the current EPLD images, new EPLD images, and whether the upgrades would be disruptive to switch operations. If the currently installed EPLD version number is greater than the new EPLD image number, you can skip the upgrade.

- To determine the EPLD upgrades needed for a Cisco Nexus 3000 Series switch, use the `show install impact epld bootflash:` command on that switch and indicate the `n9000-epld.7.0.3.I6.1` image. In the following example, the MIFPGA and IOFPGA EPLD images do not need to be upgraded.

```
switch# show install all impact epld n9000-epld.7.0.3.I6.1.img
```

```
Compatibility check:
```

Module	Type	Upgradable	Impact	Reason
1	SUP	Yes	disruptive	Module Upgradable

```
Retrieving EPLD versions... Please wait.
```

```
Images will be upgraded according to following table:
```

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
1	SUP	MI FPGA	0x23	0x23	No
1	SUP	IO FPGA	0x06	0x06	No
1	SUP	MI FPGA2	0x23	0x23	No

- To determine the EPLD upgrades needed for a Cisco Nexus 9200, 9300, or 9300-EX platform switch, use the `show install impact epld bootflash:` command on that switch and indicate the `n9000-epld.7.0.3.I6.1` image. In the following example, the MIFPGA and IOFPGA EPLD images can be upgraded for the switch supervisor (slot 1) and the MIFPGA2 EPLD image can be upgraded for the supervisor in the uplink module (slot 2). Both upgrades are disruptive.

```
switch# show install all impact epld bootflash:n9000-epld.7.0.3.I6.1.img
```

```
Compatibility check:
```

Module	Type	Upgradable	Impact	Reason
1	SUP	Yes	disruptive	Module Upgradable
2	Expansion	Yes	disruptive	Module Upgradable

```
Retrieving EPLD versions... Please wait.
```

```
Images will be upgraded according to following table:
```

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
1	SUP	MI FPGA	0x11	0x12	Yes
1	SUP	IO FPGA	0x06	0x06	No

```
...
```

```
switch#
```

Determining Whether to Upgrade EPLD Images

- To determine the EPLD upgrades needed for a Cisco Nexus 9500 platform switch, use the show install impact epld bootflash:n9000-epld.7.0.3.I6.1.img command on that switch and indicate the n9000-epld.7.0.3.I6.1 image. In the following example, the MIFPGA and IOFPGA EPLD images can be upgraded for the line cards in slots 2 through 7 and all of the fabric modules. These upgrades are disruptive.

```
switch# show install all impact epld bootflash:n9000-epld.7.0.3.I6.1.img
```

```
Compatibility check:
```

Module	Type	Upgradable	Impact	Reason
2	LC	Yes	disruptive	Module Upgradable
6	LC	No	none	Module is not Online
7	LC	Yes	disruptive	Module Upgradable
22	FM	Yes	disruptive	Module Upgradable
23	FM	Yes	disruptive	Module Upgradable
24	FM	Yes	disruptive	Module Upgradable
25	FM	Yes	disruptive	Module Upgradable
26	FM	Yes	disruptive	Module Upgradable
27	SUP	Yes	disruptive	Module Upgradable
29	SC	Yes	disruptive	Module Upgradable

```
Retrieving EPLD versions... Please wait.
```

```
Images will be upgraded according to following table:
```

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
2	LC	MI FPGA	0x12	0x13	Yes
2	LC	IO FPGA	0x16	0x16	No
7	LC	MI FPGA	0x12	0x13	Yes
7	LC	IO FPGA	0x16	0x16	No
22	FM	IO FPGA	0x18	0x19	Yes
23	FM	IO FPGA	0x18	0x19	Yes
24	FM	IO FPGA	0x18	0x19	Yes
25	FM	IO FPGA	0x18	0x19	Yes
26	FM	IO FPGA	0x18	0x19	Yes
27	SUP	IO FPGA	0x22	0x22	No
29	SC	IO FPGA	0x17	0x19	No

Downloading the EPLD Images

Before you can prepare the EPLD images for installation, you must download them to the FTP or management server.

Procedure

- Step 1 From a browser, go to <https://software.cisco.com/download/navigator.html>.

The browser will display the Cisco website.
- Step 2 Choose Switches.

A list of switch types displays on the right.
- Step 3 Select Data Center Switches.

The right side lists the Data Center Switch product series.
- Step 4 Select Cisco Nexus 3000 or Cisco Nexus 9000.

The right side lists the switches in the series that you selected.
- Step 5 Select the switch that you are updating EPLD images for.

The Downloads page opens and lists what you can download for the switch that you selected.
- Step 6 Select NX-OS EPLD Updates.

The Download Software page lists the available EPLD images for the switch.
- Step 7 If you see a new EPLD image for the NX-OS software installed on the switch, click the Download button.
- Step 8 Click the link for the file.

The Downloads page displays a Download button and lists information for the file.
- Step 9 Click Download.

The Supporting Documents page opens to display the rules for downloading the software.
- Step 10 Read the rules and click Agree.

A File Download dialog box opens to ask if you want to open or save the images file.
- Step 11 Click Save.

The Save As dialog box appears.
- Step 12 Indicate where to save the file and click Save.

The file saves to the location that you specified.

What to Do Next

You are ready to prepare the EPLD images for installation.

Installation Guidelines

To upgrade the EPLD images using CLI commands, follow these guidelines:

- Before you upgrade any EPLD images, be sure that you have updated the Cisco NX-OS operating system to the level required for the images and be sure that you have an EPLD image file.
- You can execute an upgrade from the active supervisor module only. This upgrade is for one or all of the modules as follows:
 - You can upgrade a module individually.
 - You can upgrade all modules sequentially.
 - You can update the images for online modules only.
- On a Cisco Nexus 9500 platform switch that has two supervisor modules, upgrade the EPLDs for the standby supervisor and then switch the active supervisor to the standby mode to upgrade its EPLDs (the supervisor switchover is not disruptive to traffic on Cisco Nexus 9500 platform switches). On a switch that has only one supervisor module, you can upgrade the active supervisor, but this will disrupt its operations during the upgrade.
- If you interrupt an upgrade, you must reapply the upgrade to the module that was being upgraded during the interruption.
- The upgrade process disrupts traffic on the targeted module.
- Do not insert or remove any modules while an EPLD upgrade is in progress.

Upgrading the EPLD Images

Procedure

- | | |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 1 | Copy the EPLD image file to bootflash. |
| Step 2 | To determine if you need to upgrade the BIOS for the image, use the <code>show install all impact</code> command and see the Upgrade Required (Upg-Required) field for the BIOS row in the command output. |
| Step 3 | If you do not need to upgrade the BIOS, set the boot variable using the <code>boot nxos bootflash:n9000-dk9.7.0.3.I6.1.bin</code> command. |
| Step 4 | Enter the <code>copy running-config startup-config</code> command to set the startup boot variables to the NX-OS image. |

Verifying the EPLD Upgrades

- Step 5 If you need to upgrade the BIOS, enter the `install all nxos bootflash:n9000-dk9.7.0.3.I6.1.bin` command.
- Step 6 Enter the `install epld bootflash:n9000-epld.7.0.3.I6.1.img module all` command.
The switch automatically reboots.
-

Verifying the EPLD Upgrades

To verify the EPLD upgrades for a switch or its modules, use the `show version module slot-number epld` command as follows:

- To verify updates for a module on a modular switch (Cisco Nexus 9500 platform switches), indicate the chassis slot number for *slot-number*.
`switch# show version module 22 epld`
- To verify updates for a top-of-rack switch (Cisco Nexus 3000 Series, and Cisco Nexus 9200, 9300, and 9300-EX platforms), use 1 for *slot-number*.
`switch# show version module 1 epld`

Displaying the Status of EPLD Upgrades

To display the status of EPLD upgrades on the switch, use the `show install epld status` command.

Limitations

When EPLDs are upgraded, the following guidelines and observations apply:

- If a module is not online, you cannot upgrade its EPLD images.
- If there are two supervisors installed in the switch (Cisco Nexus 9504, 9508, and 9516 switches only), you can either upgrade only the standby supervisor from the active supervisor or upgrade all modules (including both supervisor modules) by using the following commands:
 - `install epld bootflash: image module standby-supervisor-slot-number` (upgrades only the standby supervisor module)

NOTE: After you use this command, you can switchover the active and standby supervisor modules and then upgrade the other supervisor.
 - `install epld bootflash: image module all` (upgrades all of the modules)
- If there is only one supervisor installed in the switch, your upgrading or downgrading of EPLD images is disruptive.

Related Documentation

The entire Cisco NX-OS 9000 Series documentation set is available at the following URL:

<https://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/tsd-products-support-series-home.html>

Related Documentation

The entire Cisco NX-OS 3000 Series documentation set is available at the following URL:

<https://www.cisco.com/c/en/us/support/switches/nexus-3000-series-switches/tsd-products-support-series-home.html>

Release Notes

The release notes are available at the following URL:

https://www.cisco.com/en/US/products/ps13386/prod_release_notes_list.html

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For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*, at:

<https://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

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