## Firmware Update

From time to time Vescent will issue new releases of firmware for the SLICE products. Below are instructions on upgrading the SLICE-QT firmware. Please follow these instructions carefully.



For SLICE-QT firmware versions 1.29 and lower, updating the firmware will reset all stored parameters (PID loop parameters, etc.). Before beginning a firmware update, manually record all settings for all channels. Versions 1.30 and higher will automatically store this information.

- Create the following folder on your PC C:\Vescent\SLICE-QT\SLICE-QT-0001
- 2. Copy the latest System Controller firmware update .dfu file from the ftp website (email sales [at] vescent [dot] com for latest firmware and GUI revisions) into the folder created in step 1. The file will be named SystemController-x-x.dfu where x-x will be the version number of the firmware.
- 3. Copy the latest QT firmware update .hex file from the ftp website (see above) into the folder created in step 1.
  - The file will be named 90-00001-upgrade-x-x.hex where x-x will be the version number of the firmware.
- 4. Determine the COM port number for the SLICE unit's USB connection. (You can skip this step if you already know which COM port is assigned to your SLICE unit.)
  - 1. If the SLICE unit's USB cable is connected to the PC, unplug it.
  - 2. Open a Windows Command Prompt console
    - 1. Press the Windows Start Button
    - 2. Type cmd.exe in the box that says "Search programs and files"
    - 3. Press the <Enter> key
    - 4. At the command prompt type "powershell" and press the <Enter> key
    - 5. You should see a window like the one shown in figure ## with PS preceding the command prompt

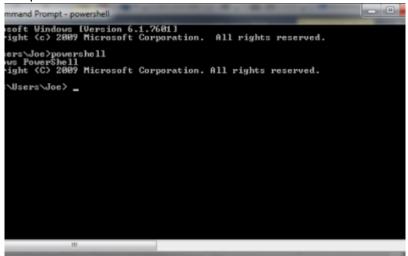


Fig. ##: Power Shell Command Prompt

- 6. Highlight the following text and use <CTRL> + <C> to copy it to the Windows clipboard: [System.IO.Ports.SerialPort]::getportnames()
- 7. Paste it into the Command Prompt window by Right Clicking anywhere in the window and selecting Paste
- 8. Press <Enter>
- 9. You should see a list of all your machine's COM ports as seen in figure ##.

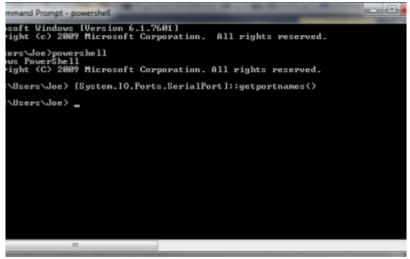


Fig. ##: COM Port Listing

- 10. Connect the USB cable from the PC to the SLICE and power on the SLICE
- 11. Press the <Up-Arrow> key which will repeat the command from step VI above and press <Enter>. The COM port assigned to the SLICE should now appear in the list. (NOTE: COM11 is the SLICE COM port in the example below but it may be a different number on your machine.)

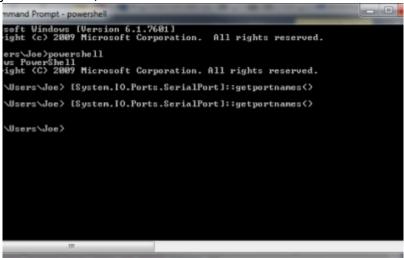


Fig. ##: COM Port Listing with SLICE-QT port

- 5. Do this step only the first time you use a new PC to do the upgrade:
  - 1. Power OFF the SLICE-QT
  - 2. Depress the blue button within the access hole on the lower left front side of the SLICE case, located just behind the red valance.
  - 3. While holding the blue button, power on the SLICE. You should see a blank white screen on the display.
  - 4. Wait for Windows to acknowledge the device found and install the drivers.
  - 5. Power Off the SLICE-QT
- 6. Power On the SLICE-QT
- 7. Copy the latest version of PC Host GUI from the FTP site (see above)
  - 1. Copy SLICE-QT-Windows.exe to your local PC
  - 2. Double click on SLICE-QT-Windows.exe to launch the application. You should see the window in figure ##.



Fig. ##: Home Screen of PC-resident GUI

8. Click on the Settings icon to get to the window shown in figure ##.

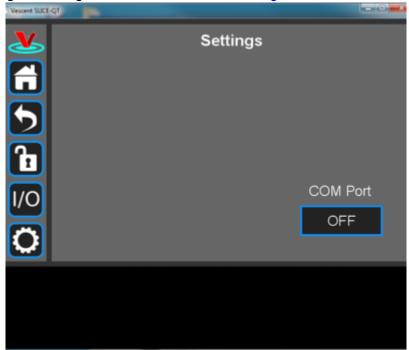


Fig. ##: Settings screen when viewed by GUI

9. Click on the 'OFF' button below COM Port. You should see a menu similar to the one shown figure ##. NOTE: The COM port numbers may differ from those shown below.

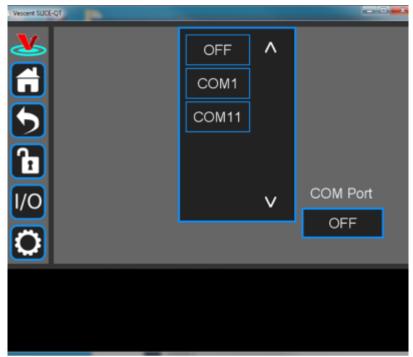


Fig. ##: COM port selection

10. Click on the last COM port in the list (COM11 in this example). The window in figure ## should appear if the connection is successful.

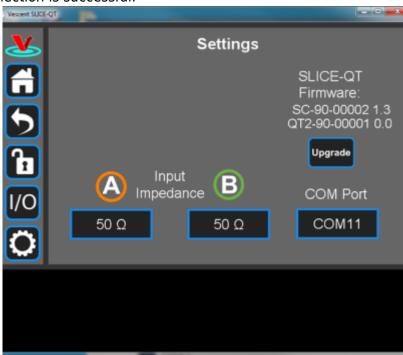


Fig. ##: Ready to upgrade

11. Click on the Upgrade button below the version numbers to see figure ##. Note that multiple SLICE-QT-000X folders can be created on your hard drive in the C:Vescent\SLICE-QT folder. The upgrader picks the one with the highest number (SLICE-QT-0002 in the example shown below).



Fig. ##

- 12. Click Continue to reach the screen shown in figure ##.
  - Follow the instructions on this screen.
    NOTE: The blue button is behind the small hole on the lower left side of the SLICE just behind the red valance.



Fig. ##

13. Click Continue to start the upgrade process.

NOTE: During the upgrade process, the SLICE will reset itself after the System Controller code is loaded.

- DO NOT attempt to power off or use the SLICE box yet. The QT firmware upgrade still needs to finish.
- 14. During the second part of the update (QT firmware portion), the message in figure ## will be displayed on the SLICE touch screen.

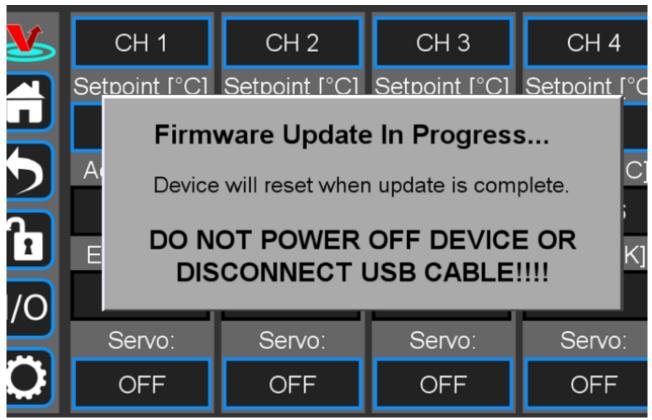


Fig. ##

15. When the update is complete, the SLICE unit will reset and the home screen will be displayed on the touch screen.

The PC-resident SLICE-QT GUI should display the message in figure ##.



Fig. ##

- 16. Verify the firmware versions on the SLICE Settings screen.
- 17. Close GUI and restart after completion.



Please follow firmware update instructions carefully.

During the upgrade, do not turn off, disconnect, or unplug the SLICE unless instructed to do so.

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