FlexRadio

SmartSDR™ for Windows v2.6.2 Release Notes

May 14, 2020

SmartSDR v2.6.2 is a maintenance release intended for use with the FLEX-6400™, FLEX-6400M™, FLEX-6600™, FLEX-6600M™, FLEX-6300™, FLEX-6500™, FLEX-6700R™ and FLEX-6700™ software defined radios which contains software defect fixes identified in previous versions of SmartSDR.

This document covers SmartSDR for Windows, SmartSDR for the "M" Model FLEX-6000s, and Maestro. Please consult the SmartSDR Software Users Guide V2 for details on using the new and updated features of SmartSDR for Windows for the optimal operating experience.

Please see the "Important Release Details" section before upgrading. Several best practice recommendations will facilitate a smooth transition to the new version of SmartSDR for Windows.

What's New in SmartSDR v2.6.2

NOTE: Please Install SmartSDR v2.6.2 at your earliest convenience. This SmartSDR software release greatly improves the stability and reliability of your FLEX-6000 software defined radio. Once SmartSDR v2.6.2 is installed, FlexRadio strongly recommends not reverting to any previous versions of SmartSDR v2 greater than SmartSDR v2.4.x to ensure the optimal user experience.

Corrected Issues Related to SD Card Corruption: Software improvements for increased SD Card stability during read/write operations. (J7741)

This software release of SmartSDR greatly improves the reliability and life expectancy of the FLEX-6000 SD card. Installing this release and not reverting to a previous release of SmartSDR is strongly recommended to ensure reliable operation.

Changes to Maestro/M Model SmartLink Login Screen: Improved SmartLink Log In screen design for better visibility and usability in Maestro and M models. (#J4900)

Fixed Frequency Rounding Error in Memory Form: Fixed memory form frequency rounding error with transverter bands. (#J7790)

Fixed SmartSDR Screen "hang" When Updating Firmware: Fixed SmartSDR for Windows application screen hangs when attempting to close while updating (#J7482)

Corrected False Positive Client Connection Message: The client Connection message now only shown on successful client validation eliminating the false-positive connection messages that appeared to show client connects from the Internet   (#J6813)

Important Release Details

Backup your profiles before upgrading Moving back and forth between v2.6.2 and v2.4.x and below will result in data loss unless you have a backup of your Profiles. When using SmartSDR v2.4.9 or below please export your profiles before upgrading to v2.6.2, and backup profiles again before reverting to previous versions. This is covered in detail below in the *Best Practices for Installing / Uninstalling SmartSDR* v2 section. Maintaining a good set of profile backups is *always* a best practice.

Upgrading FLEX-6400M and FLEX-6600M Front Panel: If you are upgrading a FLEX-6400M or a FLEX-6600M using SmartSDR for Windows, the upgrade will not be applied to the software in the Front Panel of the "M" Model.

The radio must first be connected to your network and can access the Internet to update the front panel software.

After the radio firmware updates from your PC, shut down SmartSDR for Windows and connect to your radio using the "M" Model Front Panel. The Version Select screen should display SmartSDR v2.6.2 showing a download icon. Selecting that version will start the final portion of the upgrade process.

For a detailed description of the SmartSDR for Windows software upgrade process, please refer to the SmartSDR Software Users Guide V2.

Best Practices for Installing / Uninstalling SmartSDR

Best Practices for Installing a New Version of SmartSDR for Windows

A*lways* **backup your Global, TX, and Microphone Profiles.** Please refer to the *SmartSDR for Windows Software User's Guide* for detailed instructions related to exporting your profiles to a file on your PC.

When you upgrade to a newer version of SmartSDR for Windows, a database conversion program runs automatically to convert older profile schemas to an updated one.

When downgrading versions, SmartSDR is unable to restore the profile schema version, which may cause profile corruption. To recover your previously created profiles after a software version downgrade, import the profile data created using the downgraded version of SmartSDR for Windows.

Ensure your Windows operating system is up to date before installing SmartSDR for Windows. The proper operation of SmartSDR for Windows and its associated drivers rely on having an up to date Windows operating system including the root security certificates. It is strongly recommended that you run Windows Update and install all mandatory and optional updates before installing SmartSDR for Windows.

Managing SmartSDR installed on other devices. If using Maestro or other PCs running SmartSDR for Windows, update all devices at the same time to ensure a consistent operating experience and to avoid radio firmware upgrade/downgrade delays.

Power cycle the FLEX-6000 radios before installing new a new version SmartSDR for Windows. To ensure a seamless upgrade of the FLEX-6000, it is recommended that you power cycle your radio *before* installing the SmartSDR for Windows software on your PC and updating the radio firmware.

"Cold Boot" your FLEX-6000 after upgrading the radio firmware. Power-off the radio, or disconnect it from DC power for several seconds. This cold boots the radio and helps ensure proper operation.

What to do if the firmware updates do not finish after 5 minutes? On rare occasions, an update may not signal the completion of a firmware update. If five (5) minutes elapse without the radio restarting and completing the upgrade, power off the radio by pressing the power button. The radio should restart, and the firmware update should complete normally.

Note: It would be rare that a single press on the power button does not shut down the radio. However, if this occurs, remove the DC power cable from the radio to force a hard reset. Wait about 5-10 seconds, restore DC power, and depress the power button. The radio will restart and the firmware update should complete successfully.

Best Practices for installing a new version of SmartSDR for and "M" Model FLEX-6000 or Maestro

The following best practices are applicable only when installing a new version of SmartSDR on a Maestro.

Note: Both the Maestro and an M Model FLEX-6000 must have network access that allows connectivity to the Internet to download the new SmartSDR software.

Ensure your Maestro has a reliable power source. Make certain the supplied AC adapter is used to power the unit. This prevents the Maestro from losing power during an update.

Ensure your Maestro has a reliable network connection. The Maestro and radio firmware are upgraded entirely through the network connection. When upgrading a Maestro, a wired Ethernet connection is recommended. In general, wired Ethernet connections are faster and more reliable than Wi-Fi.

Uninstalling Previous Versions of SmartSDR for Windows – Is It Necessary?

In general, the answer is no, but there are considerations when more than one version of SmartSDR is maintained on your system:

Currently, every version of SmartSDR for Windows is installed in a "side by side" manner allowing the use of previous versions and supporting easy version switching of both software and radio firmware. This method of installing places unique versions of software on your PC rather than removing or upgrading previous versions.

Release Specific Caveats:

After installing SmartSDR v2.6.2 or greater we strongly recommend you do not revert to a previous version of SmartSDR v2 greater than SmartSDR v2.4.x to ensure the data integrity of the SD card and an optimal operating experience.

After installing this SmartSDR 2.6.0 or greater we recommend you do not install a previous version of SmartSDR that will revert DAX to the previous version that is susceptible to Windows update corruption.

SmartSDR for Windows Shared Components:

The SmartSDR ecosystem employs shared components used by multiple versions. When previous versions of SmartSDR for Windows are uninstalled it may result in the removal of one or more of these shared components, which may make newer versions of inoperable.

Therefore, if you desire to uninstall an older version of SmartSDR, we highly recommend you uninstall older versions before installing a new version of SmartSDR for Windows.

Removing the DAX and FlexVSP drivers are not recommended unless explicitly instructed to do so in the Release Notes or by FlexRadio Support.

Known Issues

- **If you revert from SmartSDR v2.6.2 to SmartSDR v2.4.9 and below, you must perform a factory reset of your radio.** The database used with SmartSDR v2.6.2 is not compatible with SmartSDR v2.4.9 and below. If a factory reset is not performed after downgrading, anomalous behavior will be experienced. After performing a factory reset, it is permissible to import profiles that were created using SmartSDR v2.4.9 and below.

- During alpha testing, after the initial installation of the updated DAX drivers provided in SmartSDR v2.6.0, a handful of users reported a Windows "stop error" (colloquially known as the Blue Screen of Death or BSoD). In most cases, the error occurred once and after a subsequent PC reboot, the error did not occur again or impact proper DAX operations. We are working to identify the cause and resolve the behavior.

- After installing the updated DAX drivers, if you receive a DAX error where all the DAX channels are red, the most common reason for this is due to the lack of a default Windows audio playback device (speakers). To identify this error condition, look at the speaker icon in the Windows Task Bar. If it has a red "X" on it, this indicates a missing default audio playback device. To resolve this issue, simply connecting a pair of PC speakers or a headset to the PC will cause Windows to find a suitable default audio playback device and upon restarting DAX, the error condition should be resolved.

- FLEX-6700 only: There is a known issue (#280, #1527) where changing bands on one panadapter may change the frequency of another panadapter when going to or from 2m (or an XVTR using 2m as an IF). This happens due to hardware constraints that require each Antenna to be on only one of 2 possible Nyquist zones (below or above 122.88 MHz) and interaction with persistence when recalling the antenna selection of the selected band. One way to work around this issue is to use the Band buttons instead of setting the Antenna on the Panadapter or Slice, and then entering the desired frequency into the Slice to tune into (or out of) the 2m band (or an XVTR using 2m as an IF).

- (#7142) The "Mute local Audio When Remote" feature does not currently work in v2.6.2

- (#6938) Operation with Pactor modems will not work in v2.6.2. Pactor operation is functional in v2.4.9.
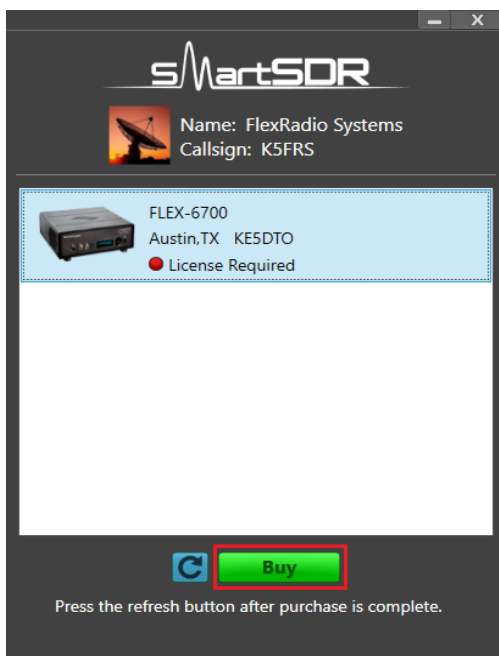
Purchasing a SmartSDR Software License for your FLEX-6000 using SmartSDR for Windows

Obtaining a SmartSDR software license is easy and convenient. Download the latest software installer for SmartSDR and run it to install the software on your PC. Using the new software, update the radio with the new firmware. Start SmartSDR then select the radio in the radio chooser window and press the yellow Update button.
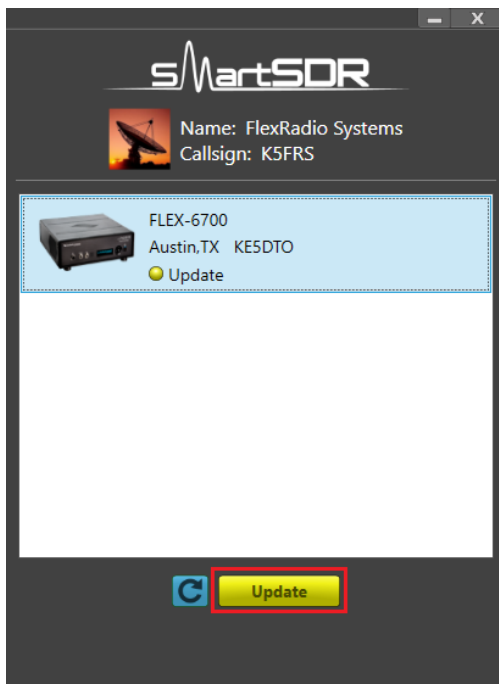
Once the update completes, if the radio you are upgrading requires a license, the radio status will show "License Required" and you will be presented with a Buy button that will launch a web browser, which will take you through the steps to purchase the license.

Note: New radios purchased include a SmartSDR license for the current major version and will not see the "License Required" indicator.


Once you have purchased a SmartSDR license for your radio, click the blue circular refresh button in the radio chooser window to update the license information for the radio. It may take up to a minute after the purchase completes before the radio acquires its license and cycling the power on the radio may be required.

Note: The radio (not just the computer) will need internet access to obtain the newly acquired license. Please ensure that the radio is plugged into a network that gives internet access.

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Purchasing a SmartSDR Software License for your FLEX-6000 using an "M" Model FLEX-6000 or a Maestro

Obtaining a SmartSDR v2 software license is easy and convenient. After downloading and installing a 2.x Maestro software version, At the Select a Version screen, select the version 2 software just installed. If you need to purchase a license to run the software, the Buy button will appear as shown below.
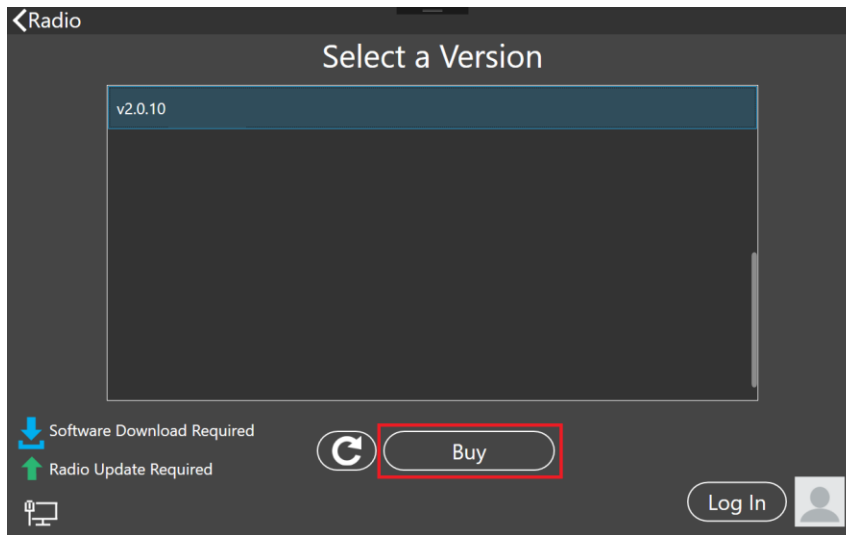

Owners of Limited Edition radios or radios purchased with a version 2 license will see a Run button instead of a Buy button. If you see a Run button, tap on the Radio link at the top left of the screen to return to the Select Radio to upgrade the radio's firmware.

Tapping the Buy button will generate and show a shortened URL that must be plugged into a browser manually. Note that the URL is case sensitive and unique for each radio.
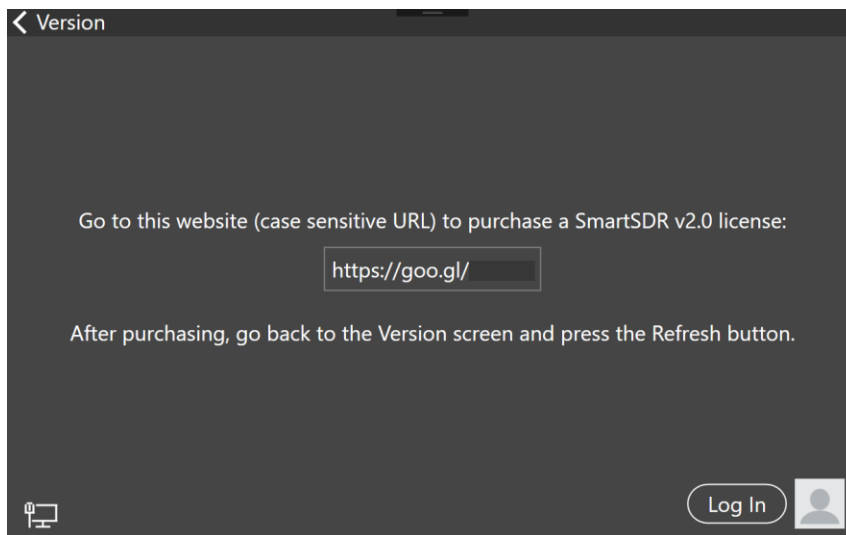
When the license purchase is complete, tap the Version link at the top left corner of the screen to go back to the Select a Version screen. At the Select, a Version screen, tap the refresh button (circular icon) to update the license information for the radio. It may take up to a minute after the purchase completes before Maestro finds the new license.
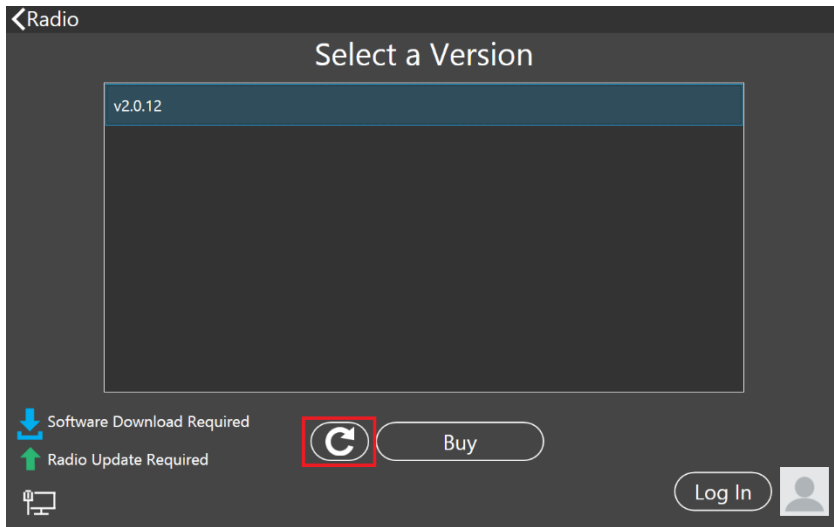
When the license is updated, the refresh button will disappear and the Buy button will change to a Run button. Tap the Run button to connect SmartSDR v2 for Maestro to your FLEX-6000.

SmartSDR Documentation Available from www.flexradio.com

The following documentation and how-to guides for SmartSDR v2.6.2 are available as a convenient download from the FlexRadio website.

SmartSDR for Windows Software User's Guide
https://www.flexradio.com/downloads/smartsdr-software-user-guide-v2-pdf/

FLEX-6400M and FLEX-6600M User's Guide
https://www.flexradio.com/downloads/flex-6400m-and-flex-6600m-user-guide-v2-pdf/

SmartSDR CAT User Guide
https://www.flexradio.com/downloads/smartsdr-cat-user-guide-v2-pdf/

FLEX-6000 Signature Series Hardware Reference Manual
https://www.flexradio.com/downloads/flex-6000-hardware-reference-manual-pdf/

FLEX-6400 and FLEX-6600 Hardware Reference Manual
https://www.flexradio.com/downloads/flex-6400-and-flex-6600-hardware-reference-manual-pdf/

FLEX-6000 Signature Series Quick Start Guide
https://www.flexradio.com/downloads/flex-6000-family-qsg-single-page-pdf/

SmartLink for SmartSDR Quick Start Guide
https://www.flexradio.com/downloads/smartlink-quick-start-guide-for-smartsdr-pdf/

FreeDV Waveform How-to Guide
https://www.flexradio.com/downloads/freedv-waveform-how-to-guide-pdf/

USB Cable Interface Guide
https://www.flexradio.com/downloads/usb-cable-interface-guide-pdf/

SmartSDR v2.5.1+ Changelog
https://www.flexradio.com/downloads/smartsdr_v2_changelog/

Obtaining Technical Support

If you encounter any issues installing or operating SmartSDR for Windows with your FlexRadio Systems' Signature Series software defined radio, please use our online Community (https://community.flexradio.com/) to query for information about SmartSDR for Windows and the FLEX-6000. If you need assistance using the Community, please refer to the community topic "How to use the FlexRadio Systems Support Community".

If you are unable to find an existing answer to your issue via the Community, please contact FlexRadio Systems Technical Support by opening a HelpDesk support ticket online at https://helpdesk.flexradio.com/

For details on how to submit a HelpDesk support ticket, please refer to the following URL: https://helpdesk.flexradio.com/hc/en-us/articles/202118688-How-to-Submit-a-Request-for-Technical-Support.

Hours of Operation: Our Technical Support engineers are available Monday-Friday from 7:00 AM-4:00 PM Central Time. If you open a HelpDesk ticket after business hours, on a holiday or weekend, we will respond to your request for assistance during regular business hours in the order your HelpDesk ticket was received.

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