Feature Description Document

Upgrading Firmware Package

Purpose

This document outlines the process of upgrading the Invixium device firmware using IXM WEB or via a USB drive.

Applies to

TITAN	TFACE	TOUCH 2	SENSE 2	MERGE 2	MYCRO
All Devices	All Devices	All Devices	All Devices	All Devices	All Devices

Description

Upgrading device firmware is a critical process for embedded products as it increases security, improves performance and fixes pending issues. There are two ways to upgrade the firmware on Invixium Devices.

1. From IXM WEB

2. From the device using a USB

To ensure smooth operation and to notify the user regarding the availability of new firmware, IXM WEB 2.2 onwards an Auto-Firmware Upgrade feature has been introduced.

This feature allows users to upgrade device firmware automatically based on schedule or immediately in real-time. This can be done as described below:
- o Manual Upgrade
- o Auto-Schedule upgrade once the firmware file is available on the device. It can be scheduled later or can be upgraded immediately.
- o Upload firmware for intermediate firmware upgrade if required

Note: Always upgrade the IXM WEB version to the latest version before upgrading the firmware of the devices to ensure smooth operation.

Auto Download & Upload Firmware Package

1. IXM WEB 2.2 onwards the Auto-Download field remains activated for all the devices for all communication modes (Ethernet, Secured Ethernet, Wi-Fi, Secured Wi-Fi and Serial).

2. For cellular supported devices, if IXM WEB detects that the device is on cellular communication mode then the "Auto-Download" field will remain inactive.

3. Any latest firmware is uploaded on "C:\Program Files (x86)\Invixium\IXM WEB\ FirmwareUpgradeFiles" (Note: This path can be different based on where IXM WEB is installed) IXM WEB will detect the new available firmware package from the path were IXM WEB package is installed. Based on this the "Status" field will display an appropriate message.


4. The device grid will display one of the following applicable status messages:
   - New Firmware Available
   - Upload Started
   - Upgrade Started
   - Upload in Progress
   - Upgrade in Progress
   - Upgrade Complete
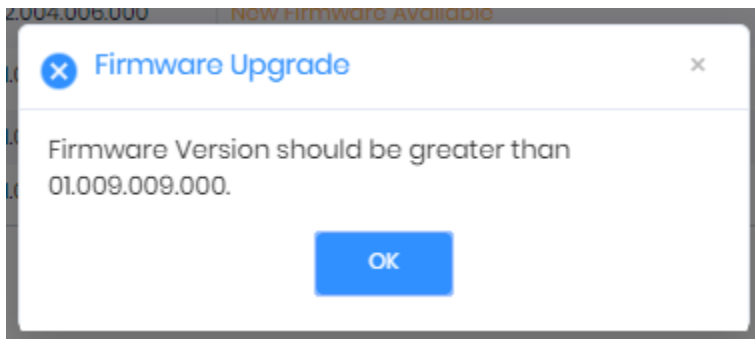   - Upload Failed
   - Upgrade Failed

5. To upload a firmware package click **Upload Firmware**, it will open a dialog box to select the firmware package file.
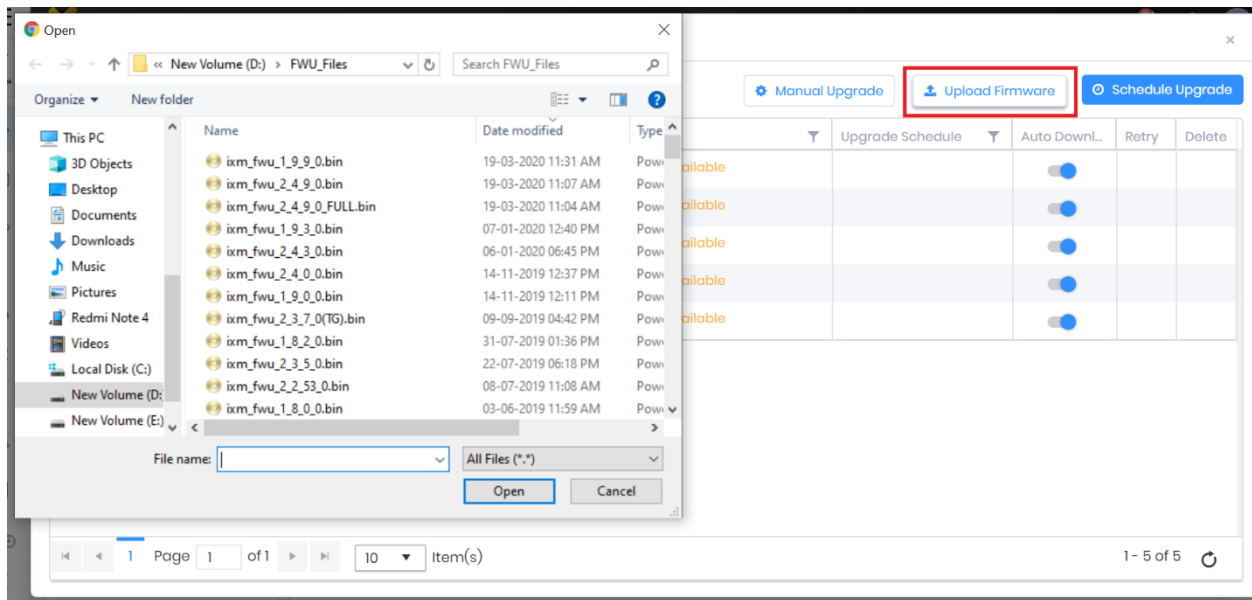
6. Once the firmware package file is uploaded to the machine, it will display a "**Firmware Uploaded**" message.
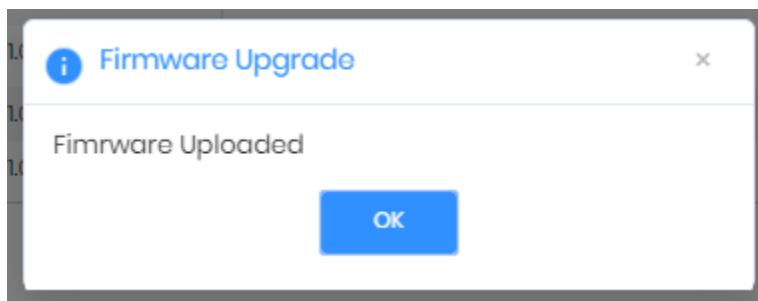
7. If the wrong version is uploaded by a user then an error message will be displayed.
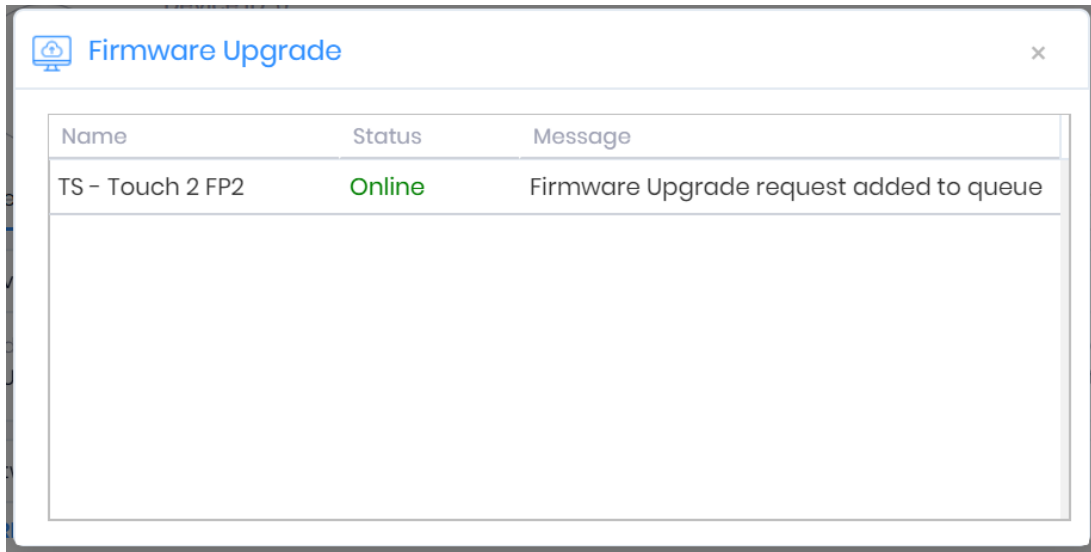
Schedule Firmware Upgrade

1. Users can schedule the firmware package from IXM WEB version 2.2.x.x onwards. Select any device(s) and then click **Schedule Upgrade**. It will open a popup window with scheduling options.
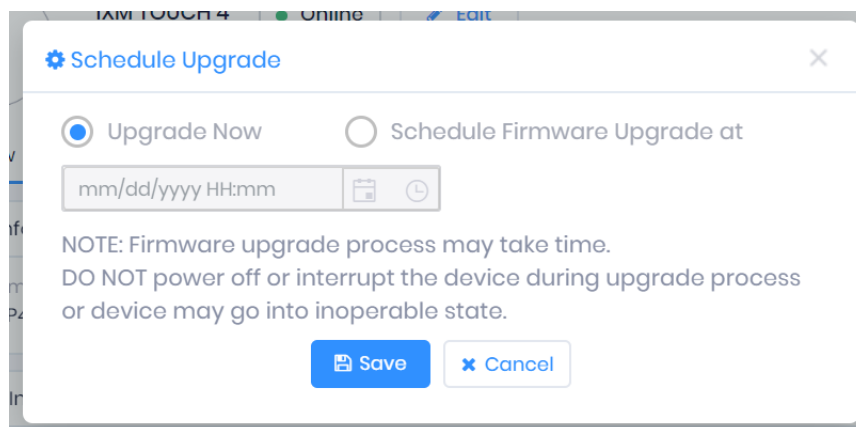
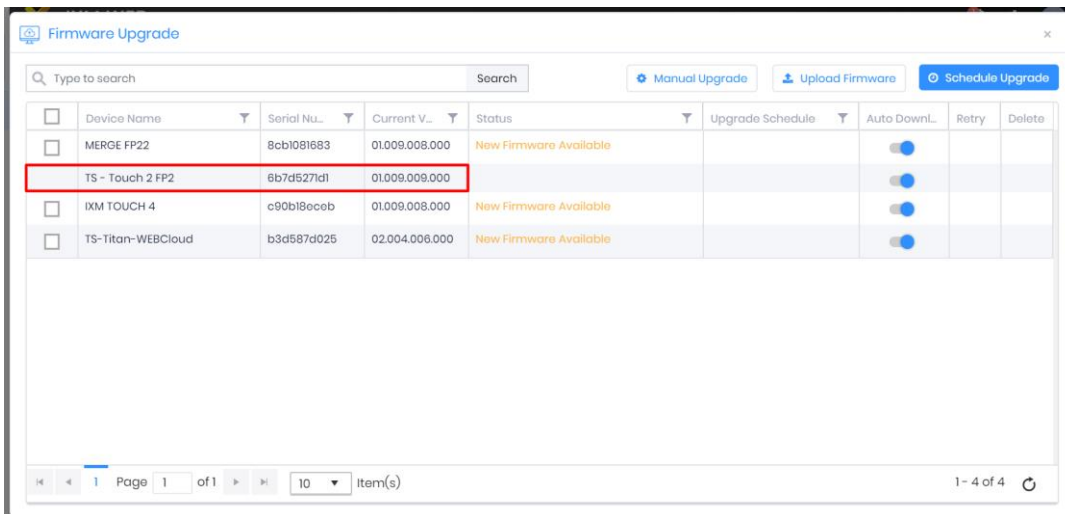2. In the popup window, two options will be available. "**Upgrade Now**" and "**Schedule Firmware Upgrade at**".
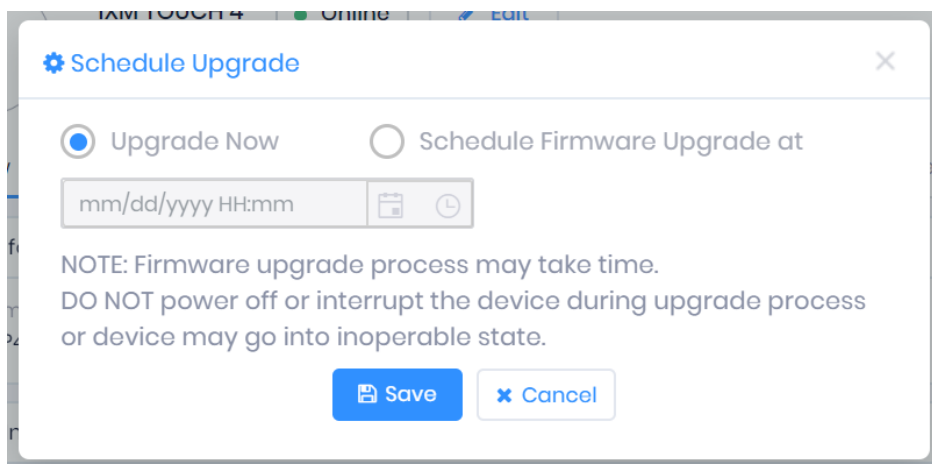
3. By default, the "**Upgrade Now**" option will be selected, if the user wants to immediately start the upgrade process then click **Save**. It will open a popup window and display a message to the user "**Firmware Upgrade request added to queue**".

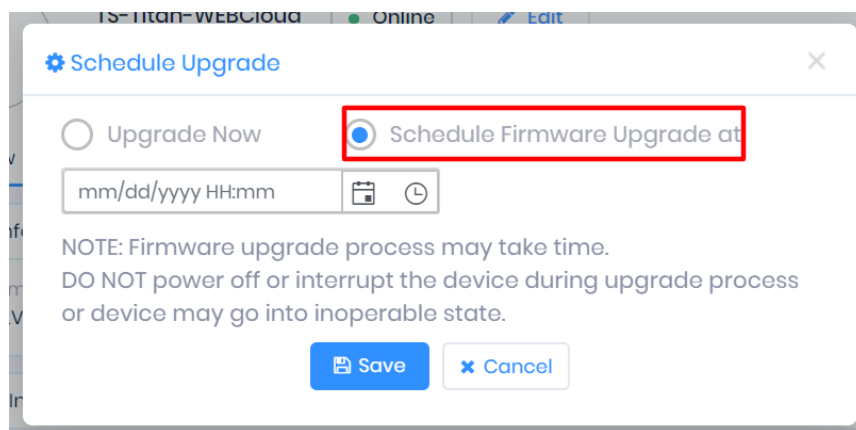4. Upon closing the popup window firmware upgrade process will start on the selected device(s).

5. Once the firmware upgrade process completes user will be able to see a new version number reflected in the table under the "**Current Version"** column.

6. To upgrade the firmware package later, the user can select the "**Schedule Firmware Upgrade at**" option.

7. Select the date & time when you want to schedule the firmware upgrade.
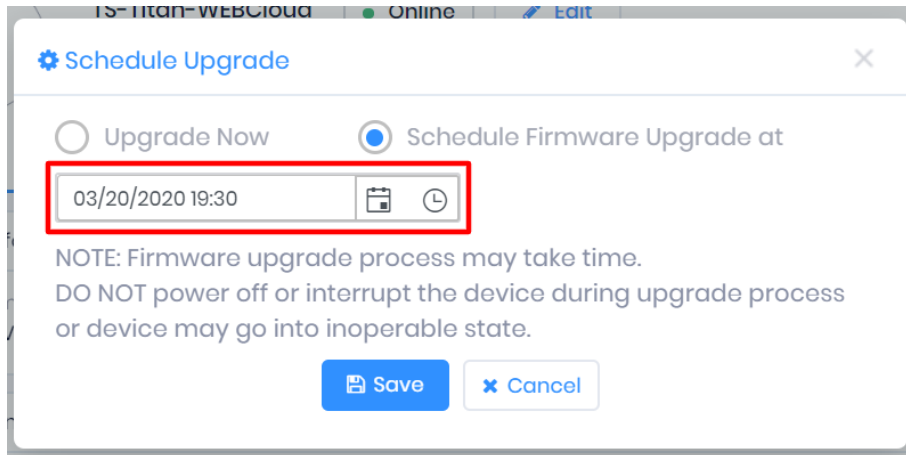
8. Click **Save** to set the scheduled date & time for the firmware upgrade process to be executed in the selected device(s). This scheduled date & time will display in the device grid under the "**Upgrade Schedule**" column.
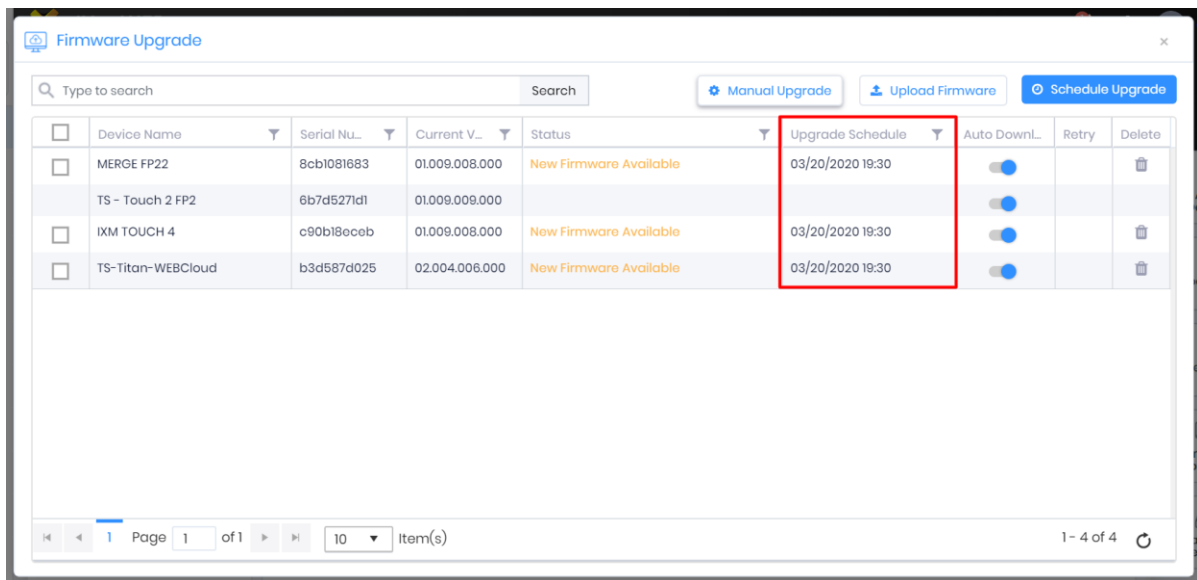
9. On the scheduled date & time, once the firmware upgrade process completes, the new version number will be displayed in the device grid under the "**Current Version**" column.

Note: If on any device, the firmware upgrade process fails then the user can click the **Retry icon** to reinitiate the firmware upgrade process.

Manually Upgrade Firmware Package using IXM WEB

1. From **Home** >> Click the **Devices** tab on the top >> Select the **Firmware Upgrade**
    app to display the default settings.

2. Click **Manual Upgrade** to proceed with upgrading the firmware package on the
    device(s).

3. Click "**Select Firmware**" to select a firmware package file. The Firmware Upgrade confirmation message will pop up.
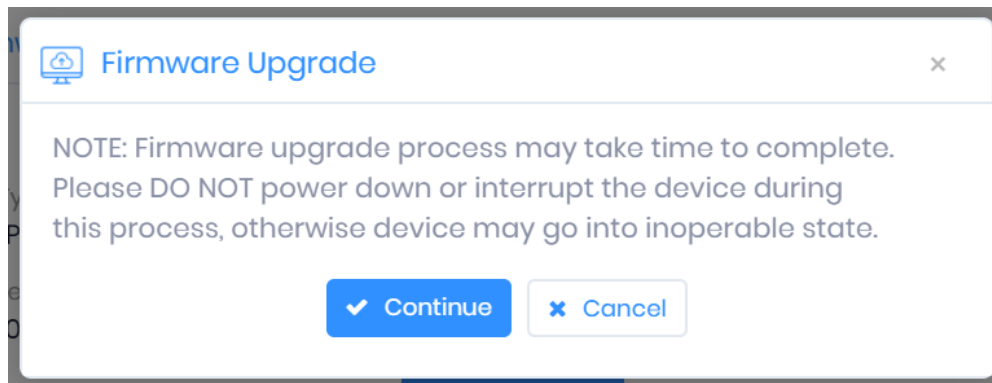
4. Click **Continue** to display the device selection view. Select devices on which you want to upgrade the firmware package and then click **OK**.
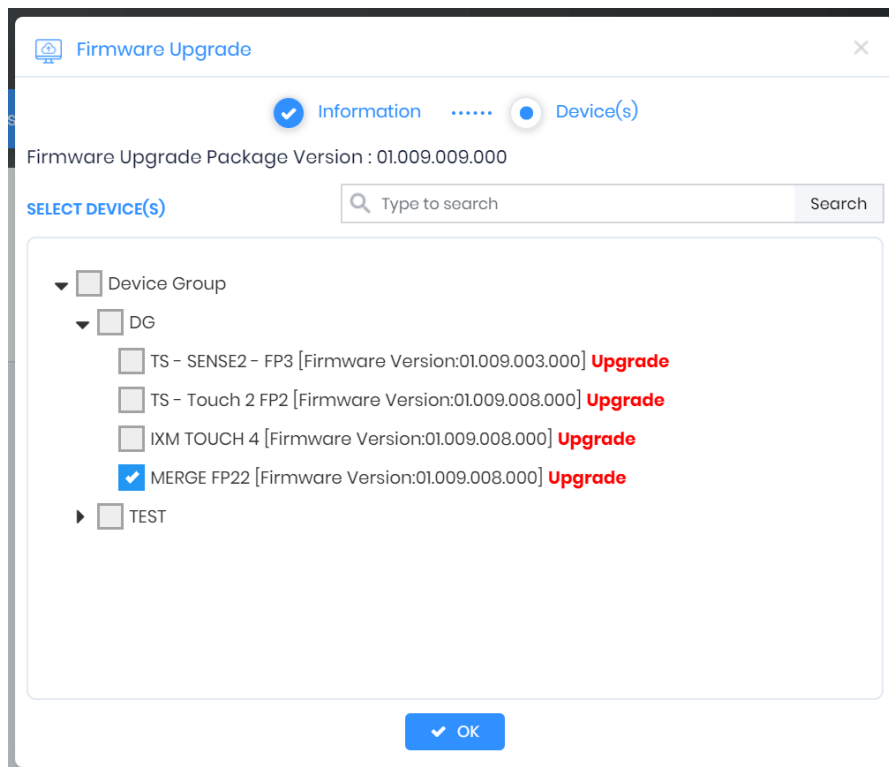
5. The firmware upgrade process will begin. The "Status" column will display a progress icon and the "Message" column will display "In Progress...".
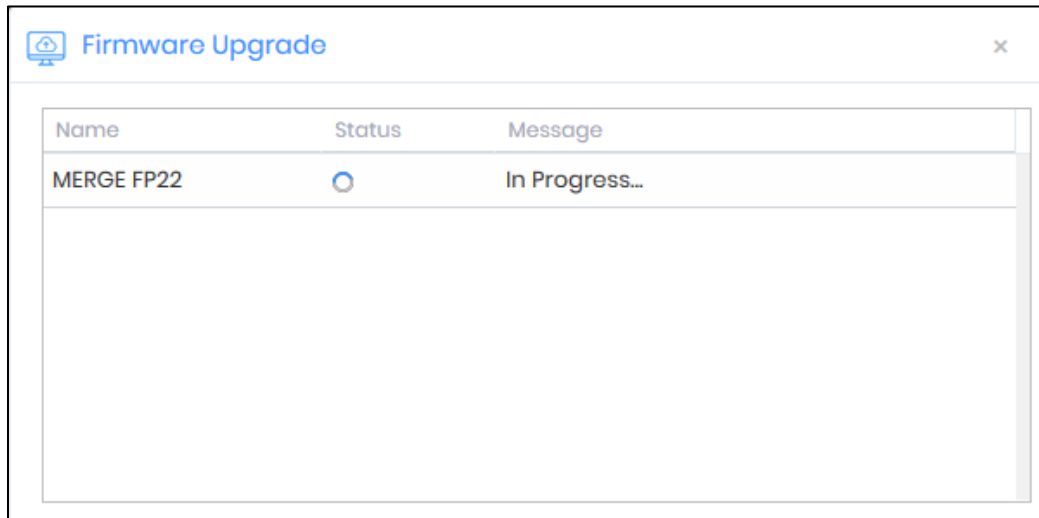
6. Once the firmware upgrade process is complete, the Status column will show the "Status" as Online/Offline and the message column will display "Firmware upgraded" if successful. Otherwise, it will display an error message.
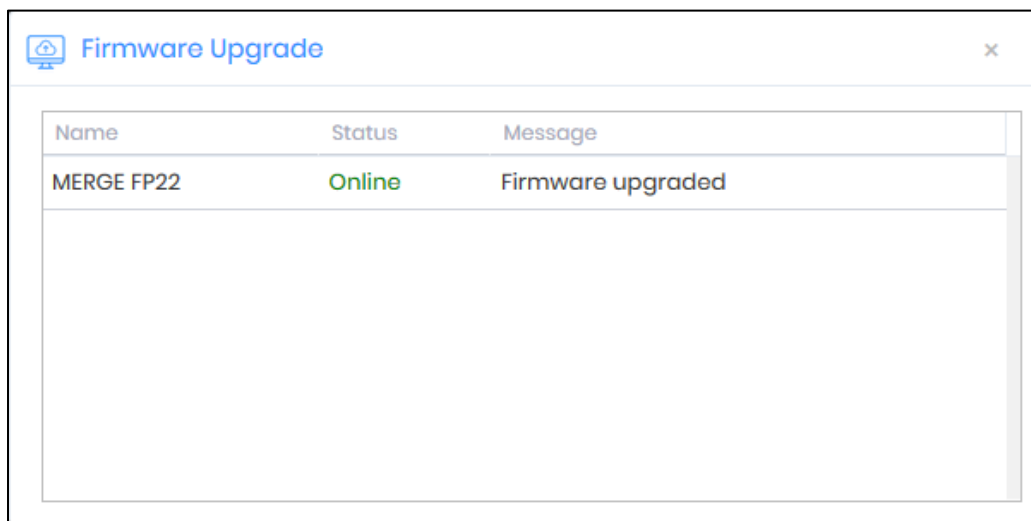
7. If the process is not successful, please ensure that the device is online and try again.

Upgrading Firmware using USB Drive

Rename the firmware file to ixm_fwu.bin and copy that file on a USB stick. Store the file in the parent USB folder, do not place this file inside another folder.

1. **MYCRO, SENSE & MERGE CR Models**
   Whenever a USB drive is plugged into the device, the firmware package gets automatically detected which starts the upgrade process.
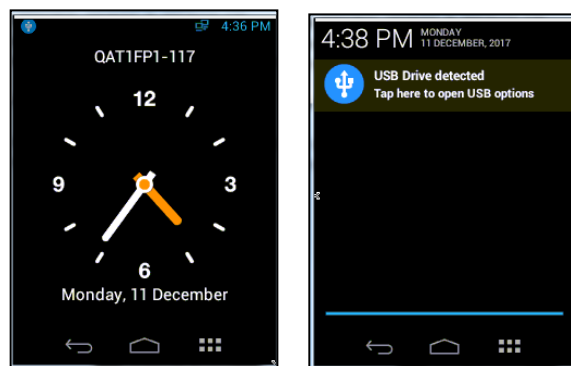
2. **TITAN, TOUCH 2, TFACE & MERGE Series**
   - Whenever a USB drive is plugged into the device, a "USB Drive Detected" message appears on the LCD.

    Note – TOUCH 2 screenshots have been provided for illustrative purposes. For TITAN, TFACE & MERGE, please follow the same procedure as TOUCH 2 on the LCD.

- Tap on the **USB Drive detected** message and enter valid credentials to open "USB Options". Tap on **Firmware Upgrade** to upgrade the firmware version on the device.
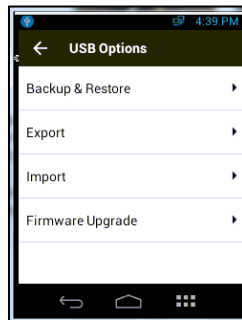
- Before the upgrade process starts, a confirmation message will be displayed.
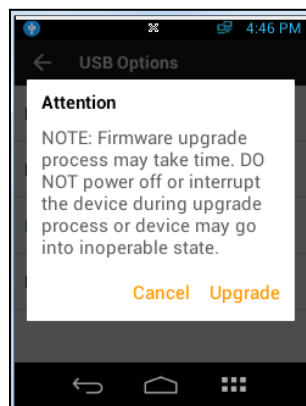
- Tapping on **Upgrade** will display a progress bar on the screen with an "Upgrading firmware" message.

- At the end of the process, the device will restart to apply the changes in the firmware package. A "Restarting" message will be displayed on the LCD.
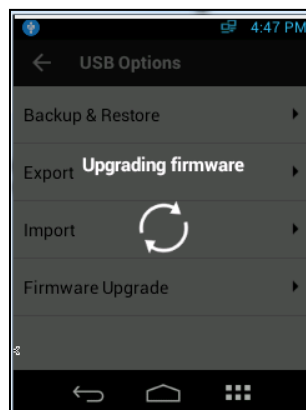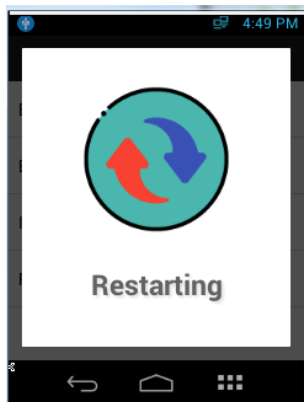

- If the device is not in a responsive state, then please ensure that the device is online and try again.

Support

For more information relating to this Feature Description document, please contact us at support@invixium.com

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