LDD-1137 Software Release Notes

Devices:

LDD-1137

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1 Current Release Notes, Version 1.50

2 October 2025; LDD-1137 Configuration Software v1.50; LDD-1137 Firmware v1.50

1.1 Supported Devices

- LDD-1137: Hardware Version Range 1.10 – 1.32

1.2 New and Improved Features

- Added a configurable communication watchdog
- Added a new GPIO function: Fix 0

1.3 Resolved Issues

- None.

1.4 Known Issues

- Configuration software LDD graph timing is off, especially on hardware versions ≥1.30.
- Culture conversion of decimal separator does not always work during import and export of settings on systems using a comma.
- The configuration software may timeout if connected via TCP/IP while acquiring DSO data.
- ADC configuration is not properly resetted/initialized when doing a soft reset (no power cycle), which can make the device error out after a firmware update. A power cycle is then needed.

2 Current Release Notes, Version 1.41

15 August 2025; LDD-1137 Configuration Software v1.41; LDD-1137 Firmware v1.41

2.1 Supported Devices

- LDD-1137: Hardware Version Range 1.10 – 1.32

2.2 New and Improved Features

- None.

2.3 Resolved Issues

- Fixed a bug where the device would not catch the cause of an error condition in case of an interlock error. The error still caused a power down of the output, however, the device stayed in ready or run state and did not present an error code. Detection of FPGA controlled error conditions might now take up to 10 ns longer. The issue was only present on firmware v1.40.

2.4 Known Issues

- Configuration software LDD graph timing is off, especially on hardware versions ≥1.30.
- Culture conversion of decimal separator does not always work during import and export of settings on systems using a comma.
- The configuration software may timeout if connected via TCP/IP while acquiring DSO data.
- ADC configuration is not properly resetted/initialized when doing a soft reset (no power cycle), which can make the device error out after a firmware update. A power cycle is then needed.

3 Old Release Notes, Version 1.40

6 March 2025; LDD-1137 Configuration Software v1.40; LDD-1137 Firmware v1.40

3.1 Supported Devices

- LDD-1137: Hardware Version Range 1.10 – 1.31

3.2 New and Improved Features

- Laser power control feature (optional).
- Photocurrent parameters and Graph added.
- Pulse sync output delay and length can now be set by the user.
- Added parameter to change external input edge detector.

3.3 Resolved Issues

- Phase asymmetry detection acted too fast during fast current transient.
- Ethernet connection works even if the endpoint has a Gbit interface.
- The external input was not affected by the maximum current setting.
- The “Show Pulse Current” option in the graph has been removed.
- The driver no longer throws an error on the main system after the user resets a sub-system to clear a device internal error.
- Negative signal generator values are no longer mapped as high values.
- Graph button in LDD window now reliably brings the window to the front.
- Reworked the DSO subsystem.
- Improved phase synchronization of the PWM.
- Depending on the Reset on change parameter (ID 22220), current output is not temporarily disabled anymore upon changing the following settings during operation:
    - LDD / LDD/LPC mode (ID 29000)
    - LDD / Current PID / * (ID 27000-27002)
    - LDD / Constant Current / CW Current (ID 22150)
    - LDD / Signal Generator / * (ID 22100-22105)
    - LDD / Lookup Table (ID 22200)
    - LDD / Lookup Table / Sample Rate (ID 22210)
    - LDD / External Input / * (ID 22160, 22161, 22170)
    - LDD / Pulse / * (ID 22400-22406)
    - LDD / Current Source Selector (ID 22000)
    - LDD / Driver Limits / Minimum Current (ID 23110)
    - LDD / Driver Limits / Maximum Current (ID 23102)
    - LDD / LPC PID / Kp (ID 29001)
    - LDD / LPC PID / Ti (ID 29002)
    - LDD / LPC PID / Td (ID 29003)
    - LDD / LPC / Constant Power / CW Power (ID 30150)
    - LDD / LPC / Signal Generator / * (ID 30100-30105)
    - LDD / LPC / Lookup Table (ID 30200)
    - LDD / LPC / Lookup Table / Sample Rate (ID 30210)
    - LDD / LPC / External Input / * (ID 30160, 30161, 30170)
    - LDD / LPC / Current Source Selector (ID 30000)
    - LDD / LPC / Scale (ID 29006)
    - Advanced Settings / Pulse Settings / * (ID 22407, 22408)
    - Analog IO / Photodiode Input / Calibration * (ID 29004, 29005)

3.4 Known Issues

- Configuration software LDD graph timing is off, especially on hardware versions ≥1.30.
- Culture conversion of decimal separator does not always work during import and export of settings on systems using a comma.
- The configuration software may timeout if connected via TCP/IP while acquiring DSO data.
- ADC configuration is not properly resetted/initialized when doing a soft reset (no power cycle), which can make the device error out after a firmware update. A power cycle is then needed.

4 Old Release Notes, Version 1.31

16 November 2022; LDD-1137 Configuration Software v1.31; LDD-1137 Firmware v1.31

4.1 Supported Devices

- LDD-1137: Hardware Version Range 1.10 – 1.31

4.2 New and Improved Features

- PAR_LDD_Enable will be reset if the LDD status is not ready or running to reflect to current status of the LDD properly.

4.3 Resolved Issues

- Communication Problems between the Current measurement sensor and FPGA on Hardware version 1.30.

4.4 Known Issues

- CoSo LDD graph timing is slightly off with HW version 1.30 and Firmware version v1.31.

5 Old Release Notes, Version 1.30

7 September 2022; LDD-1137 Configuration Software v1.30; LDD-1137 Firmware v1.30

5.1 Supported Devices

- LDD-1137: Hardware Version Range 1.10 – 1.30

5.2 New and Improved Features

- LDD system can be reset separately without reboot.
- Control system improved.
- Device configuration migrated to Base-Board Flash chip
- Feature: Pulse current low display option.
- Feature: External Temperature Measurements with limits
- Feature: RS485_1 Interface usable with options

5.3 Resolved Issues

- Overcurrent raises LDD Error and not System error anymore.

5.4 Known Issues

- None known at time of publication.

A Change History

Date of change	Doc/Version	Changed/ Approved	Change / Reason
7 September 2022	5275A	PV/RS	• Initial release
16 November 2022	5275B	PV/RS	• Added firmware version 1.31
6 March 2025	5275C	SC/RS	• Added firmware version 1.40
15 August 2025	5275D	SC/RS	• Added firmware version 1.41
9 September 2025	5275E	RS/SC	• Add new hardware version 1.32
2 October 2025	5275F	SC/RS	• Added firmware version 1.50