



LCI Sensor Maintenance Tool
v. 1.2.0
User Guide



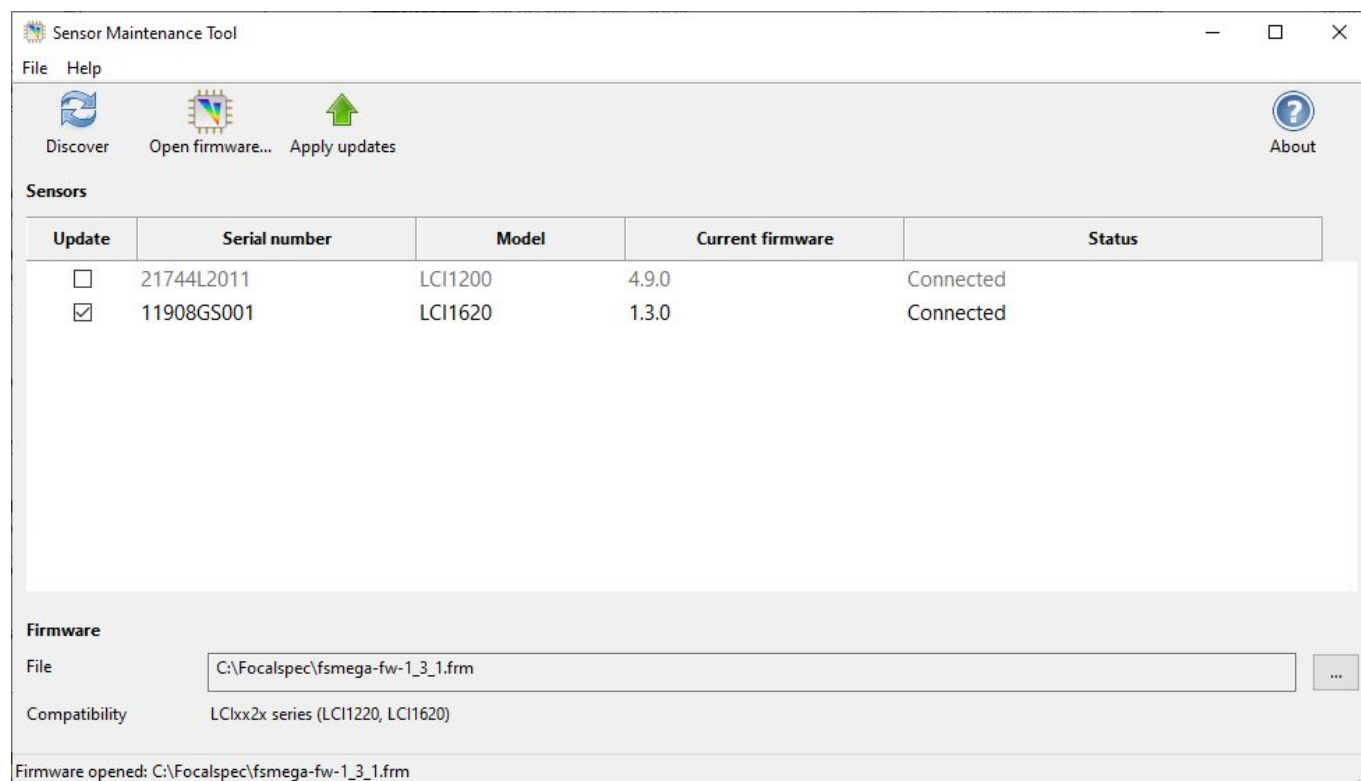
Changelog

Revision	Date	Author(s)	Summary
A	2019-11-11	Henrik Pitkälä	Document released; applies to version 1.0.0.
B	2020-02-11	Henrik Pitkälä	Updated for Sensor Maintenance Tool version 1.1.0. Added information about issues.
C	2020-02-28	Kalistaja	Template update
D	2020-12-02	Henrik Pitkälä	Updated for Sensor Maintenance Tool version 1.2.0. Added a note about firmware compatibility with LCIxx2x sensors. Some language corrections.

1 Introduction

Sensor Maintenance Tool is a GUI application to update firmware of FocalSpec LCI sensors. The application supports updating firmware in multiple sensors connected to the same PC.

2 UI Layout



3 Functions

3.1 Discover

Discover function finds the connected sensors. This function can be performed by clicking the Discover button in the toolbar or by selecting from menu File > Discover, or pressing Ctrl+D shortcut.

The discovered sensors appear in the sensors table. The sensor table shows the sensor serial number, sensor model, version number of the current firmware and the sensor status.

The connected sensor will have status "Connected".

3.2 Open Firmware

Open firmware file by clicking "Open firmware..." toolbar button or selecting from menu File > Open firmware, or pressing Ctrl+O shortcut, or clicking the small "..." button next to the firmware file name field. A file dialog window will open to enable selecting the file. The LCIxx0x sensor firmware files have extension "BIN", while LCI1x2x sensor firmware files have extension "FRM". By default, both file types are shown. Choose filtering to show only one type of sensor firmware files from the dropdown box.

Once the firmware file has been opened, the compatibility is shown in the firmware file info area. Incompatible sensors will be disabled. Please see the note about strict compatibility mode for LCI1x2x sensors below.

The recently opened firmware files are shown in the File menu. The most recently used firmware file can be opened by shortcut Ctrl+L.

Strict Compatibility Mode for LCI1x2x Sensors

When opening LCI1x2x firmware or discovering LCI1x2x sensors, a compatibility check is performed. If there's any uncertainty about firmware compatibility with the sensors, the sensors with potential issues will be disabled. In this case, the sensor updating can be enabled by switching off the strict compatibility mode in the menu: File > Disable strict compatibility mode.



Installing a potentially incompatible firmware may render a sensor completely unresponsive. It's therefore strongly recommended to contact the technical support beforehand to resolve any possible issues.

3.3 Selecting Sensors for Update

Select sensors for update by clicking the corresponding row in the sensor table. All sensors can be selected by selecting from menu File > Select all or pressing the shortcut Ctrl+A.

Note that you can only select sensors which are compatible with the opened firmware. If you select sensors first and open the firmware file after that, the incompatible selections will be cleared.

3.4 Updating Firmware

In order to be able to update firmware, the 1) sensors must have been discovered, 2) firmware file must have been opened and 3) at least one compatible sensor must have been selected for update.

Start updating firmware by clicking “Apply updates” toolbar button, or selecting from menu File > Apply updates, or pressing Ctrl+U shortcut. The status column in the sensor table will show the update progress.

After successful firmware update completion, the status will be “Completed, sensor rebooted.”

In Case of Issues

In case of any error, the status will be “Update failed.” In this case, re-run discovery and try again.

IMPORTANT: if sensor status indicator light in LCI1x2x sensor is RED after a failed update, wait for 15 minutes without turning power off and see whether the status light will turn to normal.



NOTE: when the sensor status indicator light is red after starting the update, the sensor power must not be turned off. You must wait until the indicator turns white/blue, meaning that the sensor has rebooted after the completed update. Only if the status indicator remains red for at least about 15 minutes and nothing happens, the sensor can be restarted.



NOTE: it's recommended that the sensor is powered off and on manually after firmware update.



NOTE: for maximum security, it's recommended that only one sensor is updated at a time.

4 Known Issues

- If the discovery function is having trouble finding sensors, verify that the sensor status indicator light shows the sensor is connected (the status indicator light is yellow). If all sensors are connected and there's still a problem, quit the application, restart network equipment and the application, and re-run discovery.
- If the progress of updating LCIxx0x firmware gets stuck at 99% for about five minutes and finishes with “Timeout, restart sensor” status, it means that sensor has stopped responding. This is very rarely a real issue and despite the timeout, the firmware has been updated correctly. Restart the sensor to verify that the firmware version is correct.

Copyright

Copyright © 2020 by LMI Technologies, Inc. All rights reserved.

Proprietary

This document, submitted in confidence, contains proprietary information which shall not be reproduced or transferred to other documents or disclosed to others or used for manufacturing or any other purpose without prior written permission of LMI Technologies Inc.

No part of this publication may be copied, photocopied, reproduced, transmitted, transcribed, or reduced to any electronic medium or machine-readable form without prior written consent of LMI Technologies, Inc.

Trademarks and Restrictions

FocalSpec™ is a registered trademark of LMI Technologies, Inc. Any other company or product names mentioned herein may be trademarks of their respective owners.

Information contained within this manual is subject to change.

Contact Information

LMI Technologies, Inc.
9200 Glenlyon Parkway
Burnaby BC V5J 5J8
Canada

Telephone: +1 604-636-1011

Fax: +1 604-516-8368

www.lmi3D.com