



Sentek sensor technologies
www.sentek.com.au

SOLOPORTER UPGRADE GUIDE





INTRODUCTION

This guide describes the upgrading the SoloPORTER USB firmware to version 3.64, and the firmware in EnviroSMART/EasyAG probe interfaces from XPI-Solo 1.2.1 to version 1.2.2.

WARNING:

The new SoloPORTER USB firmware will not work with the XPI-Solo 1.2.1 firmware. You **must** update to XPI-Solo 1.2.2 firmware in **all** of your EnviroSMART/EasyAG interfaces **before** upgrading the SoloPORTER USB firmware. Using an upgraded SoloPORTER on an interface containing XPI-Solo 1.2.1 firmware may result in a Last Response of "053 No free space [CheckSpace]".

The upgrade is completed in 4 stages:

The upgrade can be performed in the field or in the office.

- Preparation
- Upgrading the firmware in XPI-Solo Probe interface
- Upgrading the USB firmware in the SoloPORTER
- Confirming the upgrade

To complete the upgrade, you will require the following:

- RS232 EnviroSMART/EasyAG probe interface, either in-field or in the office
- EnviroSCAN Solo Head Unit, connected to the probe
- SoloPORTER(s)
- Probe Programming Cable
- XFWUploadWiz XPI-SOLO 1.2.2.zip (Probe Interface firmware)
- VDAP0364.FTD (SoloPORTER USB Firmware)
- Probe Configuration Utility 1.7.2 (PConfig)
- Laptop or computer capable of running Probe Configuration Utility 1.7.2, with an onboard serial port.

Note: if you are using a USB to 232 adaptor, you may have trouble updating the firmware. You may need to repeat this process several times before you successfully upload the firmware, or depending on what brand of adaptor, you may not be able to upload the firmware at all.

PREPARATION

Before upgrading, you will need to prepare your laptop with the appropriate software.

The software and firmware are available from two places:

- Download from the Sentek web site <http://www.sentek.com.au>, and select link to Downloads, or



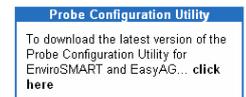
- On the latest version of the Sentek supplied SoloPORTER USB Flash drive



Software Installation from Sentek Web site

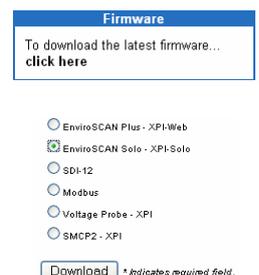
Install Probe Configuration Utility 1.7.2

- On the Sentek web "Downloads" page, click the **click here** link in the **Probe Configuration Utility** group and follow the prompts. This will download.
- Run the PConfig_Setup.exe installer to install the latest version of Probe Configuration Utility 1.7.2



Get the two firmware images

- On the Sentek web "Downloads" page, click the **click here** link in the **Firmware** group.
- Select option "EnviroSCAN Solo XPI-Solo" click Download and follow the prompts.



The download creates file FWUploadWiz XPI-Solo 1.2.2.zip, which contains:

- UploadWiz_ReadMe.txt
- XFWUploadWiz XPI-SOLO 1.2.2.exe (Probe Interface firmware)
- VDAP0364.FTD (SoloPORTER USB Firmware)

Create a folder (e.g. XPI-Solo 1.2.2) and unzip the downloaded files to this folder.

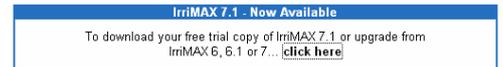
Install IrriMAX

This step is not required if IrriMAX 7.1 or later is installed.

IrriMAX is required only if you want to backup to probe data using Data Exchange.

- The IrriMAX 7.1 Compact Disk, or

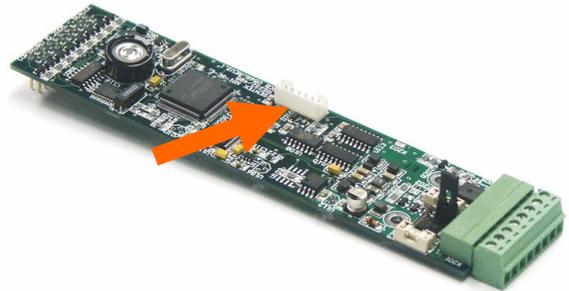
- On the Sentek web site "Downloads" page, click the **click here** link in the **Irrimax 7.1 Now Available** group and follow the prompts.
- Run Irrimax71_Setup.exe installer to install Irrimax, or insert a CD Copy of Irrimax.



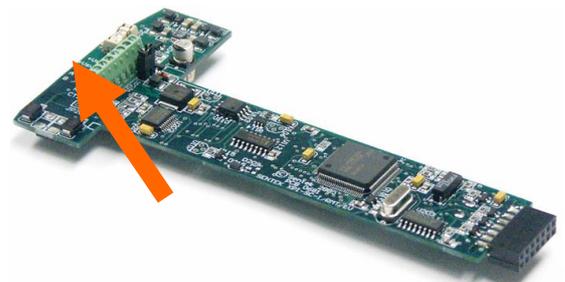
UPDATING PROBE INTERFACE FIRMWARE

Setting up the Probe interface

1. Remove the probe top-cap assembly to access the TTL connector on the Probe Interface board.
2. Connect your Probe Programming Cable to the appropriate TTL port connector for your Probe. Interface:
 - EnviroSMART TTL port connector is located on the Edge of the Interface approximately 6cm from the top



- EasyAG TTL port connector is located on the underside at the top edge of the Interface.



3. Connect the other end of the Probe Programming cable to the computer COM port.
4. Power the Probe from the Solo Head Unit (or office power pack).

Probe Backup

Before upgrading, the existing probe configuration and data must be backed up. There are two methods of backing up the data:

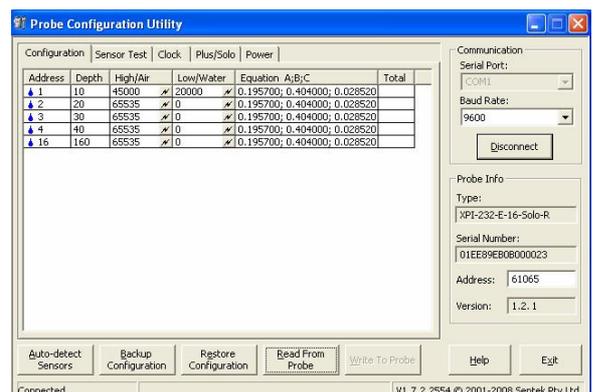
- Plugging in the existing SoloPORTER into the EnviroSCAN Solo Head Unit, which puts the data on the USB Flash drive, or
- Use Data Exchange, Source of "EnviroSCAN Plus/Solo (Cable)"

Backup configuration using PConfig

Start PConfig and click Connect.

Once connected, Click on the "Backup Configuration" button at the bottom to backup the probe configuration to a file.

You will restore this file after the new firmware has been uploaded.



Download data using SoloPORTER

Plug the SoloPORTER into the Head Unit.

Wait for Green-Steady, Red-Off

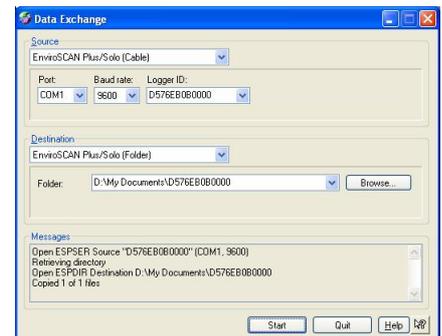
If the Green is steady and the Red light flashes there may be a low battery or upload failure. Try Unplug and Re-plug the SoloPORTER.

If the Red-Flash persists, use the Data Exchange method to download the data.



Download data using Data Exchange

- Start Data Exchange and set the Source to "EnviroSCAN Plus/Solo (Cable)" and the Destination to "EnviroSCAN Plus/Solo (Folder)".
- Choose a folder location (on your computer) to store the downloaded files. Click on the "Start" button to download data directly from the probe to the folder.

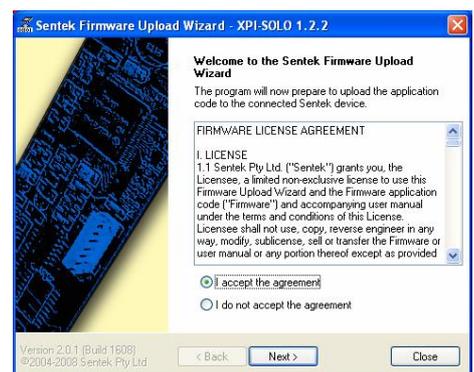


Updating Probe Interface Firmware

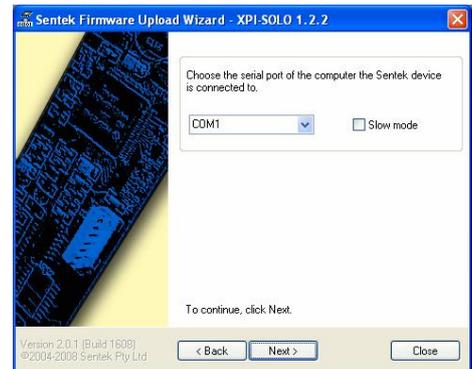
This must be done using the firmware upload wizard (FWUploadWiz XPI-Solo 1.2.2.exe) you downloaded and unzipped in the Preparation stage.

Note: If you are using a USB to 232 adaptor, you may have trouble updating the firmware. You may need to repeat this process several times before you can succeed.

1. Run the program FWUploadWiz XPI-Solo 1.2.2.exe from the folder where you unzipped the download file.
2. Accept the licensing agreement and click Next.



3. Ensure that the appropriate COM Port is selected and Click the Next button.



4. Once prompted, "Please Power up the device now", power cycle the probe off then on by rotating one battery cap on the Head Unit anticlockwise (90 degrees) until it cannot be rotated further then rotating it back. Take care not to let the battery cap come free.
Note: If the next screen, "Bootloader Activated", does not appear you should repeat .rotation of the battery cap.
If you are having difficulty connecting to the probe, try selecting the "Slow Mode" option. This will take longer to upload firmware, but may be more successful.

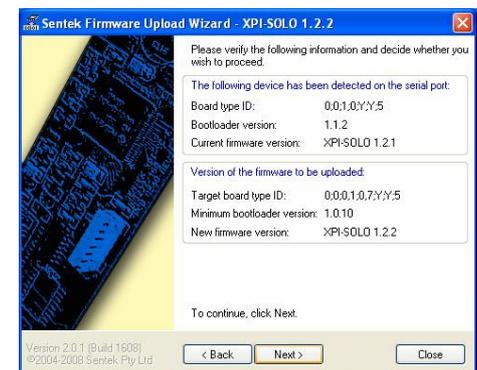


5. Once successfully connected to the Probe Interface the following screen will appear briefly before advancing onto the firmware verify page.
If this "Bootloader Activated" message remains for more than 5 seconds, click Back and then Next to try again.



6. Confirm that displayed firmware versions are the expected ones (current XPI-SOLO 1.2.1, new 1.2.2) on the firmware verify page and click Next. There should be no red warning messages at the bottom of the page. Note that if the current firmware version reported on this page is the same as the one you are attempting to upload then you have already updated the firmware and should not need to do so again.

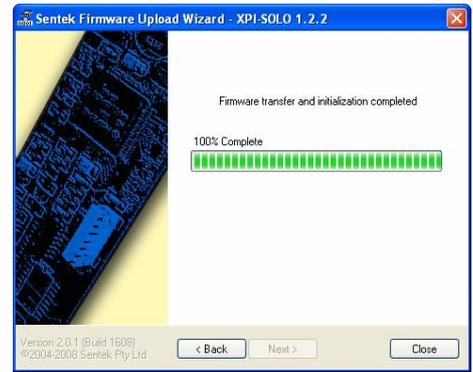
If there are any warnings or information missing on this page, it is possible that the Firmware Upload Wizard was unable to fully identify the Probe Interface.



- The firmware update will take approximately 1 ½ minutes to complete. Once completed, the message “Firmware transfer and initialisation completed” will appear.

If the upload fails you can repeat this process by removing the AA battery again, clicking the Back button, clicking the Next button and replacing the battery again.

A persistent failure may indicate a new battery set is needed in the Solo Head Unit.



Restoring Settings

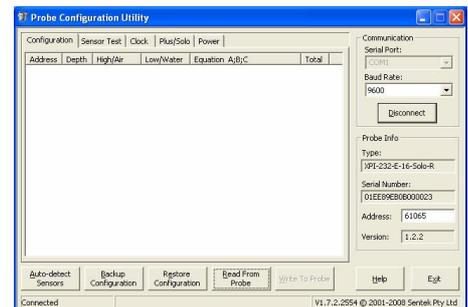
Updating the firmware erases all probe configuration and logged data. This should have been backed up in the Preparation stage.

WARNING:

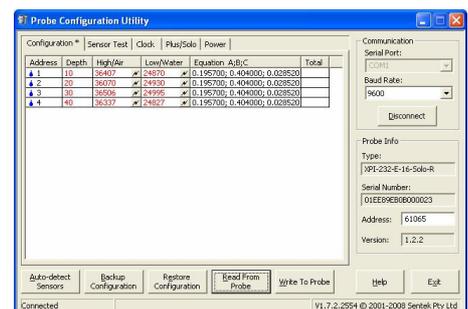
The sensor configuration for Auto-Detect Sensors must be the same as the in-field sensor configuration.

To restore old settings and appropriately configure your Probe you will need to:

- Following the firmware update, run Probe Configuration Utility.
- Connect to the probe.
- Click Auto-detect Sensors the button in the bottom left hand corner of PConfig.



- Restore your Probe Configuration backup by clicking on “Restore Configuration” and selecting the backup file you created in the Preparation stage.

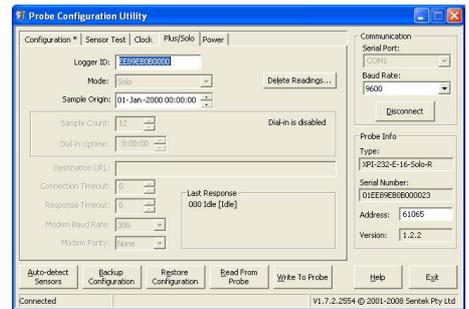


If you get a warning that the number of sensors in the configuration file is different from the number in the probe, you may have selected the wrong backup file. Check the detected sensors for any expected missing sensors.



- Confirm your Sample Interval by checking the Clock Tab. You may wish to resynchronise your clock if needed.

6. Confirm your Logger Id on the Plus/Solo Tab.



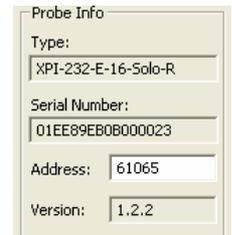
7. Click on Write To Probe to write all these settings to the probe.

Click Disconnect.
Click Exit.

CONFIRM UPGRADE

You can confirm the upgrade is complete by Connecting Probe Configuration Utility using the Probe programming cable.

1. Start Probe Configuration Utility and click Connect.
2. Examine the "Probe Info" fields:
Confirm Type is XPI-232-E-16-Solo-R or XPI-232-I-8-Solo-R
Confirm the "Probe Info" Version is 1.2.2



UPGRADING SOLOPORTER USB FIRMWARE TO VERSION 3.64

WARNING:

Once a SoloPORTER USB firmware is upgraded to version 3.64 it will no longer work with probes containing XPI-Solo firmware 1.2.1. You must upgrade any EnviroSMART and EasyAG Probe Interfaces to XPI-Solo 1.2.2 that need this SoloPORTER.

Ensure your SOLOPORTER has new batteries.

Ensure you Solo Head Unit has new batteries.

A firmware upload failure will result in an inoperable SoloPORTER, which must be sent back to Sentek for reprogramming. Do not remove the SoloPORTER until the Green-steady occurs or both lights are off.

1. The SoloPORTER USB Flash drive has a folder "SoloPORTER Firmware" which contains the file VDAP0364.FTD.
2. Insert the USB Flash drive into your computer.
3. Use Windows Explorer to copy the file VDAP0364.FTD into the SOLODATA folder

Safely remove the USB Flash drive from your computer.



Repeat these three steps for each SoloPORTER, or optionally use the one USB Flash drive to upgrade all of your SoloPORTER(s).

4. Take the SoloPORTER(s) to an EnviroSCAN Solo site that has XPI-Solo 1.2.2 firmware in the interface.

Note: SoloPORTER USB firmware will not be upgraded if you connect to XPI-Solo 1.2.1.

5. Check that you have good batteries.
6. Plug the SoloPORTER into the Head Unit and wait for the "Done" steady-Green light.



WARNING:

Unplugging the SoloPORTER while the green light is blinking may result in the SoloPORTER becoming inoperable.

Repeat these steps for each SoloPORTER.

7. Return the SoloPORTER(s) USB Flash drive to your computer and plug it in to the computer.
8. Use Windows Explorer to open the SOLO.LOG file and inspect it for the message "003 Firmware Updated: "VDAP0364.FTD" [UpdateFW] "