



# **Red Hat Enterprise Linux (RHEL) 10.2 Driver Documentation**

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## Overview

This is the documentation for Red Hat Enterprise Linux (RHEL) Inbox Driver. This document provides instructions on drivers for NVIDIA® ConnectX® adapter cards used in a RHEL Inbox Driver environment.

## Included Documentation

- [Release Notes](#)

# 1 Release Notes

These are the release notes for Red Hat Enterprise Linux (RHEL) Inbox Driver. The release notes include the following sections.

- [General Support](#)
- [Changes and New Features](#)
- [Certifications](#)
- [Known Inbox-Related Issues](#)

## 1.1 General Support

### 1.1.1 Supported Uplinks to Servers

This version supports the following uplinks to servers.

Uplink/Adapter Card	Driver Name	Uplink Speed
BlueField-3	mlx5	<ul style="list-style-type: none"><li>• InfiniBand: EDR, HDR100, HDR, NDR200<sup>3</sup>, NDR<sup>3</sup></li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup>, 100GbE<sup>2</sup>, 200GbE<sup>3</sup>, 400GbE<sup>3</sup></li></ul>
BlueField-2		<ul style="list-style-type: none"><li>• InfiniBand: SDR, FDR, EDR, HDR</li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup>, 100GbE<sup>2</sup></li></ul>
BlueField		<ul style="list-style-type: none"><li>• InfiniBand: SDR, QDR, FDR, FDR10, EDR</li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE</li></ul>
ConnectX-8		<ul style="list-style-type: none"><li>• InfiniBand: EDR, HDR100<sup>3</sup>, HDR<sup>3</sup>, NDR<sup>3</sup>, NDR200<sup>3</sup>, XDR<sup>3</sup></li><li>• Ethernet: 50GbE<sup>2</sup>, 100GbE<sup>2</sup>, 200GbE<sup>3</sup>, 400GbE<sup>3</sup></li></ul>
ConnectX-7		<ul style="list-style-type: none"><li>• InfiniBand: EDR, HDR100, HDR, NDR200, NDR</li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup>, 100GbE<sup>2</sup>, 200GbE<sup>3</sup>, 400GbE</li></ul>
ConnectX-6 Lx		<ul style="list-style-type: none"><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup></li></ul>
ConnectX-6 Dx		<ul style="list-style-type: none"><li>• Ethernet: 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup>, 100GbE<sup>2</sup>, 200GbE<sup>2</sup></li></ul>
ConnectX-6		<ul style="list-style-type: none"><li>• InfiniBand: SDR, FDR, EDR, HDR100, HDR</li><li>• Ethernet: 10GbE, 25GbE, 40GbE, 50GbE<sup>2</sup>, 100GbE<sup>2</sup>, 200GbE<sup>2</sup></li></ul>
ConnectX-5/ConnectX-5 Ex		<ul style="list-style-type: none"><li>• InfiniBand: SDR, QDR, FDR, FDR10, EDR</li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE</li></ul>
ConnectX-4 Lx		<ul style="list-style-type: none"><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE</li></ul>
ConnectX-4		<ul style="list-style-type: none"><li>• InfiniBand: SDR, QDR, FDR, FDR10, EDR</li><li>• Ethernet: 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 56GbE<sup>1</sup>, 100GbE</li></ul>

1. 56GbE is an NVIDIA proprietary link speed and can be achieved while connecting an NVIDIA adapter card to NVIDIA SX10XX switch series or when connecting an NVIDIA adapter card to another NVIDIA adapter card.

2. Speed that supports both NRZ and PAM4 modes in Force mode and Auto-Negotiation mode.
3. Speed that supports PAM4 mode only.



- BlueField is supported as a standard ConnectX-5 Ethernet NIC only.
- BlueField-2 is supported as a standard ConnectX-6 Dx Ethernet NIC. On the DPU, BlueField-2 is only supported as technical preview (i.e., the feature is not fully supported for production).
- BlueField-3 is supported as a standard ConnectX-7 Ethernet NIC. On the DPU, BlueField-3 is only supported as technical preview (i.e., the feature is not fully supported for production).

## 1.1.2 Supported Adapter Card Firmware Versions

This version of Red Hat Enterprise Linux (RHEL) driver supports the following NVIDIA network adapter card firmware versions.

HCA	Recommended Firmware Version
BlueField-3	32.42.1000
BlueField-2	24.42.1000
BlueField	18.33.1048
ConnectX-8	40.44.0208
ConnectX-7	28.42.1000
ConnectX-6 Lx	26.42.1000
ConnectX-6 Dx	22.42.1000
ConnectX-6	20.42.1000
ConnectX-5	16.35.1012
ConnectX-4 Lx	14.32.1900
ConnectX-4	12.28.2302

## 1.2 Changes and New Features

RHEL 10.2 integrates features and bug fixes from the mainline Linux Kernel v6.17. The mlx5 drivers in RHEL support the same features found in that Kernel version.

For more details about the mlx5 features added between v6.15 (used in RHEL-10.1) and v6.17, consult the following documents:

- [Linux Kernel Upstream Release Notes v6.16](#)
- [Linux Kernel Upstream Release Notes v6.17](#)

## 1.3 Certifications

### 1.3.1 Red Hat Enterprise Linux Network Adapter Certifications

The following RHEL and NIC combinations have been certified.

Adapter Card	RHEL Versions
BlueField-3	RHEL 10.0-10.x
ConnectX-8	RHEL 10.0-10.x
ConnectX-7	RHEL 10.0-10.x
ConnectX-6	RHEL 10.0-10.x
ConnectX-5	RHEL 10.0-10.x

## 1.4 Known Inbox-Related Issues

For more details, please refer to the Red Hat page “Known Issues” in the relevant release note at [https://docs.redhat.com/en/documentation/red\\_hat\\_enterprise\\_linux/10/html/10.2\\_release\\_notes/known-issues](https://docs.redhat.com/en/documentation/red_hat_enterprise_linux/10/html/10.2_release_notes/known-issues) .

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