



# **Mellanox ConnectX<sup>®</sup>-3 Firmware (fw-ConnectX3) Release Notes**

Rev 2.10.0000

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# 1 Overview

These are the release notes for the ConnectX®-3 adapters firmware, fw-ConnectX3 Rev 2.10.0000. This firmware supports the following protocols:

- InfiniBand - FDR, QDR, SDR, DDR
- Ethernet - 10GigE, 40GigE
- PCI Express 3.0, with backwards compatibility with v2.0 and v1.1



Firmware Rev 2.10.0000 is compatible with MFT tools v2.7.0a and above. Using older versions of MFT tools will cause failure during image creation.



After burning new firmware to an adapter card, reboot the machine so that the new firmware can take effect. If you do not reboot, you will get an error in the RUN\_FW command.

The document consists of the following sections:

- “Revision Compatibility” on page 5
- “Supported Features” on page 6
- “Tools, Switch Firmware and Driver Software” on page 7
- “Known Issues” on page 10

## 2 Revision Compatibility

Firmware fw-ConnectX3 Rev 2.10.0000 complies with the following programmer's reference manual:

- *ConnectX Programmer's Reference Manual (PRM), Rev 0.7 or later*, which has Command Interface Revision 0x3. The command interface revision can be retrieved by means of the QUERY\_FW command and is indicated by the field *cmd\_interface\_rev*.

## 3 Supported Features

### 3.1 Features Enabled in Rev 2.10.0000

- InfiniBand:
  - FDR
  - FDR10
  - QDR
  - SDR
  - DDR
- Ethernet:
  - 1GigE
  - 10GigE XAUI
  - 10GigE XFI/SFI
  - 40GigE
- PCI Express 3.0, with backwards compatibility with v2.0 and v1.1
- Huge pages



ConnectX®-3 cards with firmware 2.10.0000 will include all ConnectX®-2 cards supported features.

## 4 Tools, Switch Firmware and Driver Software

Firmware v2.10.0000 is tested with the following tools, SwitchX firmware, and driver software:

- Driver versions:
  - MLNX-OFED 1.5.3-1.0.0
  - WinOF 2.1.3
- MFT version: 2.7.0a
- SwitchX firmware version: 9.0.3000

## 5 Supported Devices in Rev 2.10.0000

This firmware supports the devices and protocols listed in Table 1. For the most updated list of adapter cards supported, visit the firmware download pages via <http://www.mellanox.com>.



Please contact your FAE for firmware updates to pre-production cards not on this list.

*Table 1 - Supported PSIDs*

Device Part Number	PSID	Device Name	Supported Protocols
MCX354A-FCA	MT_1020110019	ConnectX-3 VPI adapter card; dual-port QSFP; FDR IB (56Gb/s) and 40GigE; PCIe3.0 x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
	MT_1020120019		
MCX354A-FCB	MT_1090110019	ConnectX-3 VPI adapter card; dual-port QSFP; FDR IB (56Gb/s) and 40GigE; PCIe3.0 x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
MCX354A-TCA	MT_1020110028	ConnectX-3 VPI adapter card; dual-port QSFP; FDR10 IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
	MT_1020120028		
MCX354A-TCB	MT_1090110028	ConnectX-3 VPI adapter card; dual-port QSFP; FDR10 IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
MCX354A-QCA	MT_1020110018	ConnectX-3 VPI adapter card; dual-port QSFP; QDR IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
	MT_1020120018		
MCX354A-QCB	MT_1090110018	ConnectX-3 VPI adapter card; dual-port QSFP; QDR IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s; RoHS R6	InfiniBand/Ethernet VPI
MCX353A-TCA	MT_1060110028	ConnectX-3 VPI adapter card; single-port QSFP; FDR10 IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s;RoHS R6	InfiniBand/Ethernet VPI
	MT_1060120028		
MCX353A-TCB	MT_1100110028	ConnectX-3 VPI adapter card; single-port QSFP; FDR10 IB (40Gb/s) and 10GigE; PCIe3.0x8 8GT/s;RoHS R6	InfiniBand/Ethernet VPI
MCX312A-XCA	MT_1050110023	ConnectX-3 EN network interface card; 10GigE; dual-port SFP+; PCIe3.0 x8 8GT/s; RoHS R6	Ethernet
	MT_1050120023		



## 6 Supported Cables and Modules in Rev 2.10.0000

Please refer to the following page for information on support cables:

[www.mellanox.com](http://www.mellanox.com) => Products => Cables and Modules.

The list is updated from time to time.



To provide the best interoperability, please refer to the supported cables page prior to installing your system.

## 7 Known Issues

The following table describes known issues in this firmware release and possible workarounds.

**Table 2 - Known Issues**

Index	Issue	Description	Current Implemented Workaround in FW	Scheduled Release (fix)
1.	KR4 not supported	KR4 is currently not supported	N/A	Future release
2.	SDR vs Qlogic QDR switch	InfiniBand link vs Qlogic QDR switch rises as DDR or SDR	N/A	Future release
3.	InfiniBand link speed changes	When a QDR port is connected through a QDR cable to a QDR switch, and then switched to an FDR cable and switch, the link comes up as QDR again rather than FDR	Restart the driver	Future release
4.	FDR/QDR vs DDR switch	The link is raised as SDR rather than DDR	N/A	Future release
5.	Cables supported in Standby mode	Firmware 2.10.0000 currently supports the following cables and modules in Standby mode: <ul style="list-style-type: none"> <li>• DAC 0.5M and 1M SFP+ cables</li> <li>• SFP+ SR module + fiber cable</li> <li>• SFP SR module + fiber cable</li> </ul>	N/A	Future release
6.	SRIOV not supported	SRIOV is currently not supported	N/A	Future release
7.	SBR assertion	SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters	N/A	N/A