



**Focus Premium  
and  
Focus Core  
Laser Scanner  
Firmware 7.2.1**



RELEASE NOTES  
MARCH 2023

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The following third-party products are referenced in these Release Notes.

- Windows™
- Microsoft Internet Explorer®

FARO does not support these products. Contact the manufacturer for support.

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## 1. Introduction

This firmware version is intended to be used with the FARO Focus Premium and Focus Core Laser Scanners exclusively. Do not use this firmware for any other Focus scanner model.

## 2. FARO Focus Premium and Focus Core Firmware Update

Firmware is pre-installed on the scanner. Firmware updates can be performed on the scanner by connecting the scanner to the WLAN and Internet. Firmware update must not be interrupted or the update will not work and may leave the scanner in an inoperable state.



It is not possible to downgrade the firmware to an earlier version after version 7.1.0 or higher is installed.

### 2.1. Installation instructions



These instructions are only valid if you have version 7.0.2 or higher installed. If you are using earlier versions, follow the instructions in the next section.

1. Use the scanner's power supply and plug the scanner into an electrical power socket. The upgrade cannot be performed if the scanner is not plugged in. Also ensure that your scanner has a fully charged battery. (This ensures that if there is a power outage, the update will not be interrupted.)
2. Connect your scanner to the Internet. Refer to FARO Laser Scanner User Manual for details.



If you cannot connect your scanner to the Internet, follow the instructions in the next section.

3. From the scanner's Home screen, navigate to **Manage > Service > Firmware Update**.
4. Make sure that the **Enable Online Updates** switch is in its **ON** position.
5. Make sure that the Fast Installation switch is in its ON position.
6. Select **Set Update Server URL**. Make sure that the URL is <https://farofirmware.websharecloud.com/lsupdates/> Select **OK**.
7. Select **Search for Updates Now**.

8. If there is a firmware update available for your scanner, a message will appear that shows the version number of the update. If you want to install the update, select **Download and Install**.

### 3. Manual Firmware Update

Refer to the link below for instructions on how to download the firmware update.  
[https://knowledge.faro.com/Hardware/3D\\_Scanners/Focus/Firmware\\_Installation\\_for\\_the\\_Focus\\_Laser\\_Scanner?mt-learningpath=focus\\_downloads](https://knowledge.faro.com/Hardware/3D_Scanners/Focus/Firmware_Installation_for_the_Focus_Laser_Scanner?mt-learningpath=focus_downloads)

#### 3.1. Transfer the firmware update to the scanner

1. Take the SD card out of the scanner and put it into your computer.
2. Open the SD card with Windows Explorer. At the top level, there are at least two folders: Is-data and Scans. You may also have an **Updates** folder. If it exists, delete it.
3. Create a new **Updates** folder at the top level. Ensure that you follow the correct file naming and capitalization.
4. Copy the downloaded .LsSetupX file into the new **Updates** folder.
5. Remove the SD card from your computer using the Windows safe removal option and put the SD card into the scanner.

#### 3.2. Install the firmware update

Use the scanner's power supply and plug the scanner into an electrical power socket. Also ensure that your scanner has a fully charged battery. (This ensures that if there is a power outage, the update will not be interrupted.)

1. From the scanner's **Home** screen, navigate to **Manage > Service > Firmware Update**.
2. Make sure that the **Fast Installation** switch is ON.
3. Select **Update from SD Card**.
4. If the firmware update on the SD card is newer than the currently installed firmware, a message will appear that shows the version number of the update. If you want to install the update, select **Install**.
- 5.

### 3.3. Version 7.2.1



Before installing firmware version 7.2.1 on your scanner, it is strongly recommended to format the SSD. Create a secure backup of all your data before proceeding.

#### Fixes:

- **Symptom:** Flash registration consistently failed on some scanners.  
**Resolution:** This issue has been fixed.
- **Symptom:** The scanner mistakenly reported internal data corruption if the scanner clock was moved backwards.  
**Resolution:** This issue has been fixed.
- **Symptom:** The Scan Verification Tool incorrectly identified some scans as manipulated.  
**Resolution:** This issue has been fixed.
- **Symptom:** The scanner shut down unexpectedly if it used with an older battery, and if battery was running low.  
**Resolution:** This issue has been fixed.

#### Known Issues:

- **Panocam Color Settings:** The HDR color setting does not currently produce quality color when using the Ricoh Theta panoramic camera. Use the Low Noise setting for best results.

## 3.4. Version 7.2.0



Before installing firmware version 7.2 on your scanner, it is strongly recommended to format the SSD. Create a secure backup of all your data before proceeding.

### Improvements:

- Several internal optimizations have been made to reduce wait times in various parts of the scanning process.
- The scan phases are now indicated more precisely.
- Multiple robustness improvements have been implemented to enhance the streaming of scan data.
- Slowdowns in large scan projects have been resolved.
- The responsiveness of the inclinometer screen has been significantly improved.
- The active area of the shutdown button has been enlarged to facilitate easier access.
- Diagnostic data and log file export have been improved.
- Small usability improvements have been made on the WiFi page.

### Fixes:

- **Symptom:** Firmware update duration estimations were inaccurate.  
**Resolution:** This issue has been fixed.
- **Symptom:** Under certain circumstances, the project data structure could become corrupted.  
**Resolution:** This issue has been fixed. Furthermore, if a scan loses its association with its project, it will now be linked to the default project.

### LsWebAPI extensions:

- The horizontal and vertical axis can now be independently positioned through the set-position route.
- A route has been added to query the project state more efficiently.
- A route has been added to query the inclination and compass orientation of a scan.
- A route has been added to obtain an immediate inclinometer reading at all times.

### Known Issues:

- **Panocam Color Settings:** The HDR color setting does not currently produce quality color when using the Ricoh Theta panoramic camera. Use the Low Noise setting for best results.

## 3.5. Version 7.1.0

### New Features:

- Support for the Focus Core model laser scanner.
- It is now possible to capture low-noise and HDR images with the Ricoh Theta Z1 panorama camera.
- The inclinometer page now shows the position of the scanner's mirror axis.

### Improvements:

- On-site compensation can now compensate for larger misalignments.
- On-site compensation is more tolerant of the scanned environments to detect enough features.
- For the Ricoh Theta Z1 panorama camera with firmware 2.10.3 and later, images are now stored compressed, reducing capture time and scan size.
- Increased responsiveness

### Fixes:

- **Symptom:** When multiple projects were selected for export to SD card, only the last one was exported. (LSFW-1045)  
**Resolution:** This issue has been fixed.
- **Symptom:** Streaming of scan data via the LsWebAPI could sporadically abort. (LSFW-1225)  
**Resolution:** This issue has been fixed.
- **Symptom:** Export status of scan project could get lost when the scanner restarts. (LSFW-1769)  
**Resolution:** This issue has been fixed.
- **Symptom:** If a firmware update was performed while connected to FARO Stream, there was no indication of the ongoing update on the scanner UI. (LSFW-1818)  
**Resolution:** This issue has been fixed.
- **Symptom:** Some translations of strings in scanner GUI were confusing. (LSFW-969)  
**Resolution:** Translations have been improved.

### LsWebAPI extensions:

- A coarse inclinometer reading can now be retrieved for every scan, regardless of whether the inclinometer was explicitly enabled.

### Known Issues:

- It is not possible to downgrade the firmware to an earlier version after version 7.1.0 is installed.
- Panocam Color Settings: The HDR color setting does not currently produce quality color when using the Ricoh Theta panoramic camera. Use the Low Noise setting for best results.



## 3.1. Version 7.0.2

### Features and improvements:

- Firmware updates can be retrieved and installed via the Internet.
- Keyboard usability is improved.
- The range and regulatory domain of the scanner are now listed on the scanner properties page.

### Fixes:

- **Symptom:** The firmware update process would sometimes hang. (LSFW-962, LSF-967)  
**Resolution:** This issue has been fixed.
- **Symptom:** After zooming-in on a scan, it was sometimes not possible to zoom out again. (LSFW-1743)  
**Resolution:** This issue has been fixed.
- **Symptom:** When the scanner contained many scan projects, it sometimes did not power down cleanly. (LSFW-964)  
**Resolution:** This issue has been fixed.
- **Symptom:** Translations of some warnings and errors were missing. (LSFW-969)  
**Resolution:** This issue has been fixed.
- **Symptom:** Swift projects could not be deleted. (LSFW-1345)  
**Resolution:** This issue has been fixed.
- **Symptom:** Exporting of projects to the SD card sometimes failed or produced misleading error messages. (LSFW-1791)  
**Resolution:** This issue has been fixed. Write-protected SD cards are now detected.
- **Symptom:** When an on-site compensation (OSC) was performed while the SD card was selected as storage medium, an error occurred after the compensation finished and the OSC process could not be repeated until after a reboot. (LSFW-1773)  
**Resolution:** This issue has been fixed.

### Known Issues:

- Scanning via internal storage (SSD) is faster than using the SD card.
- When scanning using the SD card, GPS reception is limited when the SD card is busy.
- Limitations of the automatic synchronization to the SD card:
  - The synchronization is only triggered for new scans. Sequences of scans may be slowed-down dependent on the speed of the SD card.
  - If scans on the SD card exist with the same name as a newly recorded scan, the new scan will not be copied to the SD card.
  - If any error occurs during the automatic synchronization (e.g., the SD card is removed or full) the synchronization stops, an error message is displayed and the auto sync feature is switched-off.

## 3.2. Version 7.0.1

### Fixes:

- **Symptom:** The scanner sporadically locked up indefinitely at the end of a scan.  
**Resolution:** This issue has been fixed.
- **Symptom:** The scanner interface locked up when a scan export was triggered with disconnected WiFi.  
**Resolution:** This issue has been fixed.
- **Symptom:** The scanner would sporadically not shutdown cleanly  
**Resolution:** This issue has been fixed.
- **Symptom:** When switching to or from SSD storage immediately after a scan, the scan projects could be corrupted.  
**Resolution:** This issue has been fixed.
- **Symptom:** Swift scans could become corrupted when auto-sync to SD card is disabled.  
**Resolution:** This issue has been fixed.
- **Symptom:** Asian characters were not rendered correctly in the user interface.  
**Resolution:** This issue has been fixed.
- **Symptom:** When the temperature of the scanner changed rapidly, a false fiber amplifier fault could occur.  
**Resolution:** This issue has been fixed.
- **Symptom:** Some translations were missing.  
**Resolution:** This issue has been fixed.

### Known Issues:

- Online firmware updates are not supported.
- High-Resolution color scans are temporarily not supported in Sphere.
- Scanning via internal storage (SSD) is faster than using the SD card.
- When scanning using the SD card, GPS reception is limited when the SD card is busy.
- Limitations of the automatic synchronization to the SD card:
  - The synchronization is only triggered for new scans. Sequences of scans may be slowed-down dependent on the speed of the SD card.
  - If scans on the SD card exist with the same name as a newly recorded scan, the new scan will not be copied to the SD card.
  - If any error occurs during the automatic synchronization (e.g., the SD card is removed or full) the synchronization stops, an error message is displayed and the auto sync feature is switched-off.

### 3.3. Version 7.0

#### Known Issues:

- Online firmware updates are not supported.
- Scanning via internal storage (SSD) is faster than using the SD card.
- The translation of the firmware is not complete.
- When scanning using the SD card, GPS reception is limited when the SD card is busy.
- Limitations of the automatic synchronization to the SD card:
  - The synchronization is only triggered for new scans. Sequences of scans may be slowed-down dependent on the speed of the SD card.
  - If scans on the SD card exist with the same name as a newly recorded scan, the new scan will not be copied to the SD card.
  - If any error occurs during the automatic synchronization (e.g., the SD card is removed or full) the synchronization stops, an error message is displayed and the auto sync feature is switched-off.

## 4. Tutorials

FARO's YouTube channel provides a variety of laser scanner hardware and SCENE software tutorials on the web. Access them from the Help menu within SCENE or with the following links:

### 4.1. SCENE tutorials

[https://knowledge.faro.com/Software/FARO\\_SCENE](https://knowledge.faro.com/Software/FARO_SCENE)

### 4.2. Focus tutorials

[https://knowledge.faro.com/Hardware/Laser\\_Scanner/Focus](https://knowledge.faro.com/Hardware/Laser_Scanner/Focus)

Or visit the FARO Customer Service area on the Web at [www.faro.com](http://www.faro.com) to search our technical support database.

## 5. Technical Support

If you have any issues using one of our products, follow these steps before contacting our Technical Support Team:

- Be sure to read the relevant sections of the documentation to find the help you need.
- Visit the FARO Customer Care area on the Web at [www.faro.com](http://www.faro.com) to search our technical support database.
- Document the problem you are experiencing. Be as specific as you can. The more information you have, the easier the problem will be to solve.
- If you still cannot resolve your problem, have your device's Serial Number available before calling.

## 5.1. Customer support contact information

This section provides information about the contact information for customer support.

### **FARO Technologies, Inc.**

250 Technology Park  
Lake Mary, FL 32746  
800-736-2771 U.S. / +1 407-333-3182 Worldwide  
Email: [support@faro.com](mailto:support@faro.com)

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### **FARO (Shanghai) Co., Ltd.**

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Shanghai 200231, China  
Tel.: 400.677.6826  
Email: [supportchina@faro.com](mailto:supportchina@faro.com)

### **FARO Business Technologies India Pvt. Ltd.**

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Mohan Cooperative Industria Estate,  
New Delhi-110044, India  
Tel.: 1800.1028456  
Email: [supportindia@faro.com](mailto:supportindia@faro.com)

Email or faxes sent outside regular working hours usually are answered before 12:00 p.m. the next working day. If our staff is on other calls, leave a voice mail message; calls are always returned within 4 hours. Remember to leave a detailed description of your question and your device's Serial Number. Do not forget to include your name, fax number, telephone number and extension so we can reach you promptly.