STSW-L99LD21ADIS

L99LD21-ADIS discovery board

Data brief

Description

The STSW-L99LD21ADIS is the Graphical User Interface (GUI) dedicated to set and control the L99LD21-ADIS. This is a flexible LED driver board, designed for the control of four independent high brightness LED strings for automotive front lighting applications.

The STSW-L99LD21ADIS has been developed by using C++ and it works with SPC56B-ADIS programmed with a dedicated Firmware.

Features

- Complete Graphical User Interface (GUI) for L99LD21-ADIS discovery board

Table 1. Device summary

Order code	Reference
STSW-L99LD21ADIS	STSW-L99LD21ADIS GUI for L99LD21-ADIS

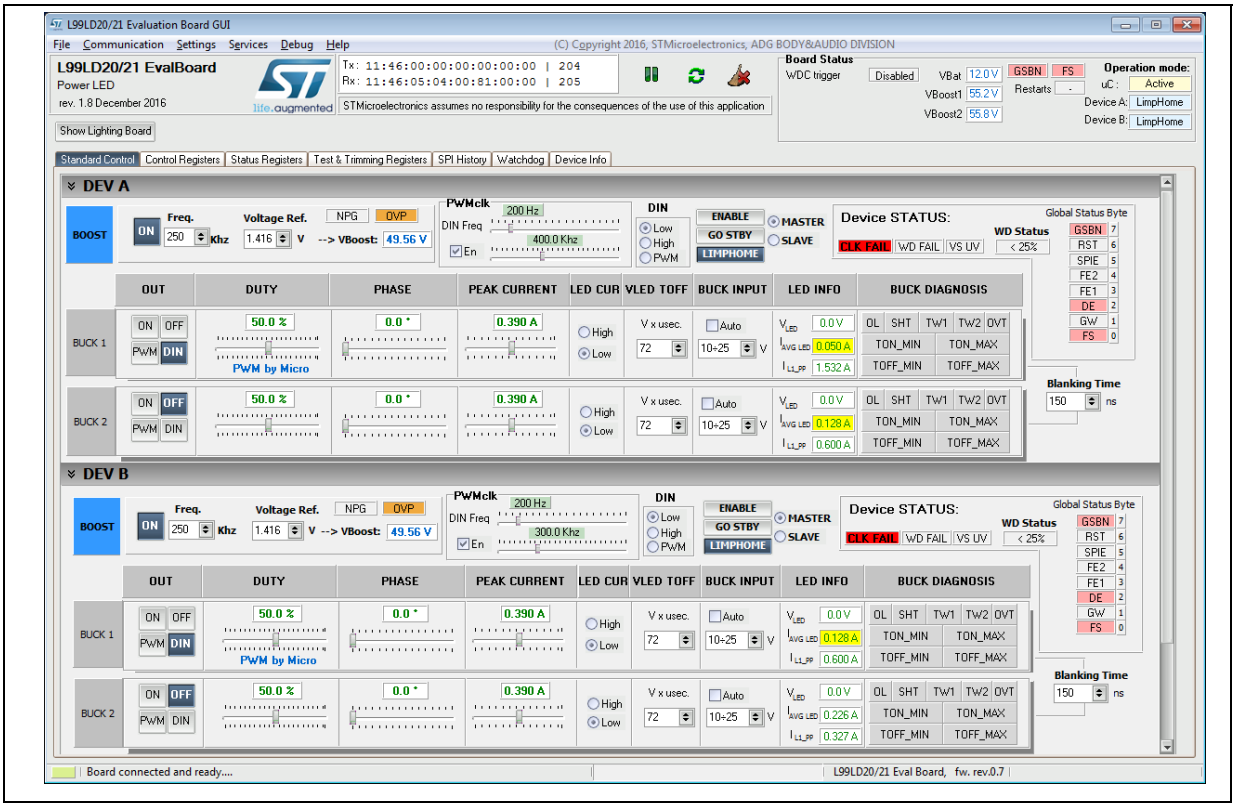
Contents

List of figures

1 Software installation

- Download GUI from www.st.com.
- Run the downloaded executable file this will extract the files to <*your chosed folder*>
- Open the folder and open the directory <GUI_Installer>
- Click and run the setup file *Setup_L99LD2021.exe*
- This can be placed in your choice of folder
- Open the folder
- Click on executable file *L99LD2021.exe* and window below should appear

Figure 1. L99LD20/21 Evaluation board GUI



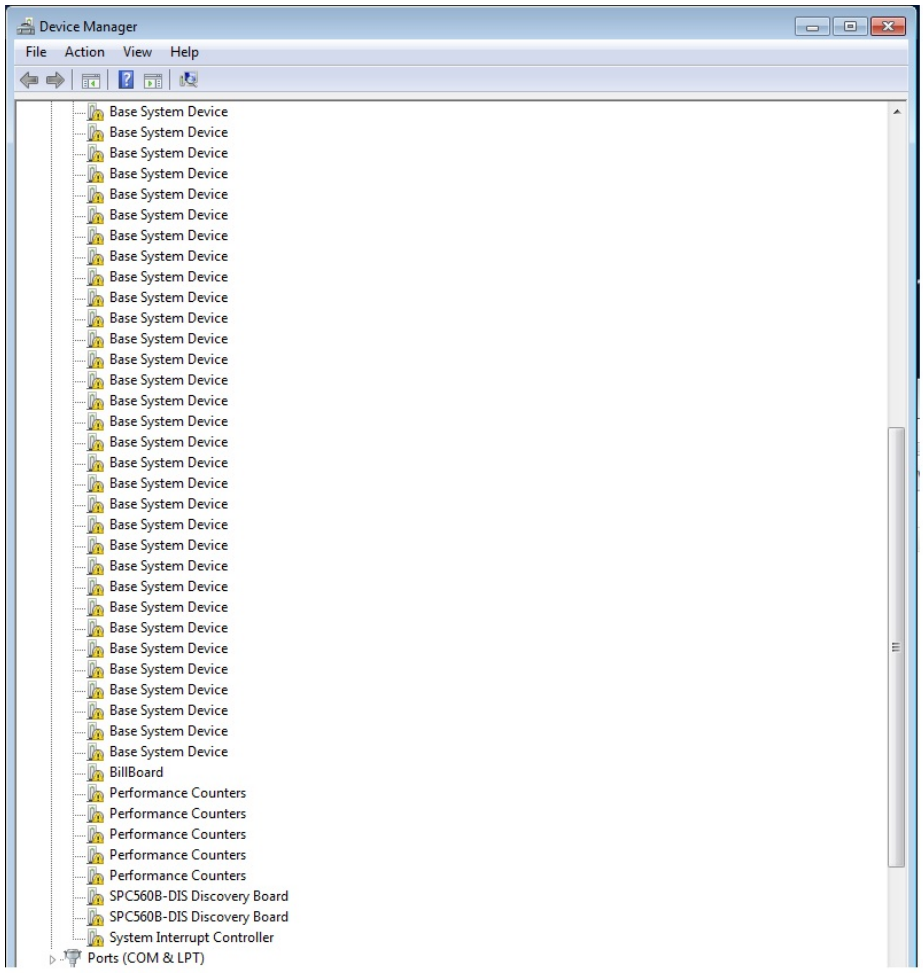
2 Getting started

- Follow all the indication reported in the L99LD21-ADIS user manual.

3 Drivers installation (be sure you are administrator in your machine)

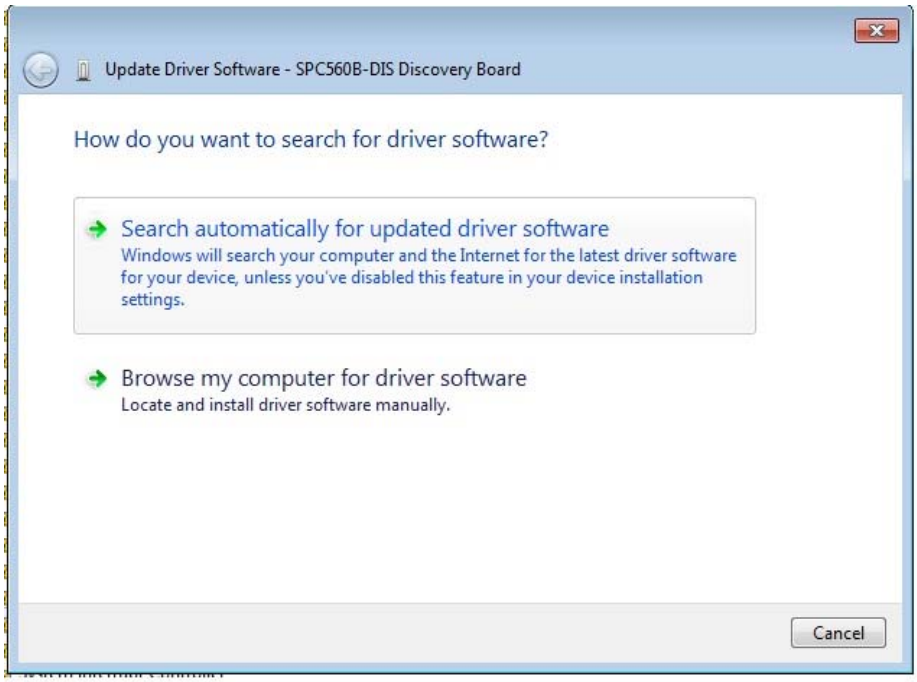
- Following steps must be executed only if connecting USB cable, this error appears: "*Device driver software was not successfully installed*"
- Select Start->Control Panel->system->device manager:

Figure 2. Device manager



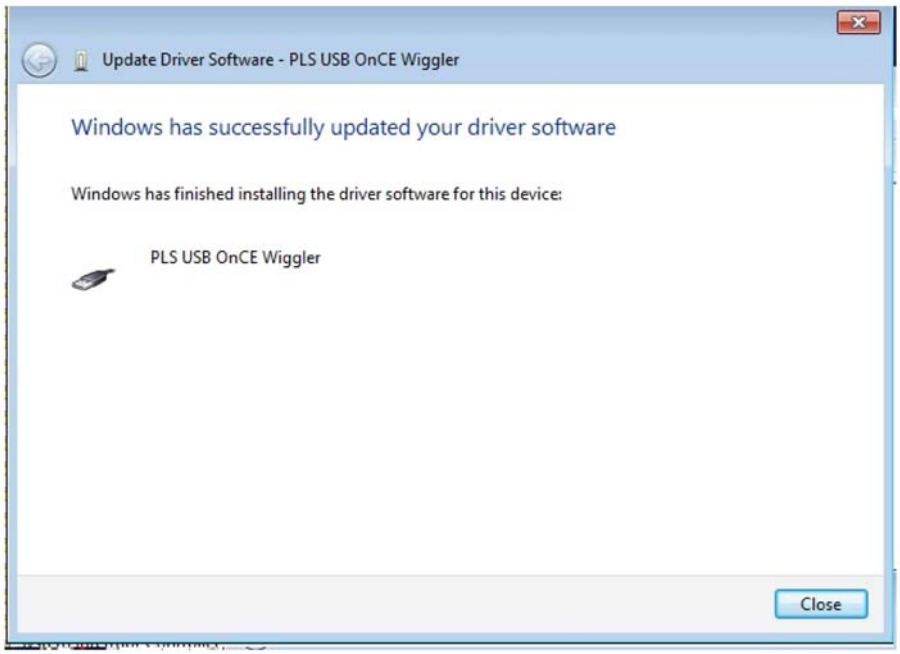
- Select first item *SPC560B-DIS Discovery Board*, press right button of the mouse, select *update driver* chosing *Browse my computer for driver software:*

Figure 3. Update Driver Software



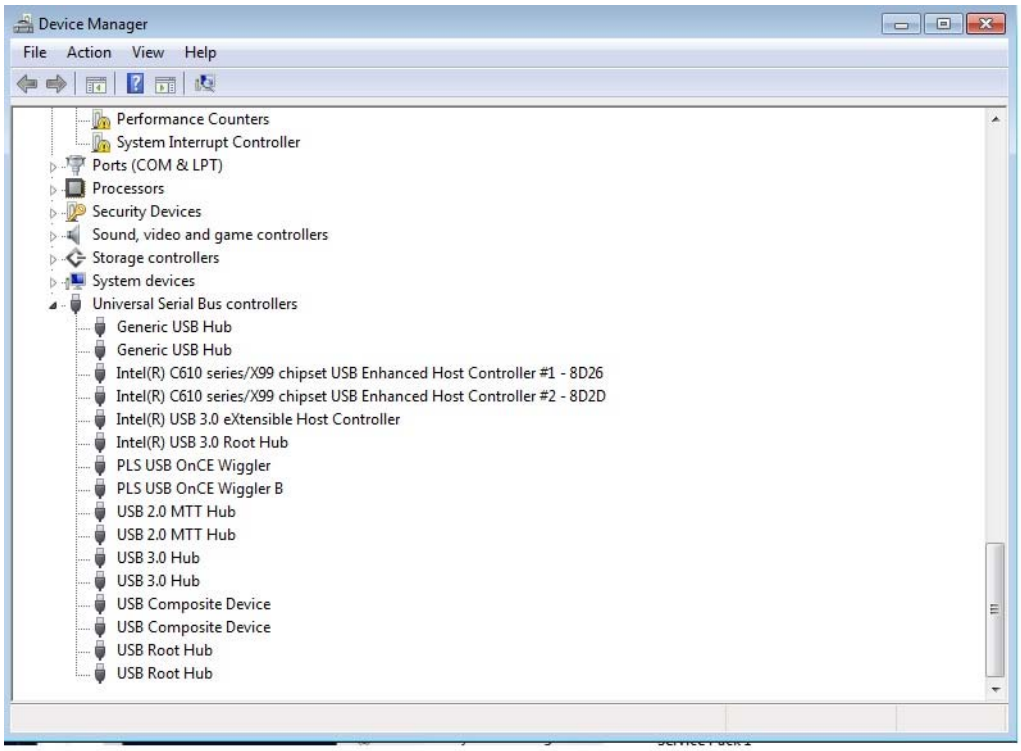
- Select <*your chosed folder*>\driver and the following message will appear:

Figure 4. Finished update driver software



- Repeat the previous steps also for the second item *SPC560B-DIS Discovery Board* in the device manager
- This must be the final result in device manager window:

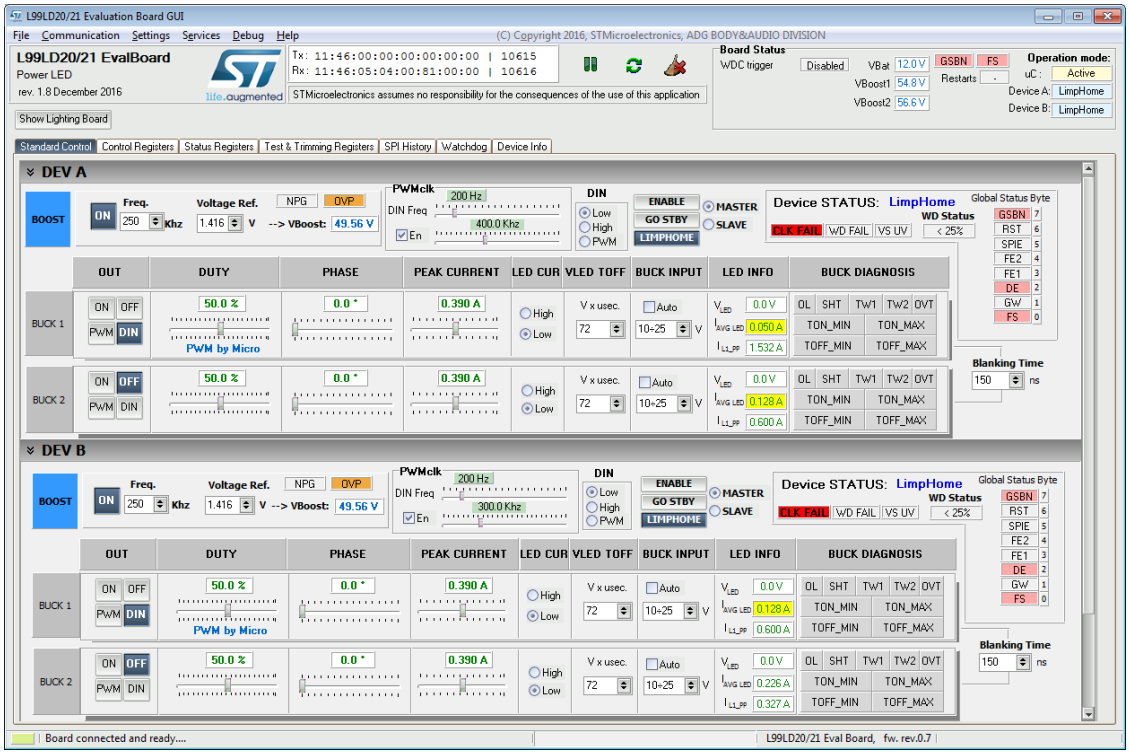
Figure 5. USB device manager



4 GUI setup

- Launch the Evaluation board GUI - *L99LD2021.exe*
- The GUI should appear with Limp Home flashing in the device status boxes (following picture)

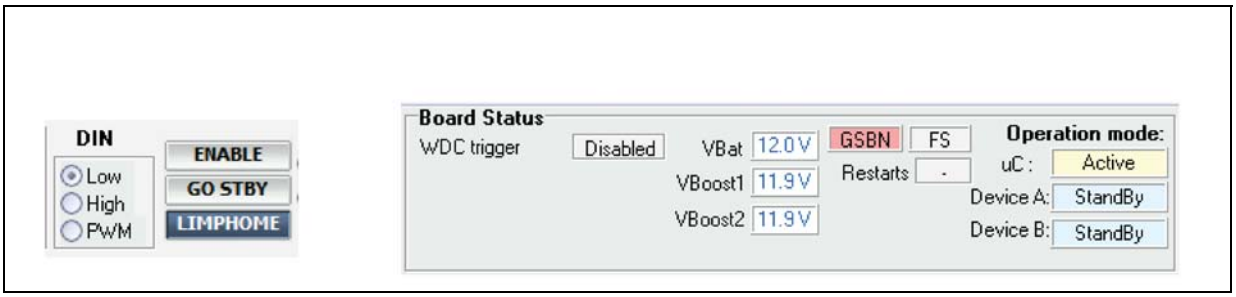
Figure 6. GUI start up



5 GUI test setup

- Click on ‘Go STBY’ for both DEV A & B

Figure 7. GUI Board status



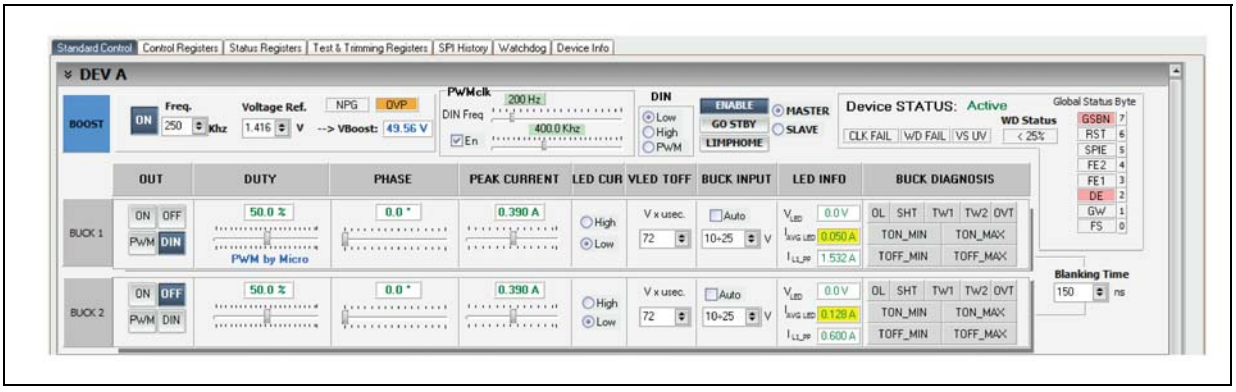
- Check the Board status and confirm both devices are in standby.

Note: The Vboost will read 12V when boost convertor are switched off

- Click on ‘Enable’ for both DEV A & B, check status is Active, repeat second time if required to confirm status is active.

Note: The controls for the Bucks will got to a default setting, shown below.

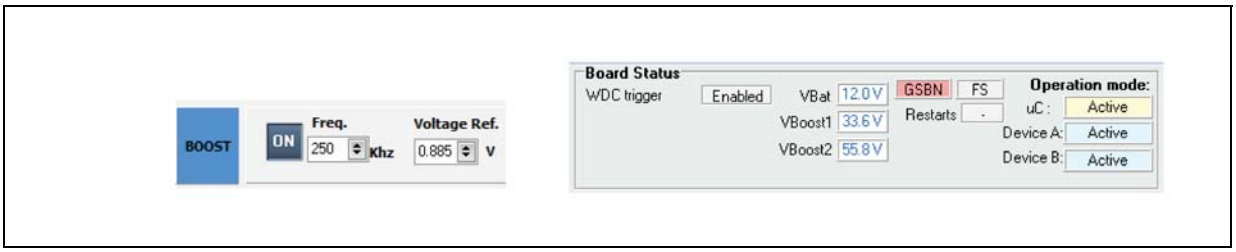
Figure 8. GUI standard control



6 Example – Set Vboost & PWM

- Click on OFF for BUCK 1 for both DEV A & B
- Ensure Master is selected for both DEV A & B
- For all Bucks set Buck Input to Auto
- Set Vboost for DEV A to ~33.0 V, select 0.885 V under Voltage Ref.
- Vboost for DEV B should remain ~56.5 V, Voltage Ref. set to 1.416 V

Figure 9. GUI Vboost and PWM set up

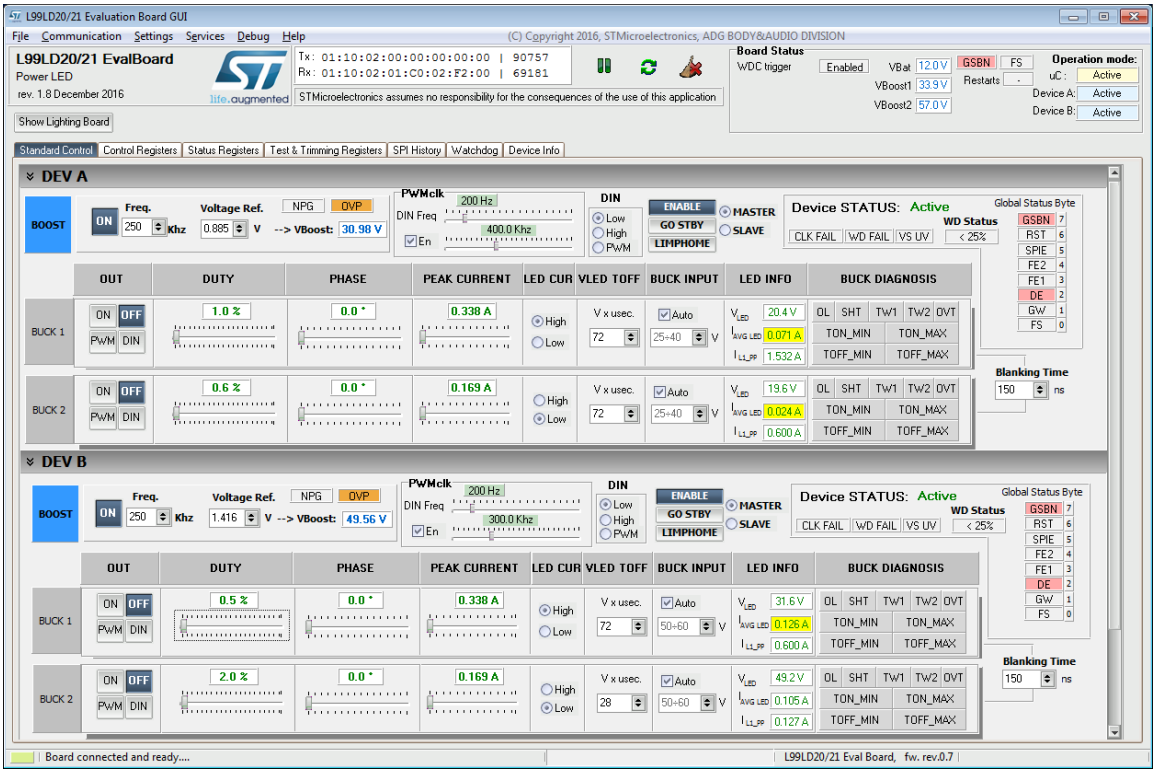


- DEV A – BUCK 1 set PWM to 1.0%, LED Cur to High, Peak Current to 0.340 A
- DEV A – BUCK 2 set PWM to 0.6%, LED Cur to Low, Peak Current to 0.170 A
- DEV B – BUCK 1 set PWM to 0.5%, LED Cur to High, Peak Current to 0.340 A
- DEV B – BUCK 2 set PWM to 2.0%, LED Cur to Low, Peak Current to 0.170 A
- DEV B – BUCK 2 set VLED TOFF setting Vxusec to 28

7 Example – GUI configured

- GUI Settings – confirm same as below.

Figure 10. GUI configured



8 Example – Light up the board

- Connect the 4 loads
- Set all bucks to PWM.
- LED Info on the GUI information displays string voltage, average current and peak measurements.

9 Revision history

Table 2. Document revision history

Date	Revision	Changes
26-Jun-2018	1	Initial release.