

## BioFlo® 320 Update – Version 02.07

### Description of changes:

Software revision 02.07 incorporates the following solutions/additions to improve the performance of your bioprocess controller:

- > Updated RPM high limit for the 1L & 3L Digital Drive to 1500RPM.
- > Enabled Static IP, IP address can be assigned from UI or using a file on USB drive
- > TMFC loop's PV and Raw input are masked to zero when there is no output %. This is done to stop totalizer, when loop is off.
- > RPM high limit set to 800
- > Fixed cascade issue on controller with 4 TMFC and overlay configuration
- > This document will be helpful if the Eppendorf provided switch is not connected to a router and used in static IP address setup

**NOTE:** An update to version 02.07 and utilization of the static IP configuration option is highly recommended for all multi-unit setups (multiple controllers with one user interface). Please refer to the Appendix A for static IP configuration instructions.

### Instructions:

Determine which software version is currently installed in your computer:

- > Turn on your fermenter/bioreactor
- > Select the Setup button (Unit View) from the bottom
- > Select the Software Tab
- > View the software version

If the installed software is lower than the latest version listed above, perform the upgrade as listed below. You may want to print this page for easy access to the instructions while you work.

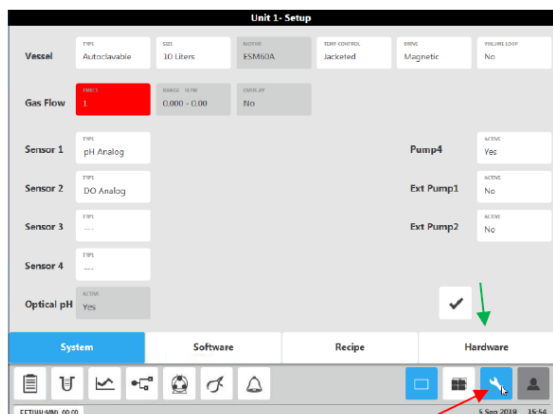
1. **Note** - Some recipes may not be compatible with the system after firmware upgrades; we recommend manually recording all recipe values prior to upgrading your firmware, as well as backing them up on an external USB memory stick before performing the upgrade
2. **Note** - For multiple BioFlo 320 installations, please ensure that the software on Unit 1 is updated last, after updating the software for units 2-8. For the update of any unit, the USB drive remains inserted in the USB port of unit 1.
3. Extract the downloaded .ZIP file to your hard drive (suggest "desktop")
4. Install a USB external memory device into the computer's USB drive connection
5. Go to the Extracted .EXE file within the extracted file on your hard drive and double click the file
6. Pop up menu comes up – Select Run
7. From the pop up menu - under "Unzip to folder" – click "Browse" and select USB drive (Removable Disk)
8. Select Unzip button and Okay
9. After download is complete select "Close" to close the dialog box

10. Remove the USB external memory device from the computer and insert it into your fermenter/bioreactor USB port on the back of the unit
11. On your fermenter/bioreactor, select the Unit View – Setup screen
12. Select the 'Software' tab
13. Select the 'Refresh' button located in the 'Software' panel
14. In the 'Updates' list, select the file (\Update\_R320GUI\_02070010) to be installed
15. Select the 'Update' button and the update routine will begin
16. During this update routine, a few dialog boxes (sometimes error messages) will pop up
17. Select "Yes" to all and the unit will automatically restart a few times
18. After the update is complete – you will come to the main screen
19. Select the Unit View – Setup screen and go the "System" tab
20. Select "Checkmark" button - This will bring back your original loops settings and control
21. Verify that the new version is running by selecting the 'Setup' button and then the 'System Settings' tab. Under "Software" confirm you have "Revision 02.07"
22. The unit will now be running with the new version that was installed on it
23. In case multiple units are connected and controlled from the same touchscreen monitor (units 2-8), proceed one by one with the other connected units:
  - a. Select the group view button, and select unit 2.
  - b. Select the unit view button and repeat steps 14-25
  - c. On units 2-8, the reboot takes place after a few seconds. On the touchscreen, a message will appear "Lost communication with unit 2".
  - d. Only when the message "Communication established with unit 2" appears, the firmware update is complete. This may take several minutes.
  - e. After unit 2 is completed, proceed to unit 3 (etc.)
  - f. After all units (2-8) are completed, finally update unit 1 with the new firmware.
24. The USB external memory device can be removed from the unit

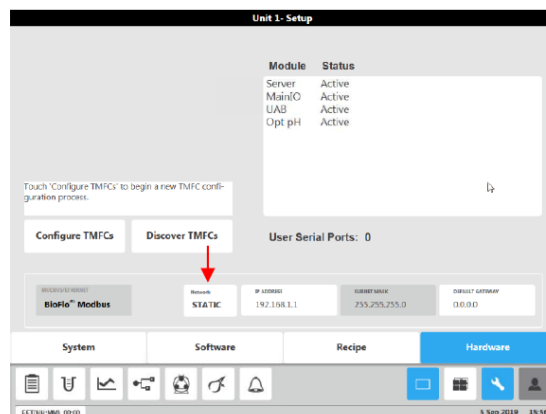
Congratulations! You have installed the latest performance enhancements.

## Appendix A: Set-up of static IP address

First, all BioFlo 320 units in the configuration must have their own preset static IP address. On the UI interface (Unit 1), do the following:



First go to the Setup screen by pressing the **setting** button. Next select the **Hardware** tab.



On the hardware screen, tap on the **Network** box. Select the static option. In the IP address window, type in the IP address of the unit (192.168.1.XXX). XXX should be less than 254. Next, in the default gateway window, set the IP address to match that of the switch (192.168.1.254) on which the unit is connected. On the next screen, press the check mark. The BioFlo 320 will reboot with the new IP setting.

**If you need to change the IP address on a client unit (units 2-8), do the following:**

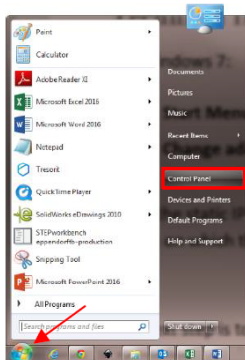
Using a text editor (like notepad), create a text file and name it TCPData. On the first line, type this text #Network,IPAddress,Subnet,Gateway

On the second line, write this text:

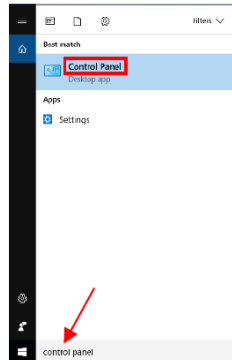
STATIC,192.168.1.XXX,255.255.255.0,0.0.0.0

XXX is the unique static address of the unit (less than 254, each of the units should have a unique number). Save this file (TCPData.txt) on a USB thumb drive. Turn off the BioFlo 320 and insert the thumb drive into one of the USB ports on the BioFlo 320 and power it on. Wait for about 1 minute, then remove the thumb drive from the USB port. When the BioFlo 320 completes the boot session, the unit should be set to the static IP address that was written in TCPData.txt.

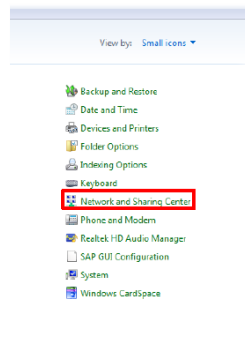
Next, the controlling PC (either DASGIP or other standalone computer) needs to have its IP address set to static. Depending on your version of Windows, the process will be different. Instructions for Windows 7 and Windows 10 are as follow:



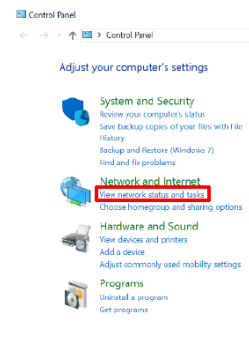
Win7: Click **Start** menu, then **Control Panel**.



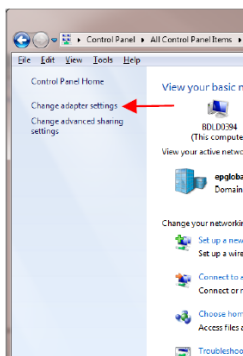
Win10: Type **Control Panel** in search box, then click **Control Panel**.



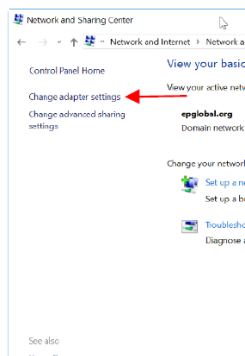
Win7: Click on **Network and Sharing Center**.



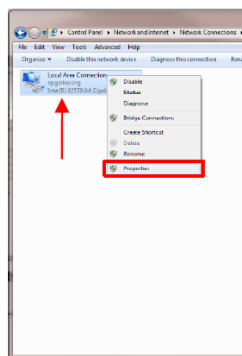
Win10: Click on **View network status and task**.



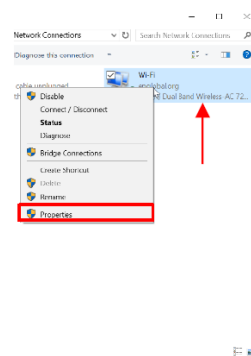
Win7: Click **Change adapter settings**.



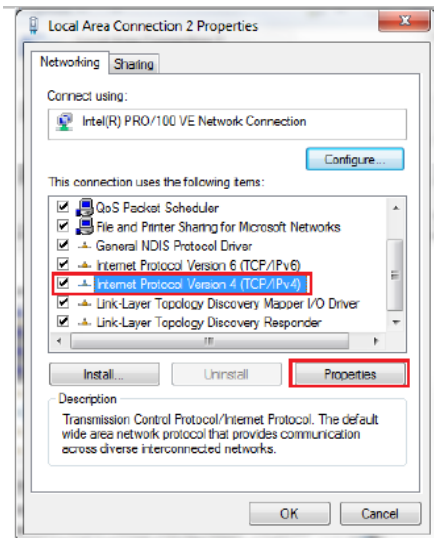
Win10: Click **Change adapter settings**.



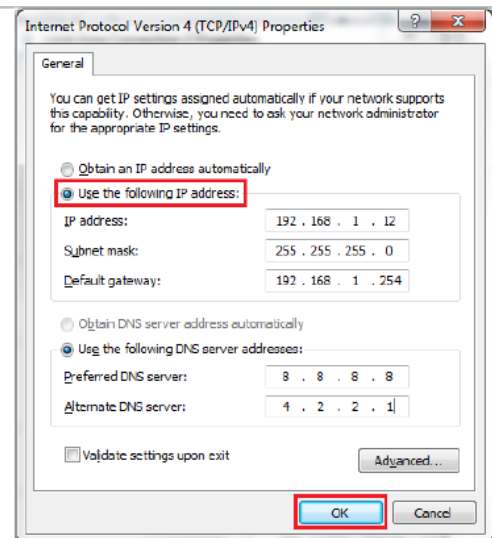
Win7: Right-click on **Local Area Connection** and click on **Properties**.



Win10: Right-click on the adaptor you are using for Connection and click on **Properties**.



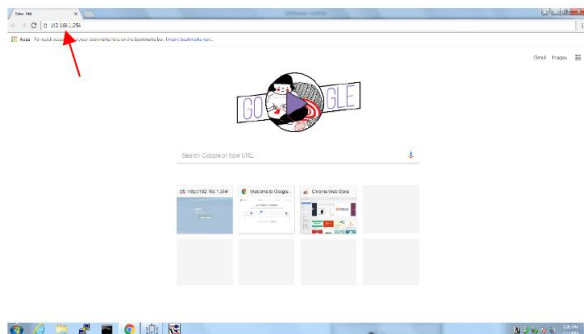
Win7 & Win10: Select **Internet Protocol Version 4 (TCP/IPv4)** and click on **Properties**.



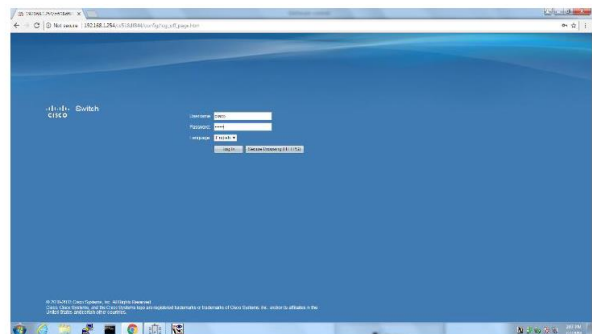
Win7 & Win10: Select **"Use the following IP address"** and enter the IP address and Default Gateway (192.168.1.254). Click **OK** to this window and the next window.

This completes the steps to make sure the default gateway of the controlling PC is the same as the IP address of the switch on which the unit is connected.

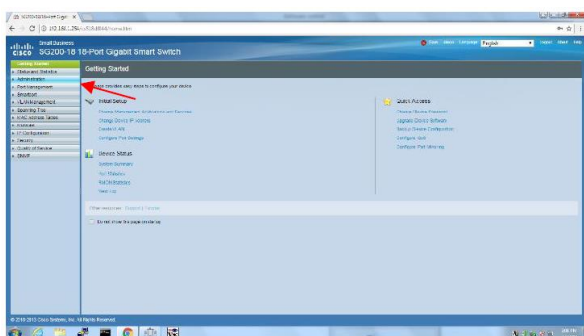
The next step is to set the switches' IP mode to static. If you use your own router, please follow the instructions for that specific router. If you use an Eppendorf provided Cisco router, follow the instructions on the next pages:



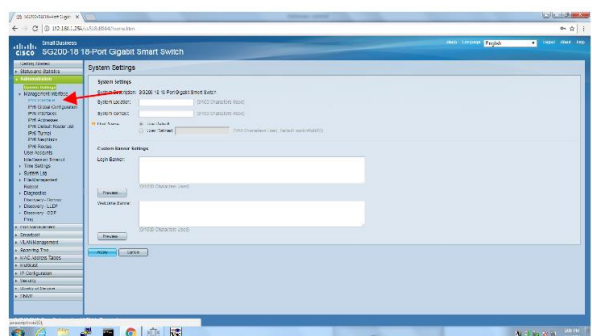
Use only Chrome to login into the router. In Chrome, type 192.168.1.254 in the IP address line and press enter.



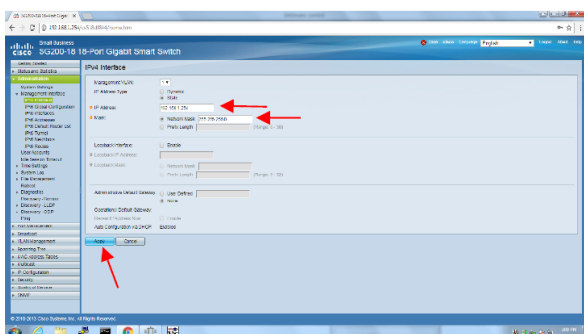
On the login screen of the router, type "cisco" in the Username box and "cisco" in the Password. Press the login button. The "Change Password" screen comes up. Change the password and keep it for later.



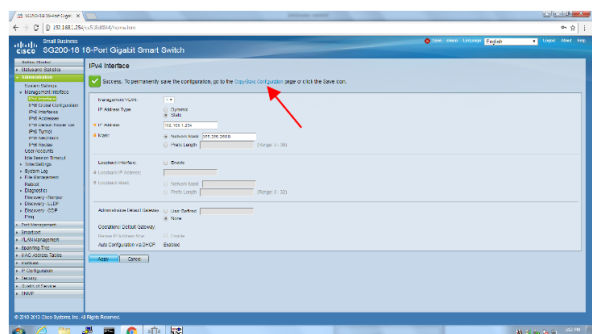
In the router webpage, select Administration. A dropdown menu will show up.



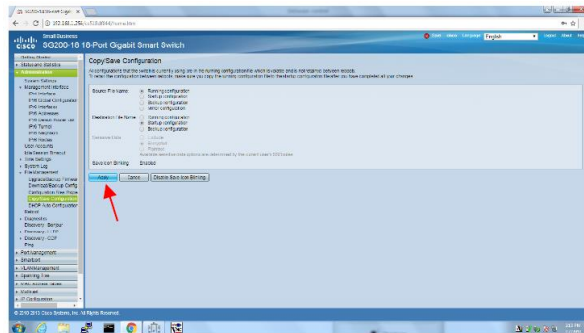
In the dropdown menu, select Management Interface, then IPv4 Interface.



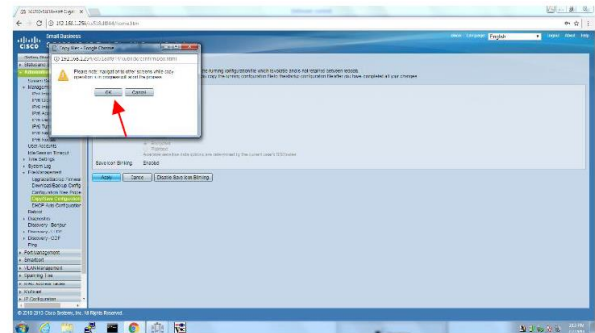
Select the Static radio button, then type the IP address in the IP address box. Press the Apply button.



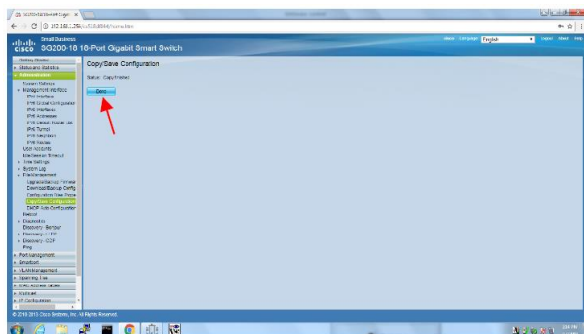
After pressing the Apply button, you will see a message saying success. Click on "Copy/Save Configuration".



The Copy/Save Configuration screen will show up. Leave the options as-is, then press the Apply button.



You will see the Copy Files window. Press the OK button.



The Copy/Save screen will show the status: Copy finished. Press the Done button to complete the IP static address configuration.