



Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I7(2)

This document lists the current and past versions of EPLD images and describes how to update them for use with the Cisco Nexus 9000 Series switches.

The following table lists the changes to this document.

| Date | Description |
|-------------------|---|
| November 21, 2017 | Created the Cisco Nexus 9000 Series EPLD release notes for Release 7.0(3)I7(2). |

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Introduction

The Cisco Nexus 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 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)

Switch Requirements

- 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)
 - 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 92304QC, 9272Q, and 93120TX switches (2 modules)
 - Cisco Nexus 93128TX, 9396PX, 9396TX, and 9364C switches (3 modules)
 - Cisco Nexus 92160YC-X, 9236C, 92300YC, 93108TC-EX, 93180LC-EX, 93180YC-EX, 9332PQ, 9372PX, 9372PX-E, 9372TX, and 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)
 - 930-W DC power supplies (2 for all Cisco Nexus 9200 and 9300 platform switches (except 92300YC and 9348GC-FXP switches))
 - 1200-W AC power supplies (2) or 930-W DC power supplies (2) for the Cisco Nexus 9272Q, 93120TX, 93128TX, and 9364C switches
 - 1200-W HVAC/HVDC power supplies (2) for all Cisco Nexus 9200 and 9300 platform switches (except the 9348GC-FXP switch)
 - 3000-W AC power supplies or 3000-W Universal AC/DC or 3000-W DC power supplies for Cisco Nexus 9500 switches

EPLD Upgrades Available for NX-OS Mode Releases 7.0(3)I5(2) through 7.0(3)I7(2)

- 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 9000 Series switch.

EPLD Upgrades Available for NX-OS Mode Releases 7.0(3)I5(2) through 7.0(3)I7(2)

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 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 9200, 9300, and 9300-EX Platform Switches

| Switch or Uplink Module | EPLD Device | Release 7.0(3)I5(2) | Release 7.0(3)I6(1) | Release 7.0(3)I7(1) | Release 7.0(3)I7(2) |
|---|-------------|---------------------|---------------------|---------------------|---------------------|
| Cisco Nexus 92160YC-X (N9K-C92160YC-X) | IOFPGA | 0x17 (0.023) | 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. ¹ | 0x17 (0.023) | 0x17 (0.023) | 0x17 (0.023) |
| | MIFPGA0 | N.A. ¹ | 0x5 (0.005) | 0x5 (0.005) | 0x5 (0.005) |
| | MIFPGA1 | N.A. ¹ | 0x1 (0.001) | 0x1 (0.001) | 0x2 (0.002) |
| Cisco Nexus 92304QC (N9K-C92304QC) | IOFPGA | 0x10 (0.016) | 0x10 (0.016) | 0x10 (0.016) | 0x10 (0.016) |
| | MIFPGA0 | 0x1 (0.001) | 0x1 (0.001) | 0x1 (0.001) | 0x1 (0.001) |

| Switch or Uplink Module | EPLD Device | Release 7.0(3)I5(2) | Release 7.0(3)I6(1) | Release 7.0(3)I7(1) | Release 7.0(3)I7(2) |
|--|-------------|---------------------|---------------------|---------------------|---------------------|
| | MIFPGA1 | 0x1 (0.001) | 0x1 (0.001) | 0x1 (0.001) | 0x1 (0.001) |
| Cisco Nexus 9236C (N9K-C9236C) | IOFPGA | 0x15 (0.021) | 0x15 (0.021) | 0x15 (0.021) | 0x15 (0.021) |
| | MIFPGA | 0x8 (0.008) | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) |
| Cisco Nexus 9272Q (N9K-C9272Q) | IOFPGA | 0x16 (0.022) | 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 | 0x10 (0.016) | 0x10 (0.016) | 0x10 (0.016) | 0x10 (0.016) |
| | MIFPGA | 0x2 (0.002) | 0x2 (0.002) | 0x2 (0.002) | 0x2 (0.002) |
| Cisco Nexus 93108TC-FX (N9K-C93108TC-FX) | IOFPGA | N.A. ¹ | N.A. ¹ | 0x17 (0.023) | 0x17 (0.023) |
| | MIFPGA | N.A. ¹ | N.A. ¹ | 0x3 (0.003) | 0x3 (0.003) |
| 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 | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) |
| | MIFPGA | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) |
| Cisco Nexus 93180LC-EX (N9K-C93180LC-EX) | IOFPGA | N.A. ¹ | 0x17 (0.023) | 0x17 (0.023) | 0x17 (0.023) |
| | MIFPGA | N.A. ¹ | 0x15 (0.021) | 0x15 (0.021) | 0x15 (0.021) |
| Cisco Nexus 93180YC-EX (N9K-C93180YC-EX) | IOFPGA | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) |
| | MIFPGA | 0x4 (0.004) | 0x4 (0.004) | 0x4 (0.004) | 0x4 (0.004) |
| Cisco Nexus 93180YC-FX (N9K-C93180YC-FX) | IOFPGA | N.A. ¹ | N.A. ¹ | 0x17 (0.023) | 0x17 (0.023) |
| | MIFPGA | N.A. ¹ | N.A. ¹ | 0x9 (0.009) | 0x10 (0.010) |
| Cisco Nexus 9332PQ (N9K-C9332PQ) | IOFPGA | 0x12 (0.018) | 0x12 (0.018) | 0x12 (0.018) | 0x12 (0.018) |
| | MIFPGA | 0x17 (0.023) | 0x17 (0.023) | 0x17 (0.023) | 0x17 (0.023) |
| Cisco Nexus 9348GC-FXP (N9K-C9348GC-FXP) | IOFPGA | N.A. ¹ | N.A. ¹ | 0x6 (0.006) | 0x6 (0.006) |
| | MIFPGA | N.A. ¹ | N.A. ¹ | 0x8 (0.008) | 0x8 (0.008) |
| Cisco Nexus 9364C (N9K-C9364C) | IOFPGA | N.A. ¹ | N.A. ¹ | N.A. ¹ | 0x4 (0.004) |
| | MIFPGA | N.A. ¹ | N.A. ¹ | N.A. ¹ | 0x7 (0.007) |
| | MIFPGA1 | N.A. ¹ | N.A. ¹ | N.A. ¹ | 0x3 (0.003) |
| 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 | 0x6 (0.006) | 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 | IOFPGA | 0x6 (0.006) | 0x6 (0.006) | 0x6 (0.006) | 0x6 (0.006) |

EPLD Upgrades Available for NX-OS Mode Releases 7.0(3)I5(2) through 7.0(3)I7(2)

| Switch or Uplink Module | EPLD Device | Release 7.0(3)I5(2) | Release 7.0(3)I6(1) | Release 7.0(3)I7(1) | Release 7.0(3)I7(2) |
|--|-------------|---------------------|---------------------|---------------------|---------------------|
| (N9K-C9372TX-E) | MIFPGA | 0x3 (0.003) | 0x3 (0.003) | 0x3 (0.003) | 0x3 (0.003) |
| Cisco Nexus 9396PX (N9K-C9396PX) | IOFPGA | 0x16 (0.022) | 0x16 (0.022) | 0x16 (0.022) | 0x16 (0.022) |
| | MIFPGA | 0x15 (0.021) | 0x15 (0.021) | 0x15 (0.021) | 0x15 (0.021) |
| Cisco Nexus 9396TX (N9K-C9396TX) | IOFPGA | 0x9 (0.009) | 0x9 (0.009) | 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 or 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) |

¹ Not available in this release.

Available EPLD Images for the Cisco Nexus 9500 Platform Switches

| Component | EPLD Device | Release 7.0(3)I5(2) | Release 7.0(3)I6(1) | Release 7.0(3)I7(1) | Release 7.0(3)I7(2) |
|--|-------------|---------------------|---------------------|---------------------|---------------------|
| Supervisor A (N9K-SUP-A) | IOFPGA | 0x27 (0.039) | 0x27 (0.039) | 0x27 (0.039) | 0x27 (0.039) |
| Supervisor A+ (N9K-SUP-A+) | IOFPGA | N.A. ² | N.A. ² | 0x8 (0.008) | 0x9 (0.009) |
| Supervisor B (N9K-SUP-B) | IOFPGA | 0x27 (0.039) | 0x27 (0.039) | 0x27 (0.039) | 0x27 (0.039) |
| Supervisor B+ (N9K-SUP-B+) | IOFPGA | N.A. ² | N.A. ² | 0x8 (0.008) | 0x9 (0.009) |
| 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 | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) | 0x9 (0.009) |
| 32-port 100-Gigabit QSFP28 line card (N9K-X9732C-EX) (for –E fabric modules) | IOFPGA | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) |
| | MIFPGA | 0x7 (0.007) | 0x7 (0.007) | 0x7 (0.007) | 0x7 (0.007) |
| 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+ 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. ² | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) |
| | MIFPGA | N.A. ² | 0x7 (0.007) | 0x7 (0.007) | 0x7 (0.007) |
| 36-port 100-Gigabit QSFP28 line card (N9K-X9736C-FX) | IOFPGA | N.A. ² | N.A. ² | 0x4 (0.004) | 0x5 (0.005) |
| | MIFPGA | N.A. ² | N.A. ² | 0x5 (0.005) | 0x6 (0.006) |
| 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) |
| 48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9464TX2) | 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 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9464TX2) | 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 1/10GBASE-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-/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) |

| Component | EPLD Device | Release 7.0(3)I5(2) | Release 7.0(3)I6(1) | Release 7.0(3)I7(1) | Release 7.0(3)I7(2) |
|---|-------------|---------------------|---------------------|---------------------|---------------------|
| 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) |
| 48-port 1-/10-/25-Gigabit SFP28 and 4-port 40-/100-Gigabit QSFP28 line card (N9K-X97160YC-EX) | IOFPGA | 0x8 (0.008) | 0x8 (0.008) | 0x8 (0.008) | 0x8 (0.008) |
| | MIFPGA | 0x4 (0.004) | 0x4 (0.004) | 0x4 (0.004) | 0x4 (0.004) |
| Fabric module for Cisco Nexus 9504 40-Gigabit line cards (N9K-C9504-FM) | IOFPGA | 0x19 (0.025) | 0x19 (0.025) | 0x19 (0.025) | 0x19 (0.025) |
| Fabric module for Cisco Nexus 9504 100-Gigabit –EX line (N9K-C9504-FM-E) | IOFPGA | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) |
| Fabric module for Cisco Nexus 9504 100-Gigabit –S line cards (N9K-C9504-FM-S) | IOFPGA | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) |
| Fabric module for Cisco Nexus 9508 40-Gigabit line cards (N9K-C9508-FM) | IOFPGA | 0x19 (0.025) | 0x19 (0.025) | 0x19 (0.025) | 0x19 (0.025) |
| Fabric module for Cisco Nexus 9508 100-Gigabit –EX line cards (N9K-C9508-FM-E) | IOFPGA | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) |
| Fabric module for Cisco Nexus 9508 100-Gigabit –S line (N9K-C9508-FM-S) | IOFPGA | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) | 0x11 (0.017) |
| Fabric module for Cisco Nexus 9516 40-Gigabit line cards (N9K-C9516-FM) | IOFPGA | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) | 0x13 (0.019) |
| Fabric module for Cisco Nexus 9516 100-Gigabit –EX line cards (N9K-C9516-FM-E) | IOFPGA | 0x6 (0.006) | 0x6 (0.006) | 0x6 (0.006) | 0x7 (0.007) |
| | MIFPGA | N.A. ² | N.A. ² | 0x3 (0.003) | 0x4 (0.004) |

² Not available in this release.

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.I7.2.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.I7.2 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.I7.2.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 |

Downloading the EPLD Images

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

- 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 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.

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

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 **show install all impact** command and see the Upgrade Required (Upg-Required) field for the BIOS row in the command output.

Verifying the EPLD Upgrades

- Step 3** If you do not need to upgrade the BIOS, set the boot variable using the **boot nxos bootflash:n9000-dk9.7.0.3.I7.2.bin** command.
- Step 4** Enter the **copy running-config startup-config** command to set the startup boot variables to the NX-OS image.
- Step 5** If you need to upgrade the BIOS, enter the **install all nxos bootflash:n9000-dk9.7.0.3.I7.2.bin** command.
- Step 6** Enter the **install epld bootflash:n9000-epld.7.0.3.I7.2.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 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:

Related Documentation

- **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>

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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Obtaining Documentation and Submitting a Service Request

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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Related Documentation

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