## **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.

- 1. Create the following folder on your PC C:\Vescent\SLICE-QT\SLICE-QT-0001
- 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

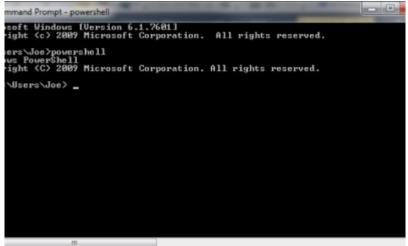


Fig. ##: Power Shell Command Prompt

- 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 ##.

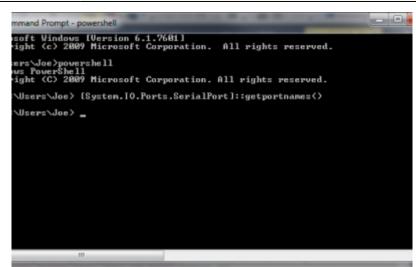


Fig. ##: COM Port Listing

- 10. Connect the USB cable from the PC to the SLICE and power on the SLICE
- 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.)

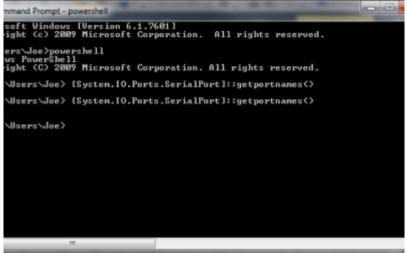


Fig. ##: COM Port Listing with SLICE-QT port

- 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 ##.

Miscant SLIC	1E-Q1	_		- 0 ×
2	CH 1	CH 2	CH 3	CH 4
8	Setpoint [°C]	Setpoint [°C]	Setpoint [°C]	Setpoint [°C]
ш	0.000	0.000	0.000	0.000
5	Actual [°C]	Actual [°C]	Actual [°C]	Actual [°C]
Ĩ	0.000	0.000	0.000	0.000
	Error [mK]	Error [mK]	Error [mK]	Error [mK]
1/0	0.0	0.0	0.0	0.0
	Servo:	Servo:	Servo:	Servo:
0	OFF	OFF	OFF	OFF

Fig. ##: Home Screen

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

Vescent SUCE-QT	
<u>×</u>	Settings
5	
b	
1/0	COM Port
	OFF
0	

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.

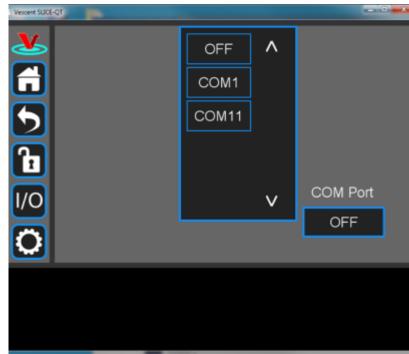


Fig. ##: COM port selection

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.

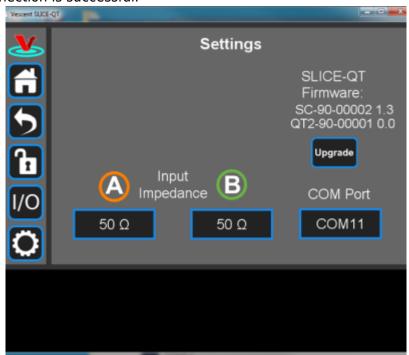


Fig. ##: Ready to upgrade

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 ##.
  - 1. 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.

Firmware Update	e - Reset I	Device
1) Power off the device.		
2) Depress and hold the	blue button	in the
hole on the left side	The second se	1
of the device.	1 march	0
3) While holding the		
button, power on the		
device.		-
4) When the device is p	owered on a	nd has a
completely white scre	en, press "C	ontinue
to proceed.		
Cancel	Cor	tinue
Cancer	001	unue

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.

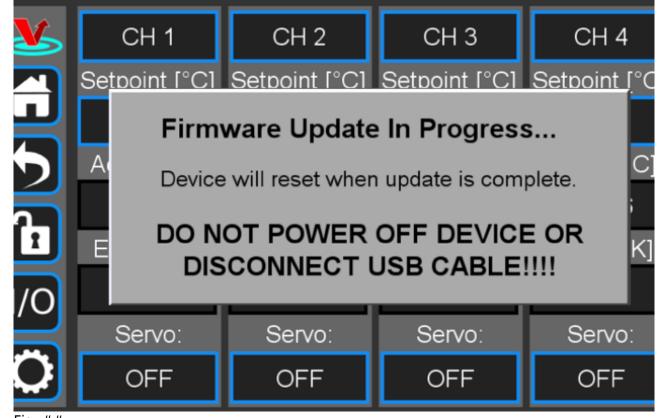


Fig. ##

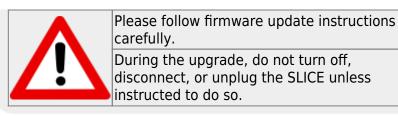
15. When the update is complete, the SLICE unit will reset and the home screen will be displayed on the touch screen.

The PC Vescent SLICE-QT application should display the message in figure ##.





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



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