

Moxi GO II OS/Firmware Update Instructions (v2.14.2)

Requirements:

These instructions apply to updating the Moxi GO II OS/Firmware (to version 2.14.2) using a computer with a USB port (any OS). Please contact ORFLO Technical Support (Tech_support@orflo.com, 855-879-6694, option 1) for any technical inquiries or assistance.

Notable improvements in v2.14.2 (vs. 2.14.1)

- Fixed rarely occurring "i2c" panic crash.

Notable improvements in v2.14.1 (vs. 2.14)

- Fixes Secure Mode bitmap naming bug associated with two digit months.
- Enables toggling of PIN code after "Secure Mode" (21 Part 11 software) activation
- Fixes a BMP file naming bug when printing screenshots for saved QC Batch Mode tests

Notable improvements in v2.14 (vs. 2.13)

- Fixed super-user app bug
- Enabled Type M+ (MXC040) tip type
- Create system Bluetooth ID/identifier for newer boards with no Bluetooth radio.
- Internal change for laser type field to allow for future laser modifications

Notable improvements in v2.13 (vs. 2.12)

- Fixed cell QC app pre-/post- save minor discrepancies
- CAR-T and PBMC Apps post-save scaling fix
- 21 CFR Part 11, (factory) admin-reset fix
- Updated Cell QC Batch .csv summary file to include Live and Dead cells stats (conc., size, volume)
- Incorporated crash-log file analysis to optimize code, making the likelihood of system crashes even rarer.
- Fixed "erase disk" functionality
- Other misc. bug fixes

Notable improvements in v2.12 (vs. 2.11)

- Implementation of 21 CFR, Part 11 electronic signature functionality (requires separate license/activation to enable this functionality)
- Other misc. bug fixes.

Notable improvements in v2.11 (vs. 2.10)

- Fix to filename auto-generation to speed it up. Had potential to cause system shutdown due to time out.
- Other misc. bug fixes

Notable improvements in v2.10 (vs. 2.09)

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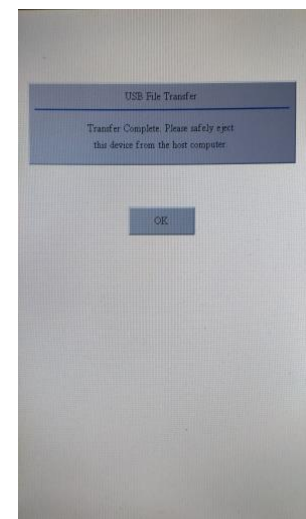
- Activation of μ SD card storage (already factory installed on all systems) to expand data storage from 16Mb to 4Gb (min).
- Cell QC application:
 - Auto-gated populations
 - Simplified initial data output for quick access to relevant information
 - Batch mode enabled – Run a series of viability tests in rapid sequence with fixed gates, dilution adjustments, and sample ID designations. The system auto-generates a summary Excel (.csv) table of all the data
- PBMC Check application
 - Auto-gated PBMC populations
 - Simplified data output for cell count and viability
 - RBC % calculations
- CAR-T Expansion application
 - Auto-Gated T-Cell Populations
 - Simplified data output for cell count and viability
- Enablement of file transfer to (re)load data on the Moxi GO II system via USB.
- Enablement of file deletion on the unit via USB (e.g. use Mac Finder or Windows Explorer to delete files on the Moxi GO II)
- Converted Scatter plot from black background to white background to better suit printing for publications.
- Increased scatter plot/histogram/data size on screen.
- Automatic, dynamic impedance correction to account for variations in media conductivity and cassette apertures, delivering higher precision (consistent) sizing across a broad range of conditions.
- Algorithm for automatic, initial gating of scatter plot data.
- Fluorescence signal baseline averaging to reduce noise background and increase signal-to-noise ratio by up to 2x.
- Relaxed File Compare/Test Overlay criteria to allow for a broader range of test comparisons.
- Updated Logicle scaling to better accommodate negative range during spillover compensation.
- Updated PMT2 display output to generic “long pass” to account for both 561nm/LP and 646nm/LP filter use.
- Added fluorescence overlays on the quadrant plot (PMT vs PMT) views.
- Ability to use a control set (second file) to compensate fluorescence spillover.
- Size scale minimum increased from $2\mu\text{m}$ to $2.7\mu\text{m}$ to reduce the size of the noise cluster.
- Railed fluorescence events notification.
- High concentration warnings.
- Ability to toggle “Settings values” by touching the screen.
- Battery charge percentage indication.
- Cassette removal reminder.
- Improved histogram display, including overlay regions.
- Numerous bug fixes.



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Upgrade Instructions:

- **Please refer to our instructional video for a visual walk through of firmware upgrades: https://www.youtube.com/watch?v=DkHy1_LAVDs**
- Download the “Moxi_GO-II_firmware_v2.14.2.zip” file for the Moxi GO II from the [download page](#). If you haven’t already registered your system, a brief registration process is required. If you had already registered, you should be able to find the direct link in your email acknowledgement.
- Unzip all the files on the computer to be used for updating your GO.
- Plug the Moxi GO II into your computer (Mac or PC) using the provided USB cable
- Starting with the system powered off, place unit into “Firmware Update” (“Orflo OS Loader”) mode by pressing (and releasing) the start button quickly until the “Loader” text appears as the bottom (typically takes 8 quick button presses, stop pressing when the text appears. The loader mode is shown in the image to the right/top.
- The Moxi GO II will appear as an external drive on the computer (look for it in the Windows Explorer as “External Disk”). Drag all of the extracted files (not the folder, copy all the files at once) onto this drive (or copy and paste them) onto the newly mounted Moxi GO drive.
- **WAIT FOR ALL FILES TO FINISH COPYING BEFORE PROCEEDING (do not touch the Moxi GO II screen).**
- Safe-eject the Moxi GO II drive from your computer.
- The Moxi GO II screen will have changed to the “USB File Transfer” screen. Touch the “OK” button to start (image on right/bottom). The unit will begin updating each file onto the system and will automatically shut off upon completion. DO NOT attempt to turn off the system prior to completion. If you have any issues, please contact Gemini Bio-Product/ORFLO Technical Support at Tech_support@orflo.com or via phone at 855-879-6694, option 1.
- At this point, the new firmware should be properly installed. Touch the “Help” Icon and press “Next” three times to confirm the OS version (see image below).
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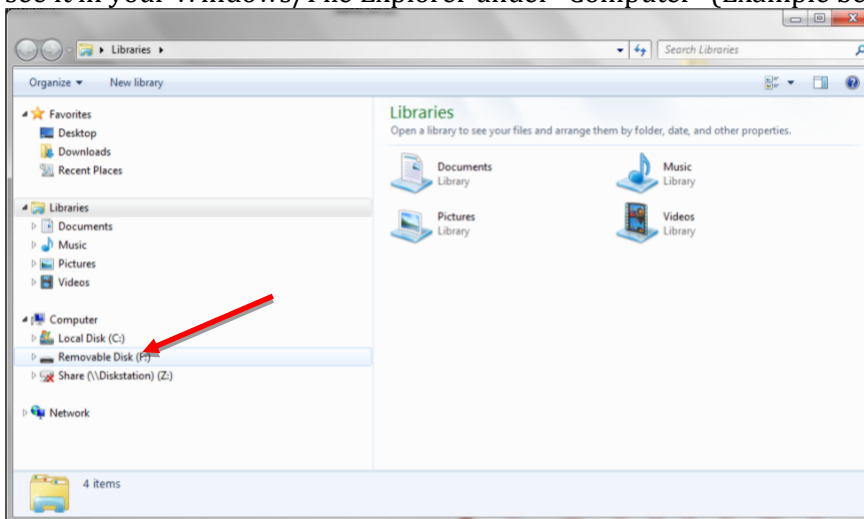


Touch
"Next" 3x

DATA (μSD) DISK FORMAT (STRONGLY RECOMMENDED, if not performed already)

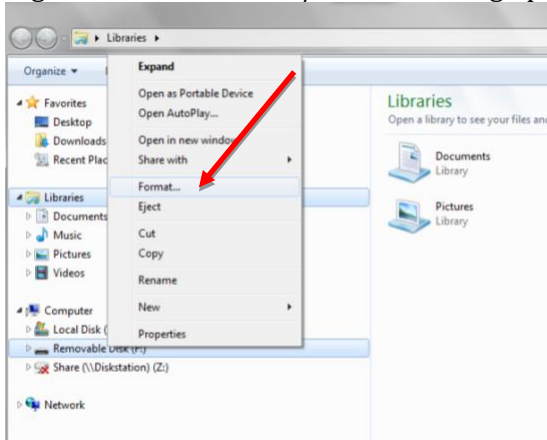
For optimal performance (i.e. file/image save speed), it is strongly recommended that you format the Moxi GO II Data (μSD) Disk following the firmware installation. Formatting the disk requires connecting the system to Windows laptop. Briefly:

1. Disconnect the system power cable from the AC (wall) adapter and plug that USB 2.0 end into a Windows computer
2. Turn on the Moxi GO II system
3. If secure mode is turned on, login as an administrator.
4. Touch "USB Disk"
5. Touch "Connect"
6. Wait for the system to appear as an external drive on your Windows machine. You will see it in your Windows/File Explorer under "Computer" (Example below)

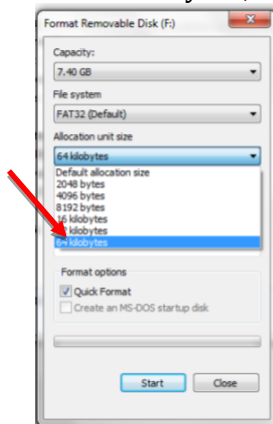


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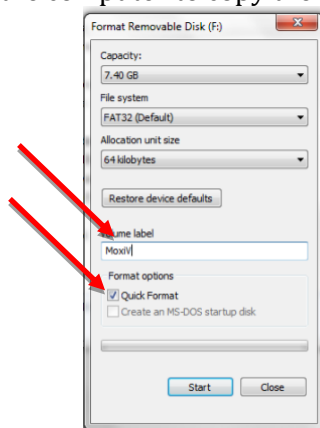
7. **BACKUP/COPY** all the data on the disk to the computer. **THIS IS CRITICAL AS THE NEXT STEPS WILL REMOVE ALL DATA FROM THE DEVICE**
8. Right click on that drive/device to bring up the options. Select “Format”



9. Select the **MAXIMUM** available allocation size (either 32kB or 64kB). If the maximum value is already set, the format is not necessary. You can stop here.



10. Make sure “Quick Format” is checked and type a volume name (e.g. “Moxi GOII”)
11. Select “Start”. The format should take less than a minute.
12. When complete, safe-eject the disk from your computer.
13. **Reboot the Moxi GO II.** The system is ready for use. Note: At this point, you can reconnect the Moxi GO II to the computer to copy the backed up data back to it.



**Moxi GO II OS/Firmware Update Instructions (v2.14.2)****Notes:**

- To migrate older data (that was on the 16Mb flash disk, when upgrading from v2.09 or earlier) to the new μ SD disk, follow the “Migrate and USB Quick Start Rev 1.0.pdf” guide instructions.
- To activate the 21 CFR Part 11 mode, please refer to the Moxi GO II 21 CFR, Part 11 Quickstart Guide.