

# Application Notes

for

## **Voltaire GridVision Integrated Firmware Revision 10.06 (Based on InfiniScale™ III Firmware 1.0.0)**

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## 1. Introduction

The GridVision™ Integrated firmware package, Rev. 10.06 contains firmware images for the Voltaire switch platforms ISR 2012, ISR 288, ISR 9096, and ISR 9024 and provides support for ConnectX™.

Those firmware images are based on Mellanox InfiniScale™ III firmware Rev. 1.0.0.

## 2. Related Documentation

- Voltaire GridVision User Manual [ISR 2012, ISR 9288, and ISR 9096] [DOC-00047]
- Voltaire Switch User Manual 4.0 [ISR 9096\_9288\_9024] [399Z00038]
- Mellanox InfiniScale™ III MT47396 Firmware 1.0.0 Release Notes

## 3. Functionality Changes

### 3.1 Added Support for ConnectX™ IB HCA

Support for ConnectX™ IB HCA product was added to firmware Rev 10.06 (1.0.0).

### 3.2 Removed Support for InfiniScale™ III A0 Device

InfiniScale III devices can either carry a Voltaire hardware revision number A0 or A1.

Firmware 10.06 (1.0.0) does not include support for the Voltaire InfiniScale III A0 device (Mellanox P/N: MT47396A0-FCC).

Firmware Revision 09.12 (0.8.6) is the last firmware image to support InfiniScale III A0 device.

Burning this firmware version (or a later version) to InfiniScale III A0 device will prevent the device from booting.

Burning of InfiniScale III A0 device with this firmware version (or a later version) is neither blocked nor detected with current GridVision Integrated software versions (3.4.x and 4.x).

Hence, prior to the firmware upgrade process, make sure detect any InfiniScale III A0 device in the fabric and prevent it from being burned.

For details how to view the firmware version and hardware revision refer to Section: "Viewing the Firmware Version".

## 4. Supported Platforms

The firmware package includes firmware images for the platforms and modules, as specified in the table below.

Specific configuration settings of each firmware image are specified by the firmware *physical parameter ID (psid)*. The PSID is an indicator associated with each firmware image.

The PSID of each firmware image is listed in the following table.

Module Name	PSID
ISR 9024D-M	VLT1110031006
ISR 9024D-U	VLT1100031006
ISR 9024-LRM	VLT1010021006
ISR 9024S-M	VLT1090031006
ISR 9024S-U	VLT1080031006
sFB-4D	VLT1130031006
sFB-4	VLT1050031006
sFB-12D	VLT1140031006
sFB-12	VLT1040031006
sLB-24D	VLT1120031006
sLB-24	VLT1030031006
sFB 2012	VLT1170031006
sLB 2024	VLT1150031006

## 5. Viewing the Firmware Version

This section provides instructions on viewing firmware version, PSID indicator, and hardware revision of the InfiniScale III switch chips that are present in the fabric.

### 5.1 Fabric View

GridVision™ Integrated software package Rev. 4.0.0 and higher provides a CLI command that lists the firmware versions, the PSID indicator, and the hardware revision for all the InfiniScale™ III switch chips in the fabric.

To view the firmware versions and PSIDs, run the following command from the CLI utilities menu:

```
(utilities)# firmware_verify_anafa_II
```

This command lists the firmware version, the PSID indicator, and the hardware revision for all the InfiniScale III switch chips in the fabric, as shown in the example below.

Example:

```
ISR9288D-0e18(utilities)# firmware_verify_anafa_II
Scan Fabric
Default fw_version is 00.08.06
-----
hw_dev_rev      hw_dev_id      fw_version      fw_build_id     fw_date         fw_psid
1 Switch 24 S-0008f10400400e1b ISR9288 Voltaire sFB-12D smalid 132
0x1a1           0xb924         00.08.06        0x2d22          07/12/2006     '
VLT1140030907'
-----
2 Switch 24 S-0008f104003f1205 ISR9288/ISR9096 Voltaire sLB-24D smalid 6
0x1a1           0xb924         00.08.06        0x2d22          07/12/2006     '
VLT1120030904'
-----
hw_dev_rev      hw_dev_id      fw_version      fw_build_id     fw_date
fw_psid
Default fw_version is 00.08.06
```

## 5.2 Platform View

Alternatively, you can view the PSID and the hardware revision under the utilities menu, as detailed below.

**Step 1** From the CLI Admin menu run the `module-firmware show` command.

Example:

```
Switch> module-firmware show
Grab I2C lock
Anafa No. Node GUID          System GUID          LID    FW Version
-----
Line 4
-----
1           8f104003f104e      8f104003f104e      2      0.8.6
Spine 2
-----
1           8f10400403003      8f10400403003      4      0.8.6
```

**Step 2** Run `vendstat N <LID>` from the CLI Utilities Menu for each LID, as shown in the example below:

```
Switch(utilities) vendstat N
hw_dev_rev:.....0x1a1
hw_dev_id:.....0xb924
fw_version:.....00.08.06
fw_build_id:.....0x2d22
fw_date:.....07/12/2006
fw_psid:.....'VLT1120030904'
fw_ini_ver:.....0
sw_version:.....00.00.00
```

In this example, the firmware version is `fw_psid = VLT1120030904`

## 6. Firmware Upgrade Process

The user must invoke a firmware upgrade for the entire fabric.

### To perform a firmware upgrade:

1. Locate the firmware package on a local FTP server.
1. For ISR 9288/9096/2012 Grid Directors, the entire chassis can be upgraded using the following CLI commands:
  - a. Configure the FTP server (name or IP address, username, and password)
  - b. Invoke the following command and specify the directory on the server where the firmware package is located (`update-file-param`):

```
update firmware [chassis] [update-file-dir]
```

**Note: If the directory is not specified, the firmware will be taken from the local system, not from the local FTP server.**
  - c. Monitor the output of the upgrade process.
  - d. In case of upgrade failure on specific modules, wait until the process is completed and repeat the upgrade command specifying the erroneous modules only.
  - e. Power cycle the chassis to apply the new firmware.

**Note:** Each Grid Director System is upgraded separately.
2. For ISR 9024 platforms, the entire fabric can be upgraded using a single CLI command:
  - a. Configure the FTP server (name or IP address, username, and password).
  - b. Invoke the following command:

```
update remote-firmware all [update-file-dir]
```

**Note: If the directory is not specified, the firmware will be taken from the local system, not from the local FTP server.**
  - c. Monitor the output of the upgrade process.
  - d. In case of upgrade failure on a specific platform, wait until the process is completed. Repeat the upgrade command specifying the erroneous platform only (using its LID).
  - e. Power cycle the platforms to apply the new firmware.
3. Verify that the new firmware was upgraded in the whole fabric using the command described in the Section 5 on “Viewing the Firmware Version”.

#### NOTE



It is mandatory to upgrade all InfiniScale -III switch chips in the fabric to the same FW version, for both managed and unmanaged switch platforms.

## 7. Known Issues

#	Module	Summary
1	Firmware upgrade	With GridVision Integrated software versions (4.x or older), there is no protection against firmware burning of InfiniScale III A0 device.
2	SM link configuration  (of an SDR – DDR connection)	An SM running on SDR switch that is connected to a DDR switch might fail to configure the DDR switch in case of cable plug-in.  Workaround: from the master SM platform, invoke the CLI:  <code>sm-initiate-fabric-configuration</code>
3	SM hand over	SM handover will not occur if the trigger (e.g. SM priority change) is done on the standby SM side.