

# Emulex<sup>®</sup> LPe35000-Series HBA Firmware and Boot Code

**Release 12.4.243.16, 12.4.243.22, 12.4.243.23, and 12.4.243.26**

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## Purpose and Contact Information

These release notes describe the new features, resolved issues, known issues, new firmware features or resolved issues that require a host reboot, technical tips, and license notices associated with this firmware and boot code release for Emulex<sup>®</sup> LPe35000-series HBAs.

For the latest product documentation, go to [www.broadcom.com](http://www.broadcom.com). If you have questions or require additional information, contact an authorized Broadcom<sup>®</sup> Technical Support representative at [ecd-tech.support@broadcom.com](mailto:ecd-tech.support@broadcom.com).

## New Features (Release 12.4.243.16)

- Support is added for AMD Epyc 7002-series processors (PCIe 4.0).
- x86Boot and UEFIBoot support is added for AMD Epyc 7002-series processors (PCIe 4.0).
- SFP data can now be read on trunked links.
- Support is added for loopback tests on trunked ports.
- Support is added for performance scaling across sockets on the Linux drivers.
- To improve consistency across Emulex HBAs, the PCI Rev\_ID value has been changed from 1 to 0. Drivers now accept both values.

**NOTE:** In some cases, a firmware update requires either a firmware reset or a basic PCIe reset, depending on the features available in the new firmware. A firmware reset is performed automatically if it is needed, regardless of the operating system. In some cases, a full reboot is required to activate new firmware, to enable a new feature, or to take advantage of a resolved issue. In such a case, the application that updated the firmware produces a message indicating what is needed.

See the [New Firmware Features or Resolved Issues That Require a Host Reboot](#) section for a list of new features or resolved issues that require a host reboot after a firmware update.

## Resolved Issues

### Firmware (Release 12.4.243.26)

1. The BB\_Credit Recovery feature is now enabled on an HBA that is connected to a Brocade<sup>®</sup> switch when Dynamic D\_Port is enabled on the HBA.
2. A condition that could result in memory loss has been resolved.

## Firmware (Release 12.4.243.23)

In Windows Server operating systems, the Trunking Initialization protocol is now performed on all trunked ports.

## Firmware (Release 12.4.243.22)

An issue in which SFP data could not be read on multiport adapters was resolved.

## Firmware (Release 12.4.243.16)

1. After a host reboot occurs, trunking no longer uses the WWNs assigned by FA-PWWN instead of the default WWNs.
2. An adapter that is attached to a Cisco MDS switch that supports 16Gb/s, and that is configured for Auto Detect, now runs at 16Gb/s instead of 8Gb/s.
3. An issue with function level reset (FLR) error handling and recovery was resolved.
4. Changes were made to support the suite of tests performed at the PCI-SIG industry workshop.

## Boot Code (Release 12.4.243.16)

A link speed that was configured in the Emulex OneCommand<sup>®</sup> Manager application is now reflected in the x86 Boot BIOS utility.

## Known Issues (Release 12.4.243.16, 12.4.243.22, 12.4.243.23, and 12.4.243.26)

### Firmware

1. To perform a firmware dump on an LPe35000-series adapter with one of the following inbox Linux drivers installed, you cannot use the OneCommand Manager or OneCapture™ applications. You must use the LPe35000-Series HBA Firmware Dump tool instead. Refer to the *Emulex Drivers for Linux Release Notes* for instructions on using the tool.
  - SLES 15
  - RHEL 7.6 (except the RHEL 7.6 errata kernel kernel-3.10.0-990.el7)
  - Ubuntu 18.0.4 (except the Ubuntu 18.04.3 HWE release)
2. A host reboot is required after a firmware update on the following Linux inbox drivers:
  - SLES 15
  - RHEL 7.6
  - Ubuntu 18.04 (except the Ubuntu 18.04.3 HWE release)
3. If a firmware update requires a system reboot, you cannot perform a firmware dump until the reboot has occurred.

### Workaround

None.

- When D\_Port tests are run from the switch, the switch port can get stuck in D\_Port mode if the tests are interrupted.

**Workaround**

Do not stop D\_Port tests while they are running. Instead, use the `Portdporttest --exit` command to clear the configuration.

If the switch port is stuck in D\_Port mode, reset the ports at both ends of the connection.

- A length error might occur on a PCIe read.

**Workaround**

None.

- The link fails to come up on some 16Gb/s arrays that are directly attached to an adapter when forward error correction (FEC) is enabled at the array.

**Workaround**

Disable FEC using the OneCommand Manager or the OneCommand Manager for VMware vCenter application. Refer to the appropriate drivers user guide and the *Emulex OneCommand Manager Application User Guide*, the *Emulex OneCommand Manager Application CLI User Guide*, or the *Emulex OneCommand Manager for VMware vCenter User Guide* for information about changing parameters.

## Boot Code

There are no known issues in the boot code in this release.

## New Firmware Features or Resolved Issues That Require a Host Reboot

This section lists the new firmware features or resolved issues that require a host reboot to be activated after they are installed through a firmware update.

### Firmware Version 12.4.243.26

No new firmware features in this release require a host reboot after a firmware update.

### Firmware Version 12.4.243.23

No new firmware features in this release require a host reboot after a firmware update.

### Firmware Version 12.4.243.22

No new firmware features in this release require a host reboot after a firmware update.

### Firmware Version 12.4.243.16

- An issue with function level reset (FLR) error handling and recovery was resolved.
- To improve consistency across Emulex HBAs, the PCI Rev\_ID value was changed from 1 to 0.
- Changes were made to support the suite of tests performed at the PCI-SIG industry workshop.

## Firmware Version 12.2.299.32

No new firmware features in this release require a host reboot after a firmware update.

## Firmware Version 12.2.299.23

No new firmware features in this release require a host reboot after a firmware update.

## Firmware Version 12.2.299.14

No new firmware features in this release require a host reboot after a firmware update.

## Firmware Version 12.2.212.14

This was the initial factory release of firmware for LPe35000-series adapters.

**NOTE:** If you downgrade the firmware to a version that did not require a host reboot after a firmware update, from a newer version that required a host reboot after a firmware update (such as version 12.4.243.16), you must perform a host reboot after installing the older, downgraded version.

## Technical Tips

1. Trunking is not supported at 8Gb/s speeds.
2. Neither FA-PWWN nor Dynamic D\_Port can coexist with the trunking feature. If trunking is enabled, the LPe35000 firmware automatically disables FA-PWWN and Dynamic D\_Port.
3. If you reset an adapter to its default values while trunking is configured, trunking is disabled after reboot, and all boot parameters are set to default.
4. If trunking is configured, the trunk port link speed displayed by the x86 Boot BIOS utility or the UEFI Boot utility is always shown as the aggregate speed. If a physical port is inactive, the displayed speed does not change from the aggregate speed.
5. D\_Port and FA-PWWN cannot be enabled simultaneously.

### Workaround

If D\_Port is enabled and you want to enable FA-PWWN, you must first disable D-Port. If FA-PWWN is enabled and you want to enable D\_Port, you must first disable FA-PWWN.

**NOTE:** You must disable D\_Port using an Emulex application that allows you to do so, such as the OneCommand Manager application.

6. Boot from SAN is not supported if Diffie-Hellman Challenge Handshake Authentication Protocol (DHCHAP) authentication is enabled.

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