

## **Firmware update v5.20 SPID MD-01 and MD-02 Controller**

**Update firmware based on version  
FlashMagic v13.45**



Important Note: Updating the firmware is not without risks. An update (attempt) is completely at your own risk and will void any guarantee/warranty. We are not able to provide support on updated devices online and will ask you to ship the controller to our address on your cost and the customer will be charged to have the parcel sent back to his address !

## **FIRMWARE UPDATE**

When a firmware is available by RF HAMDESIGN you can update the firmware of your MD-0X controller. It is important to install a flash program, we do advise to use Flash-Magic, you can find info about how to use this tool in our RF HAMDESIGN /HR Support page.

To upload firmware we advise to use Flash Magic. The firmware upload manual is based to version v13.45. (Note: There are newer or older versions of Flash Magic but they have no addition at all to this version)

You can download for free the latest version of FlashMagic here: <https://www.flashmagictool.com/>

Note: When an firmware update file (.hex file) will be available at our web-site, a notification will be made at the /HR support page. We do not reply to email request regarding firmware update requests.

To update your MD-0X controller and if you do not have available a serial port on your PC, you need a USB to Serial converter cable. Sometimes a USB to Serial converter cable is difficult to recognize by WIN OS. Info and tips can be found on the last page of this document in the Trouble shooting Firmware section. Support of this matter is out of the scope of delivery.

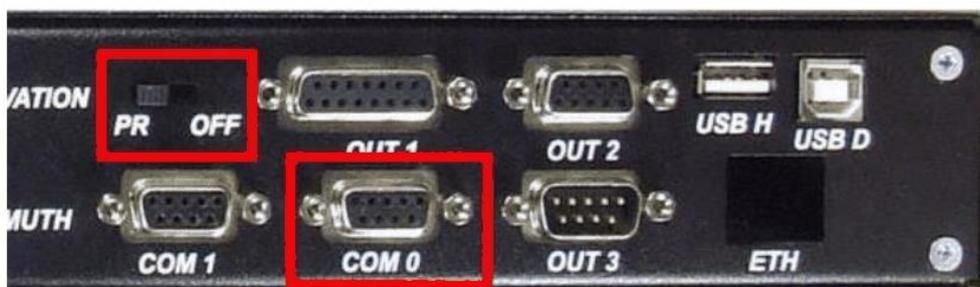
Before you update: Check firmware version by pressing F2 and F button at the same time !

Last advice before you start: Check the complete setup settings of your controller after firmware update, all old settings will be overwritten, so you have to reset the setup yourself with your favorite values.

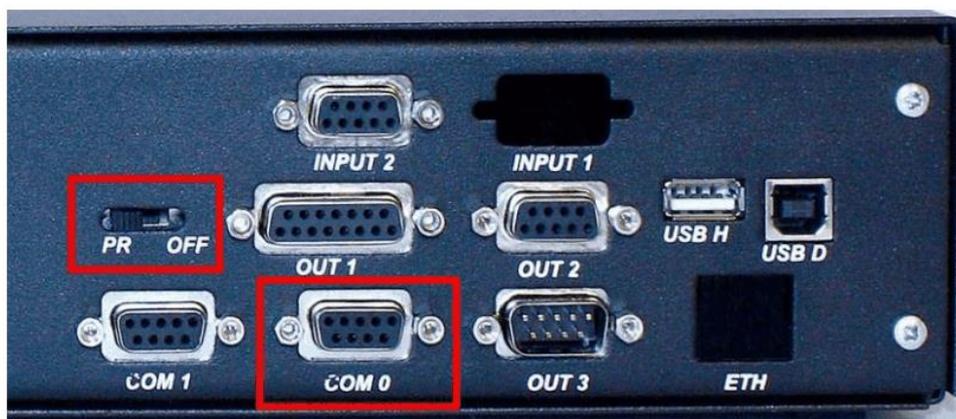
### **Firmware Update Step by step:**

- ✓ 1. Switch MD-0X device off
- ✓ 2. Set switch to position OFF (back panel of MD-0X)
- ✓ 3. Connect serial Sub-D 9-pol. cable to COM 0 to MD-0X and to serial port PC
- ✓ 4. Switch on MD-0X

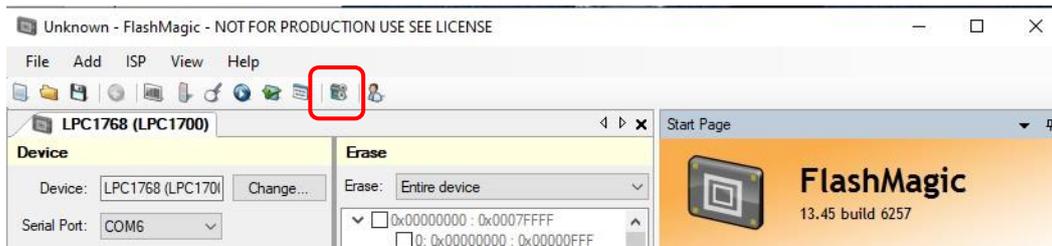
### **MD-01**



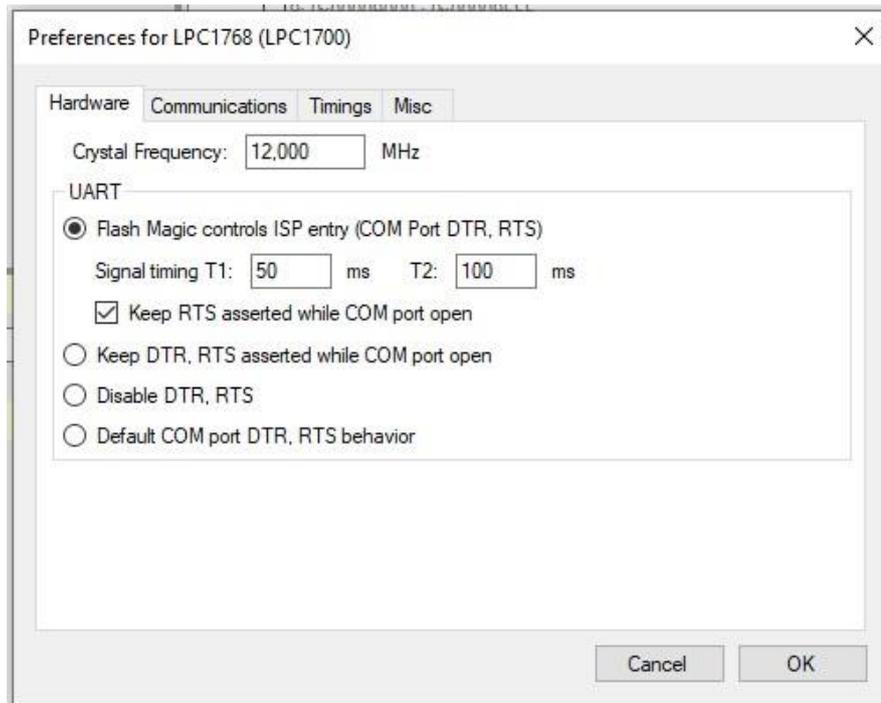
### **MD-02**



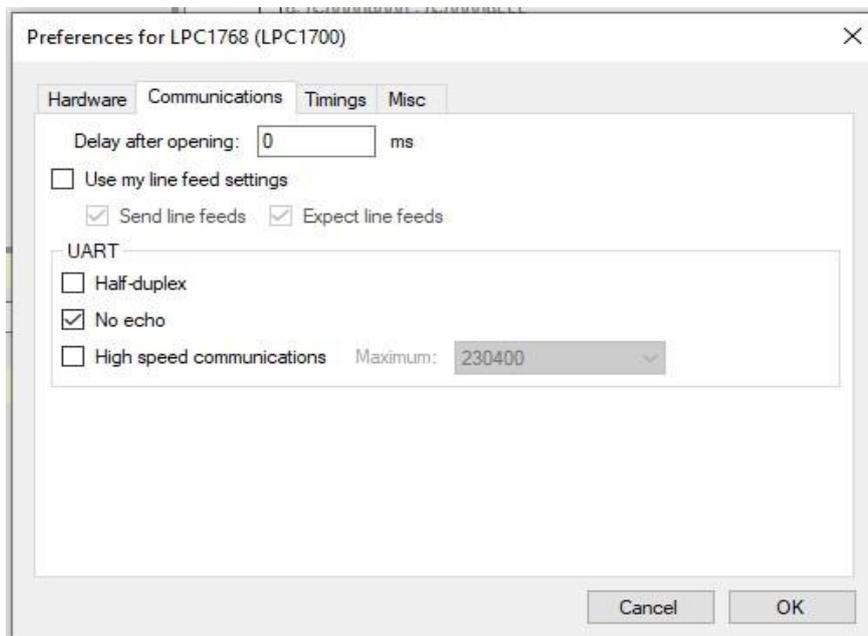
- ✓ 5. Startup Flash Magic on your PC
- ✓ 6. Now Choose from Main screen menu:



- a) Preferences (Red outline above) ->
- b) Hardware ->
- c) Hardware Config and set options as on the screen shot below
- d) Next step: Communications



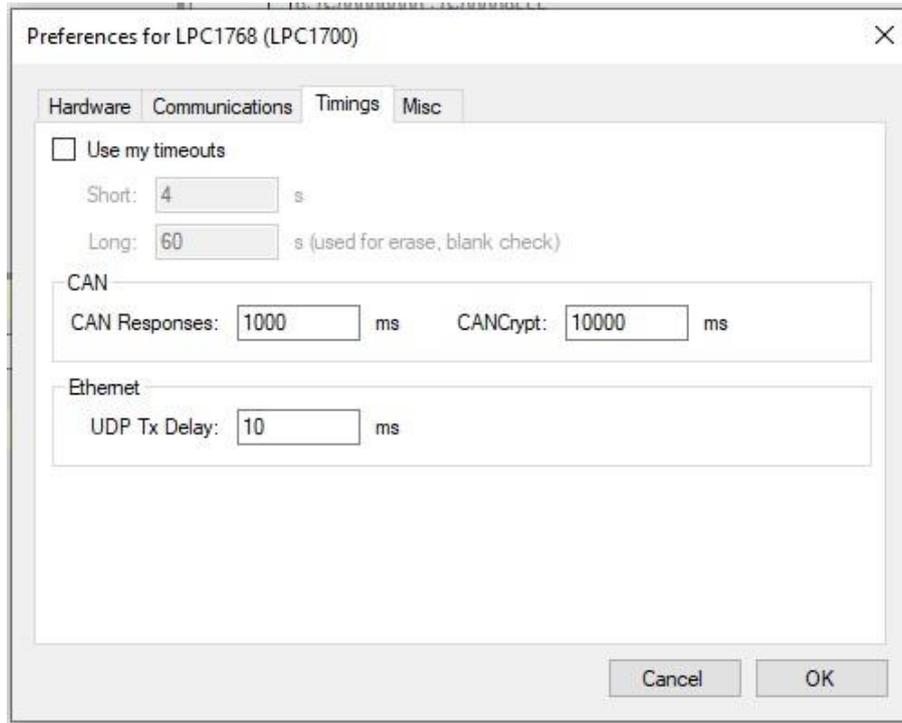
- ✓ 7. Communications step:  
Set options as on the screen shot below  
Next step: Timings



✓ 8. Timings step:

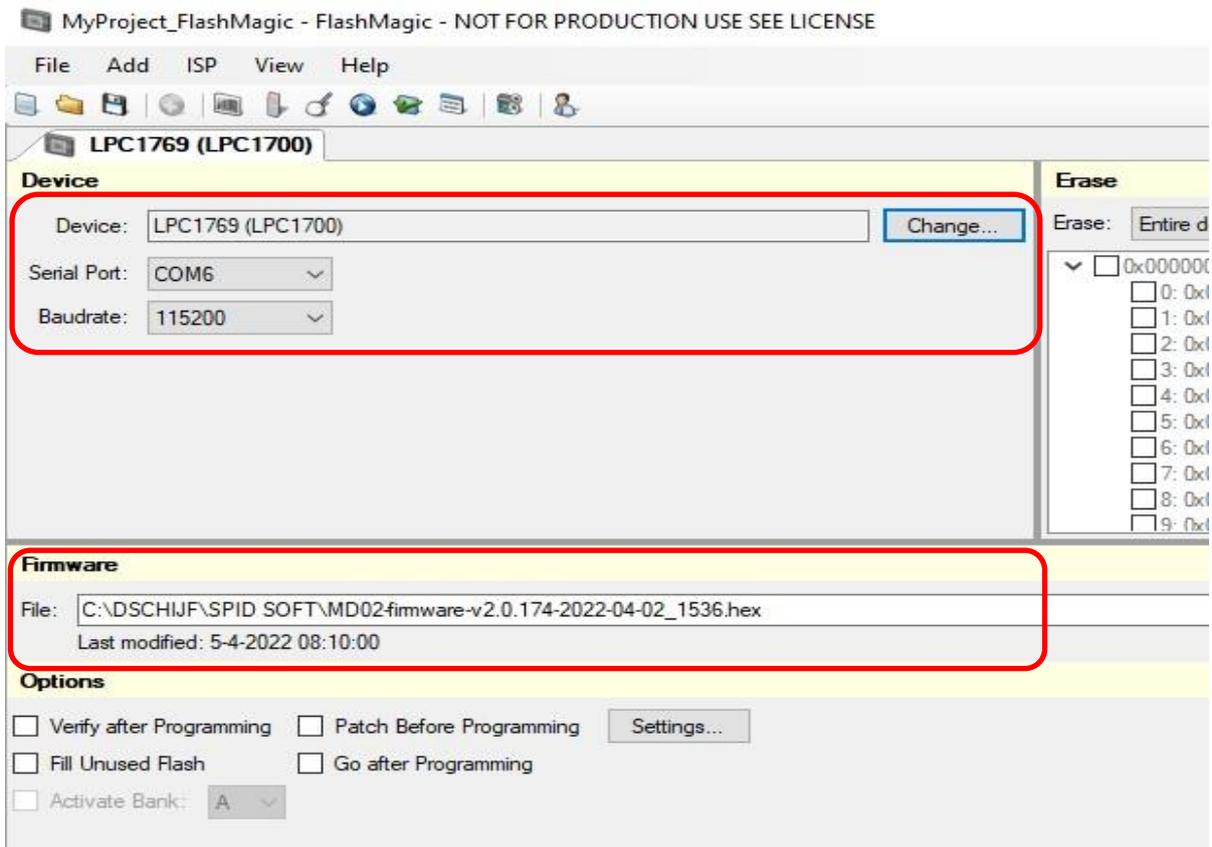
Set options as on the screen shot below

Next step: Processor / Click OK on each field and settings are done.



✓ 9. Select Processor in main screen, Click the change button (Red outline below)

- Select Device to LPC1769
- Select COM port which is in use at your PC (Trouble shooting Firmware info)
- Select firmware file (.hex file) by clicking the browse button which you download from the RF HAMDESIGN /HR support page at your Hard Disk
- Set options as on the screen shot below
- Click OK on each field to confirm



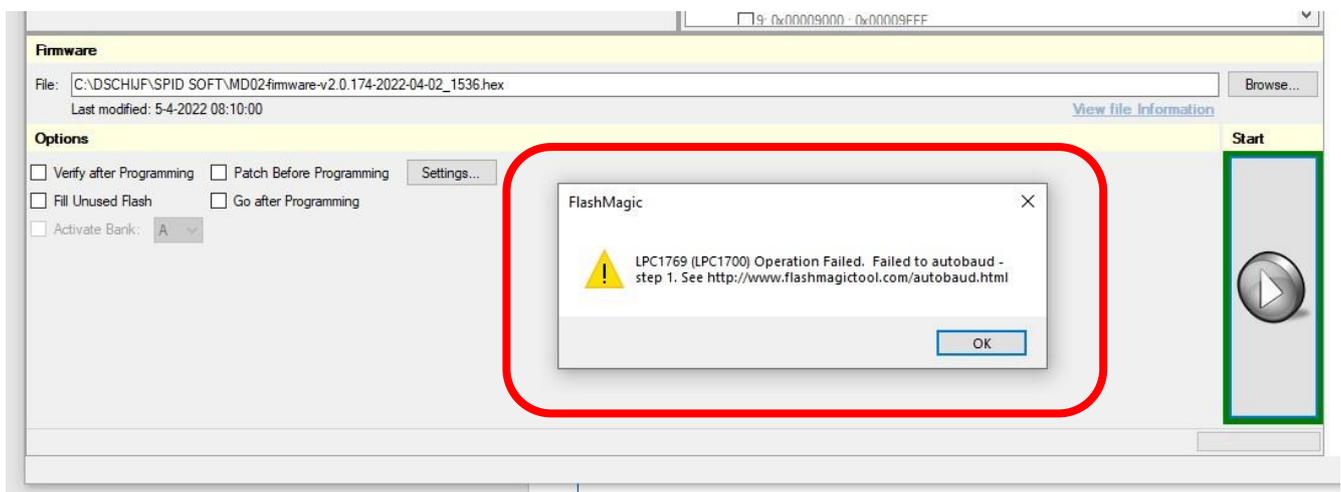
## Back in the Main Screen:

- ✓ Now you are ready to upload the firmware to your MD-0X controller
- ✓ Click Start button to start update firmware, if your setup in Flash Magic and your USB to Serial converter is working, the green bar below to the Start / Stop button will start running and you find the programming lines down left in the screen coming up. \*\*
- ✓ Turn off your controller MD-0X after update is finished
- ✓ Set the back panel switch to position PR
- ✓ Switch on controller and new version will be loaded and the new version number will be displayed on the screen of the MD-0X controller. (Check this)
- ✓ The new Firmware is installed and MD-0x is ready to use
- ✓ Important note: Check your settings in your MD-0X controller, this can be changed after firmware update ! (For example: Gear, USB, Protocol etc etc.)

## \*\* Error during upload:

After pressing start the upload should start, if FlashMagic cannot connect to your MD-0X controller there will appear a error message, Red rectangle below.  
In this case it is time to check your MD-0X <> PC connection / used port, etc etc.

Support of this kind of job is out of the scope of delivery. Take you time to find out the issue, in 99.9% of the cases the selected COM port is not correct or PC connection is not made to your PC, check more information below in this document.



### MAC users:

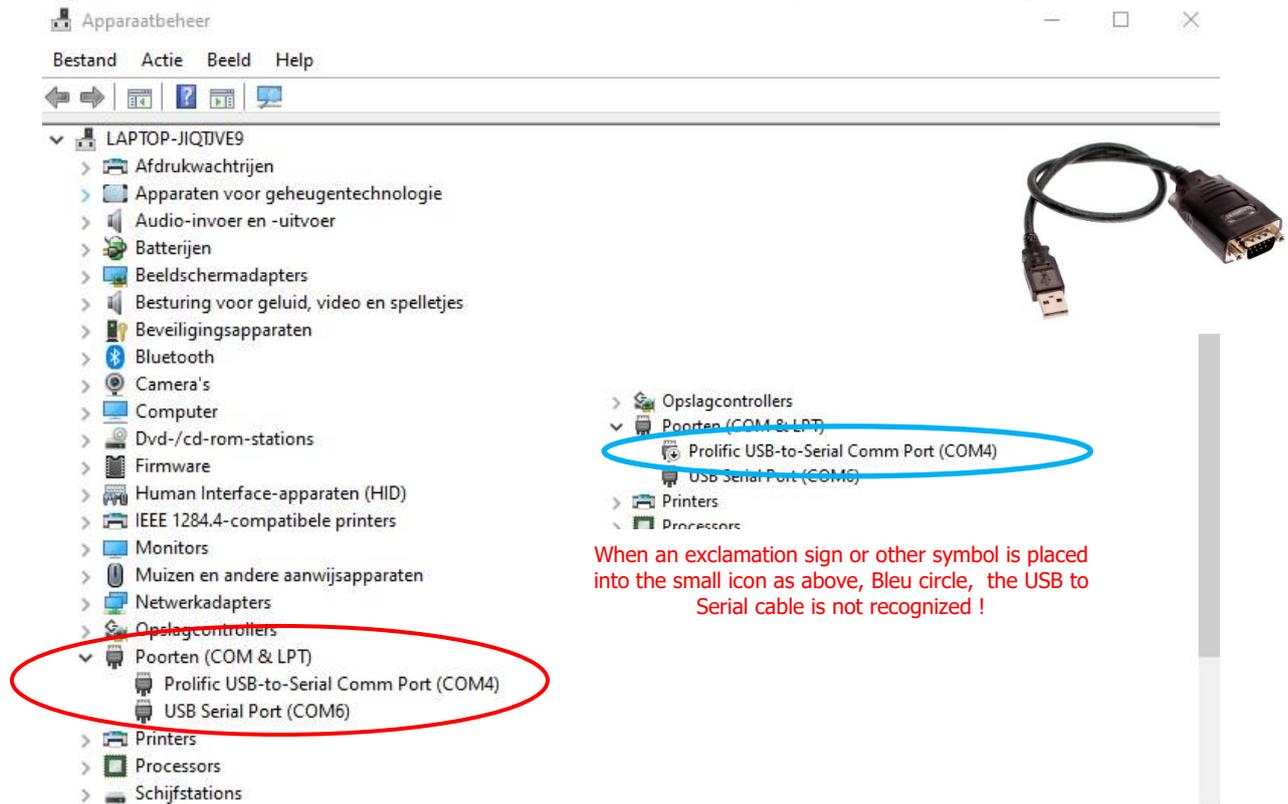
FlashMagic works in a Windows virtual machine (VirtualBox on the Mac), but if you download the firmware HEX file on the Mac and then copy it to Windows, the upgrade won't work. Will we have anything to do with the line break differences between Mac and Windows. So download the HEX file in the Windows VM as well, then everything goes well.

## Trouble shooting Firmware

### **Update by using an COM <> Serial Converter cable:**

When a USB to Serial converter cable is used (picture right) you should check in your PC the device management screen:

- ✓ Search for: ports (COM&LPT)
- ✓ If your USB to Serial cable is recognized by WIN OS, you should find a USB Serial Port (COM X) without an exclamation point or other sign
- ✓ This COM X is used to communicate with your PC and Controller, COM X must be entered into Flash Magic as well.
- ✓ It should be as the info in RED circle down below in your device management screen.



Apparaatbeheer

Bestand Actie Beeld Help

LAPTOP-JIQTIVE9

- > Afdrukwachtrijen
- > Apparaten voor geheugentechnologie
- > Audio-invoer en -uitvoer
- > Batterijen
- > Beeldschermadapters
- > Besturing voor geluid, video en spelletjes
- > Beveiligingsapparaten
- > Bluetooth
- > Camera's
- > Computer
- > Dvd-/cd-rom-stations
- > Firmware
- > Human Interface-apparaten (HID)
- > IEEE 1284.4-compatibele printers
- > Monitors
- > Muizen en andere aanwijsapparaten
- > Netwerkadapters
- > Opslagcontrollers
- ✓ **Poorten (COM & LPT)**
  - ✓ **Prolific USB-to-Serial Comm Port (COM4)**
  - ✓ **USB Serial Port (COM6)**
- > Printers
- > Processors
- > Schijfstations

Opslagcontrollers

- > Opslagcontrollers
- ✓ **Poorten (COM & LPT)**
  - ✓ **Prolific USB-to-Serial Comm Port (COM4)**
  - ✓ **USB Serial Port (COM6)**
- > Printers
- > Processors

When an exclamation sign or other symbol is placed into the small icon as above, Bleu circle, the USB to Serial cable is not recognized !

Note: If you find a non-connected USB to Serial cable try to restart your PC and check again.

Sometimes WIN OS is supplied with wrong drivers for the often used Prolific USB to Serial converters !  
We did add info to this document to solve this problem.....read next pages.

## **Error message for Windows XP Windows 7, Windows 8, Windows 8.1 and Windows 10:**

"This Device cannot start (Code 10)"  
"No driver installed for this device"  
"Device driver was not successfully installed"

There is a Prolific USB To Serial Driver "Code 10" Fix available.....

Or, you may get no error at all, but your device will not work. If your adapter was working prior to going to Windows Update, you may be able to "roll back" to the previous installed driver and all will be well for a while. However, if you didn't have a previous driver installed that worked, you'll have to go through the process of removing any PL-2303 driver installation programs, the actual driver files, and the information (.INF) files BEFORE you are able to successfully install the correct driver. What aggravates the issue is that there are many "Prolific Driver Removal Tools" that do not work properly as well! And Windows 8, 8.1, and Windows 10 are set by default to automatically update your drivers without your permission or even notifying you of the update. So, no matter how many times you remove the driver files and reboot, the next time you insert the USB-To-Serial adapter, Windows installs the newest non-working version again. Yes, it's frustrating.

The best 64-bit driver that works with all the "Prolific" adapters is old Version 3.3.2.102. Our "PL2303 Code 10 Fix" program will remove all incompatible drivers, make a change in the registry so that Windows can never update the driver without your permission, and install the Version 3.3.2.102 compatible drivers.

### **Windows 64-bit Fix for:**

- All Windows 64-bit operating systems including Windows 10
- .Prolific USB to Serial Adapter OR other device.
- .Device using PL-2303 H, HX, HXA, HXD, X, XA, EA, RA, SA, TA, TD version chips
- .Driver Version: 3.3.2.102
- .Driver Date: 09/29/08
- .Supported device ID and product strings: . VID\_067B&PID\_2303 for "Prolific USB-to-Serial Comm Port"1

1. Unplug all USB-To-Serial adapters and Double click on the installer "PL2303\_xxbit\_Installer.exe". This file can be deleted later.
2. The "PL2303 Code 10 Fix" program will be installed along with a shortcut on your Windows Desktop.
3. Double click on the "PL2303 Code 10 Fix Shortcut"
4. Plug in one (1) of your USB-To-Serial adapters and click "Continue".
5. When it finishes, Reboot your computer.
6. Unplug the adapter and plug back in again. That's it! Donations are appreciated.

Trouble Shooting: You must follow every step in the process precisely. If you still receive an error after running the "PL2303 Code 10 Fix" and your device is plugged in, go to the Windows Device Manager. Scroll down to Ports (Com & LPT) and Double-Click on "Prolific USB-to-Serial Comm Port (COM#)". In the Properties Window, Click on "Driver". The "Driver Version" must say "3.3.2.102" dated 09/24/08. If not, then the correct driver is not installed. Unplug the USB-To-Serial adapter and run the "PL2303 Code 10 Fix" again, following the directions precisely until you get it right.

Removal: To remove the "PL2303 Code 10 Fix" from your computer, go to your Control Panel and un-install like any Windows program. Removing the program will not delete the drivers. The drivers can be deleted in the Device Manager.

**There is a Windows 64-bit and Windows 32-bit Fix available, please send us a mail for 1 of these fixes.**

### **F-RAM clean Tool:**

Sometimes it happens when the firmware is blocked into the FRAM, it is possible there has been no update. The just new uploaded firmware does not work.....

It is the best option now to erase the full memory of the F-RAM by using our Clean Tool-Kit.

For this function is available: CLEAN FRAM file. You can download it from our web-site

[www.rfhamdesign.com](http://www.rfhamdesign.com) on the /HR support page.

(Note: Updating the firmware is not without risks. An update (attempt) is completely at your own risk and will void any guarantee/warranty. We are not able to provide support on updated devices online and will ask you to ship the controller to our address on your cost and the customer will be charged to have the parcel sent back to his address ! )

### **How to use Clean FRAM:**

Upload Clean F-RAM to your controller by using the same steps as in this description on the earlier pages of this manual, start at page 2: **Update Step by step**