IQS318EV02 USER GUIDE

IQ Switch® - ProxFusion® Series

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Table of Contents

1   Introduction

This user guide describes the operation of the IQS318EV02 Evaluation Kit. The EV-Kit consists of five parts:

- ➢ IQS318 Inductive Switch x 1
- ➢ IQS318 Inductive Key Module x 1
- ➢ IQS318 Inductive Button x 1
- ➢ IQS318 Capacitive Switch x 1
- ➢ CT210A x 1

To visualise all sensor data from the EV-Kit, the module board can be interfaced to any Windows PC with USB support, along with the CT210A and the relevant IQS318 software Graphical User Interface (GUI) available to download from the Azoteq website. The purpose of the IQS318EV02 EV-Kit is to help application and development engineers in evaluating the IC's capabilities. A picture of the evaluation kit is shown below.

Download GUI from Azoteq website: https://www.azoteq.com/product/iqs318/

GUI can be found in the following section:

- ➢ Design Support -> Software
- ➢ Click on the Debug and Display tool for IQS318 hyperlink to download GUI.
- ➢ Install GUI on PC.
- ➢ Connect the CT210A to the PC with a USB micro data cable.

2 Setting up for the IQS318 Inductive Switch Module

To interface the IQS318 Inductive Switch module to a PC we advise using the CT210A. This module is set up in Inductive mode. This EV Kit can be set up with the following steps:

➢ Plug the Module into the CT210A via ribbon cable
➢ Run the IQS318 GUI
➢ Click "Start Streaming" button
➢ Data should now stream to GUI
➢ Click "ACK RESET"
➢ GUI should look as follow.
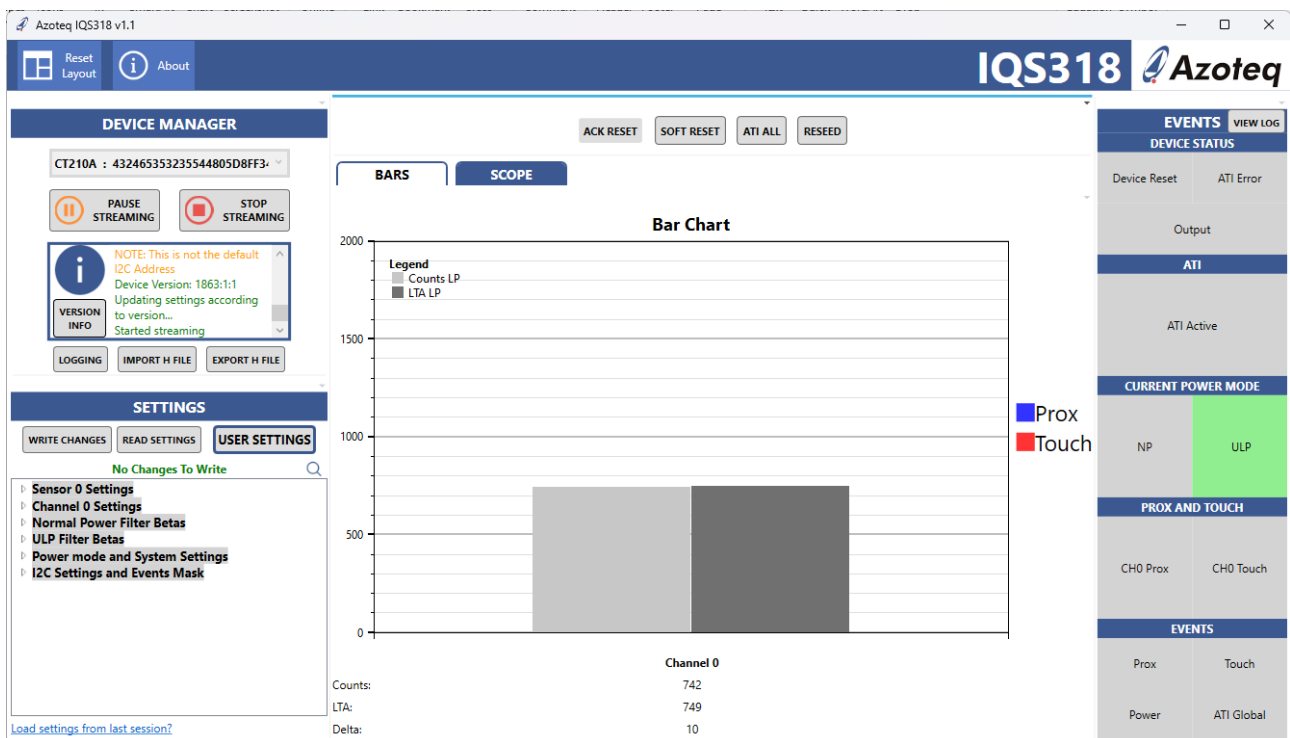
Channel 0 represents the Inductive Switch. This triggers in both directions, meaning a slide to the right will increase the counts and a slide to the left will decrease counts.
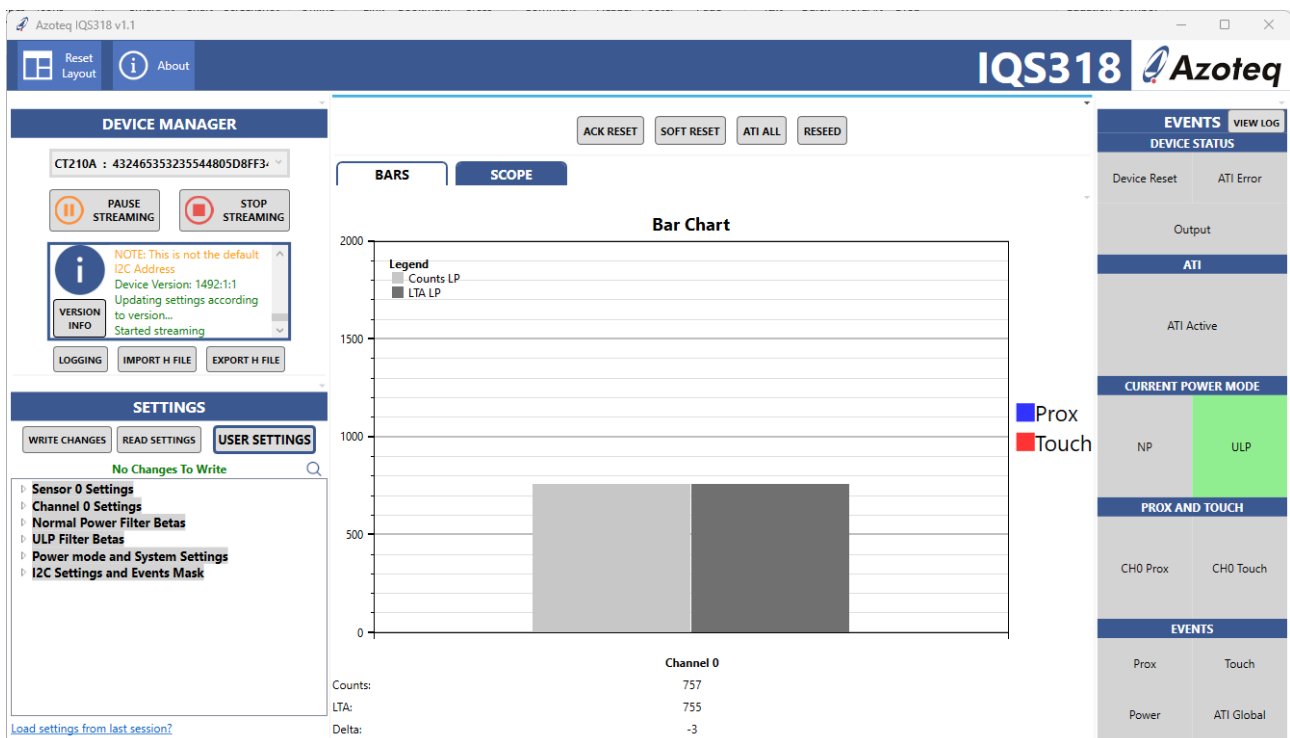
After evaluating click "STOP STREAMING."

In standalone mode unplug the ribbon cable and provide power through the USB C connector. The LED will turn on when the Output state is set (slider moved to the right) and will turn off when the Output state is cleared (slider moved to the left). On start-up the Output state is not set.

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3 Setting up for the IQS318 Inductive Key Module

To interface the IQS318 Inductive Key module to a PC we advise using the CT210A. This module is set up in Inductive mode. This EV Kit can be set up with the following steps:

> ➢ Plug the Module into the CT210A via ribbon cable
> ➢ Run the IQS318 GUI
> ➢ Click "Start Streaming" button
> ➢ Data should now stream to GUI
> ➢ Click "ACK RESET"
> ➢ GUI should look as follow.

Channel 0 represents the Inductive Key. This triggers in a downwards directions, meaning a push down on the key will result in a decrease of the counts.

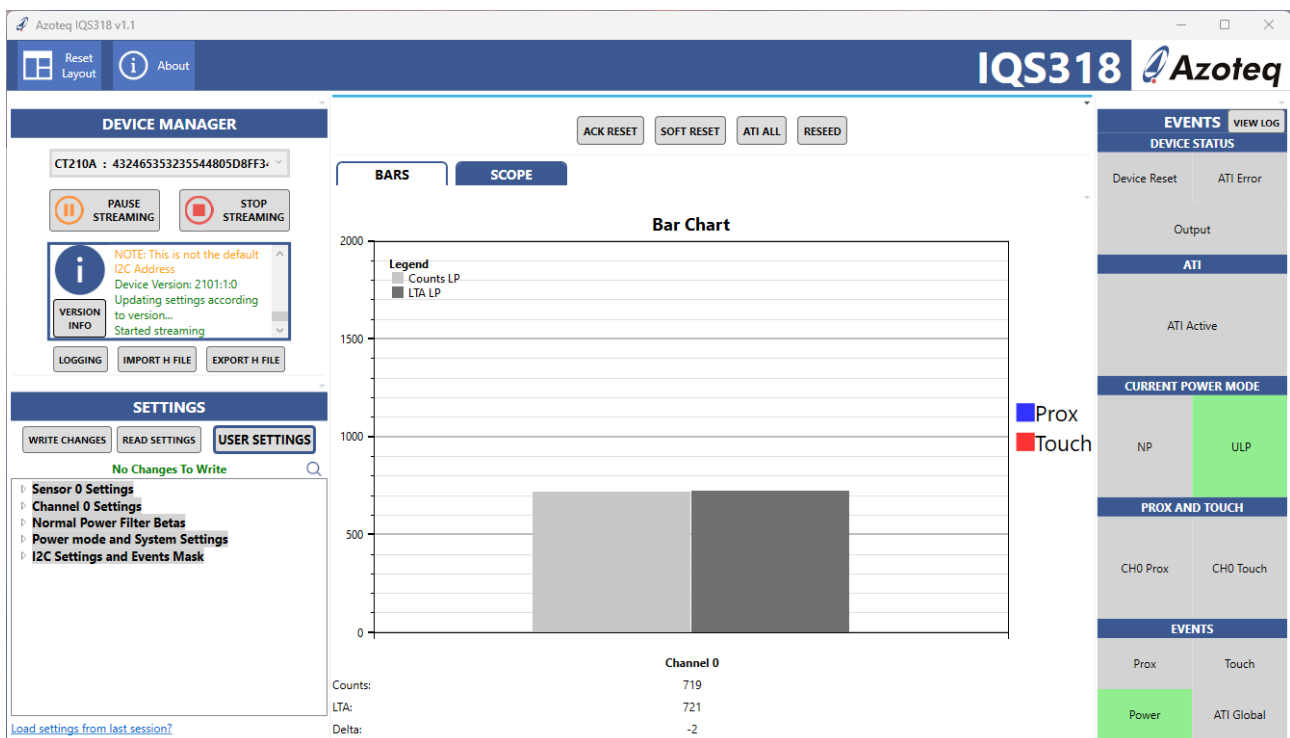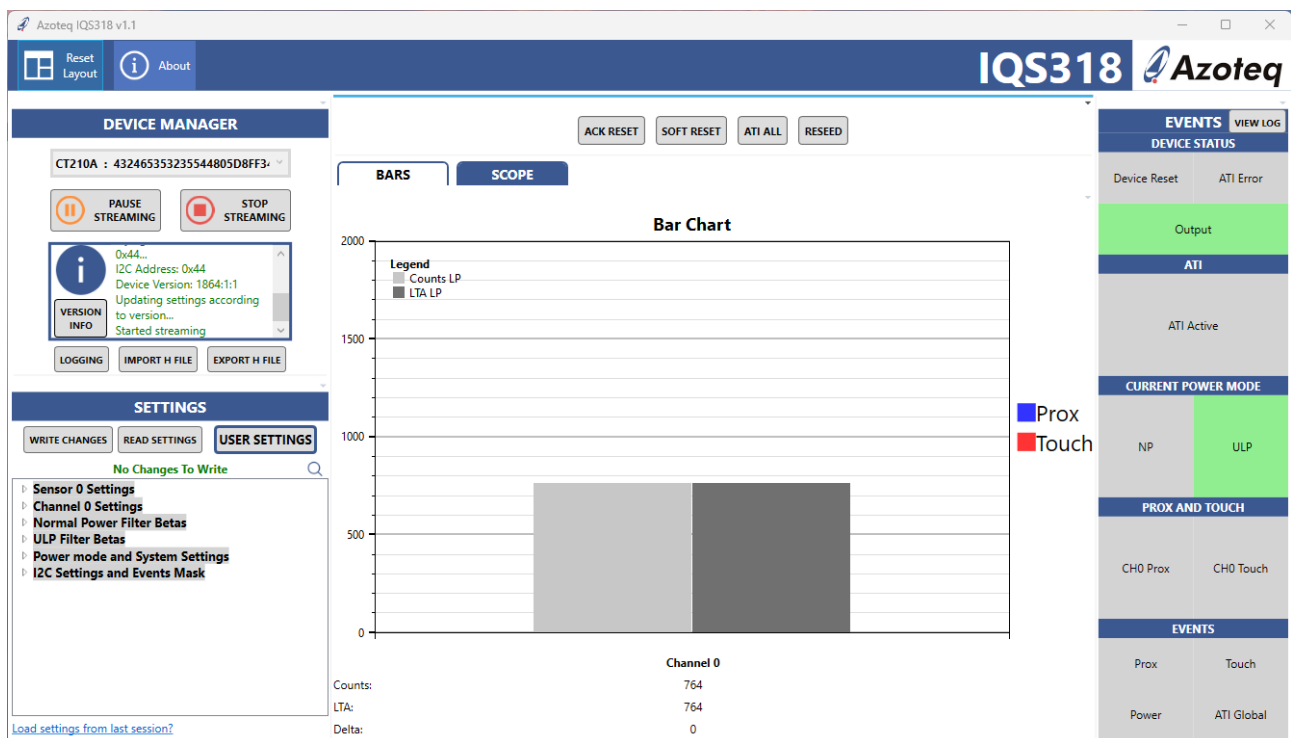After evaluating click "STOP STREAMING."

In standalone mode unplug the ribbon cable and provide power through the USB C connector. The LED will turn on when the Output state is set (key is pressed down) and will turn off when the Output state is cleared (key is released). On start-up the Output state is not set.

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4 Setting up for the IQS318 Inductive Button Module

To interface the IQS318 Inductive Button module to a PC we advise using the CT210A. This module is set up in Inductive mode. This EV Kit can be set up with the following steps:

➢ Plug the Module into the CT210A via ribbon cable
➢ Run the IQS318 GUI
➢ Click "Start Streaming" button
➢ Data should now stream to GUI
➢ Click "ACK RESET"
➢ GUI should look as follow.

Channel 0 represents the Inductive Button. This triggers in an upwards direction, meaning a button press down will increase the counts.
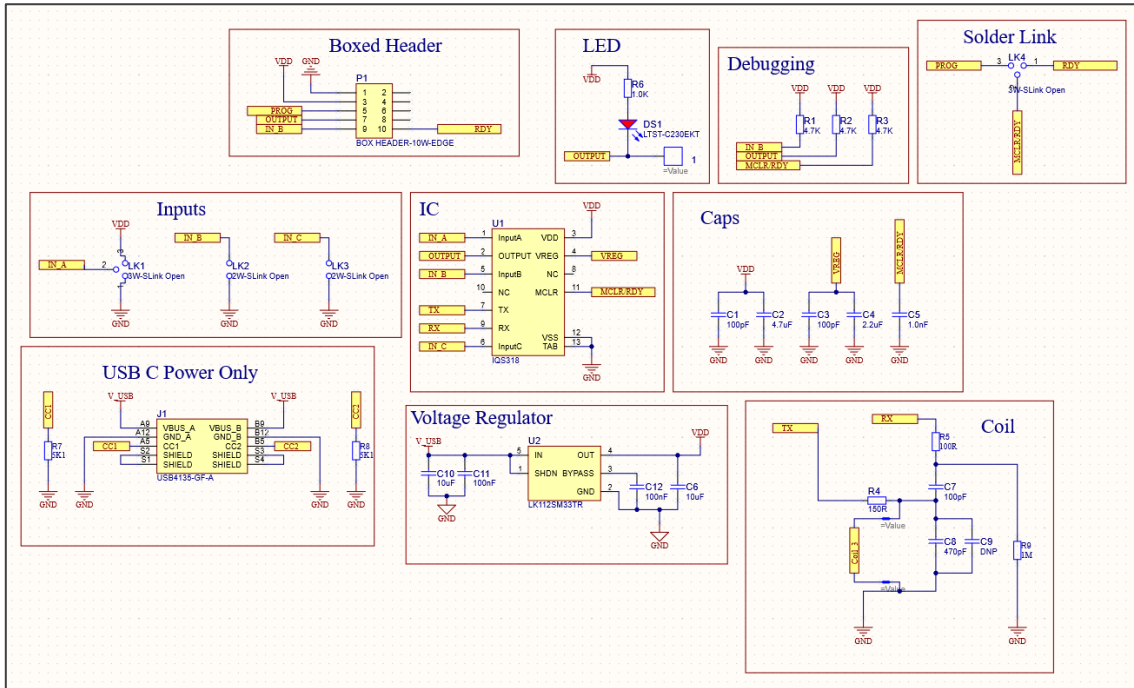
After evaluating click "STOP STREAMING."

In standalone mode unplug the ribbon cable and provide power through the USB C connector. The LED will turn on when the Output state is set (button pressed) and will turn off when the Output state is cleared (button released). On start-up the Output state is not set.

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5 Setting up for the IQS318 Capacitive Switch Module

To interface the IQS318 Capacitive Switch module to a PC we advise using the CT210A. This module is set up in Self Capacitance mode. This EV Kit can be set up with the following steps:

- Plug the Module into the CT210A via ribbon cable
- Run the IQS318 GUI
- Click "Start Streaming" button
- Data should now stream to GUI
- Click "ACK RESET"
- GUI should look as follow.

Channel 0 represents the Self Capacitance Switch. This triggers in both directions, meaning if the hinge is opened to lie on top of the electrode the counts will increase and when removed from the electrode the counts will decrease.

After evaluating click "STOP STREAMING."

In standalone mode unplug the ribbon cable and provide power through the USB C connector. The LED will turn on when the Output state is set (hinge on top of electrode) and will turn off when the Output state is cleared (hinge removed from electrode). On start-up the Output state is set.

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6   Reference Designs

6.1   Inductive Switch Module

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6.2 Inductive Key Module

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6.3 Inductive Button Module

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6.4 Capacitive Switch Module

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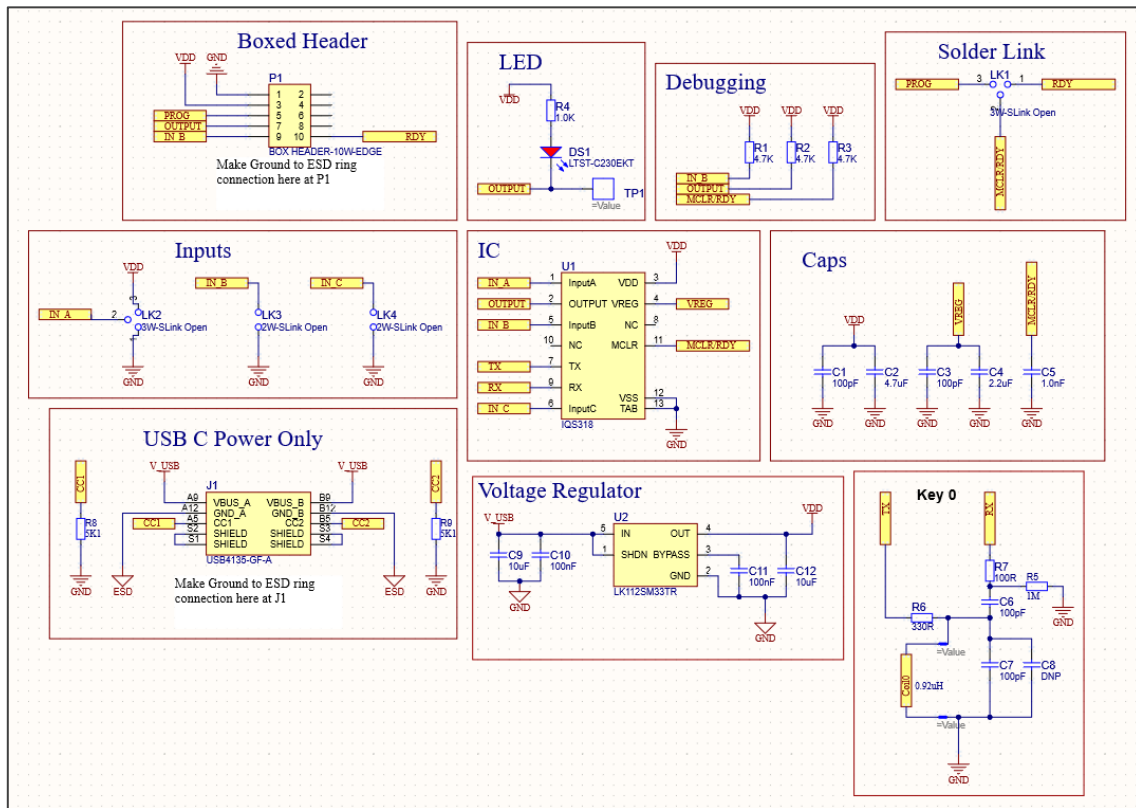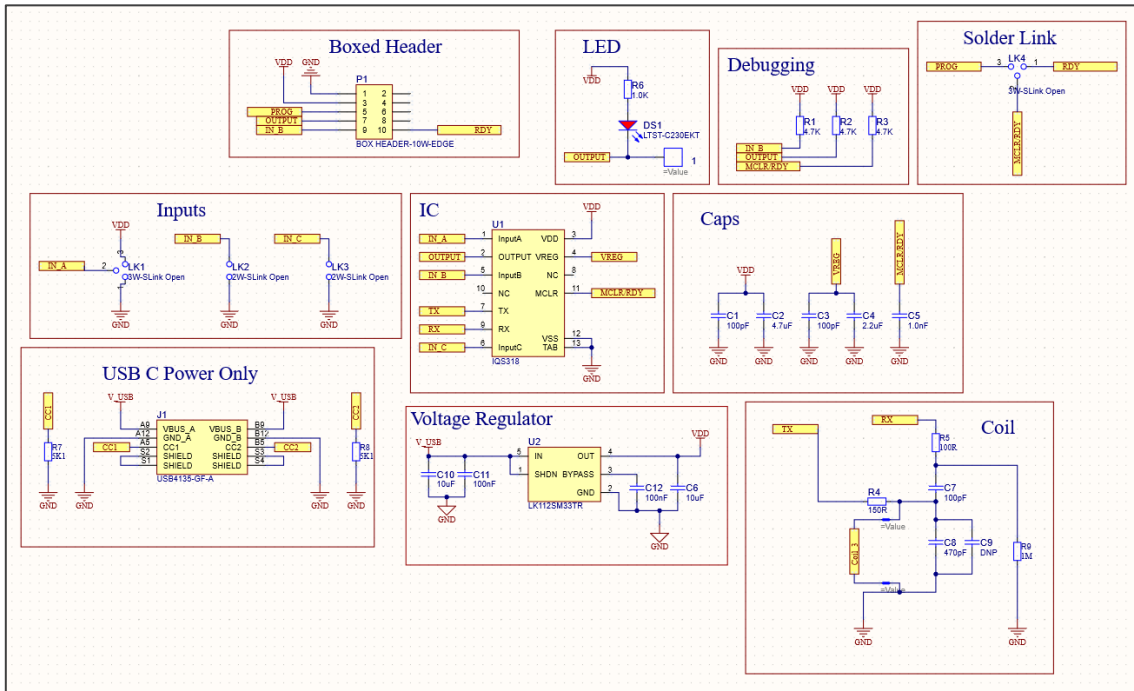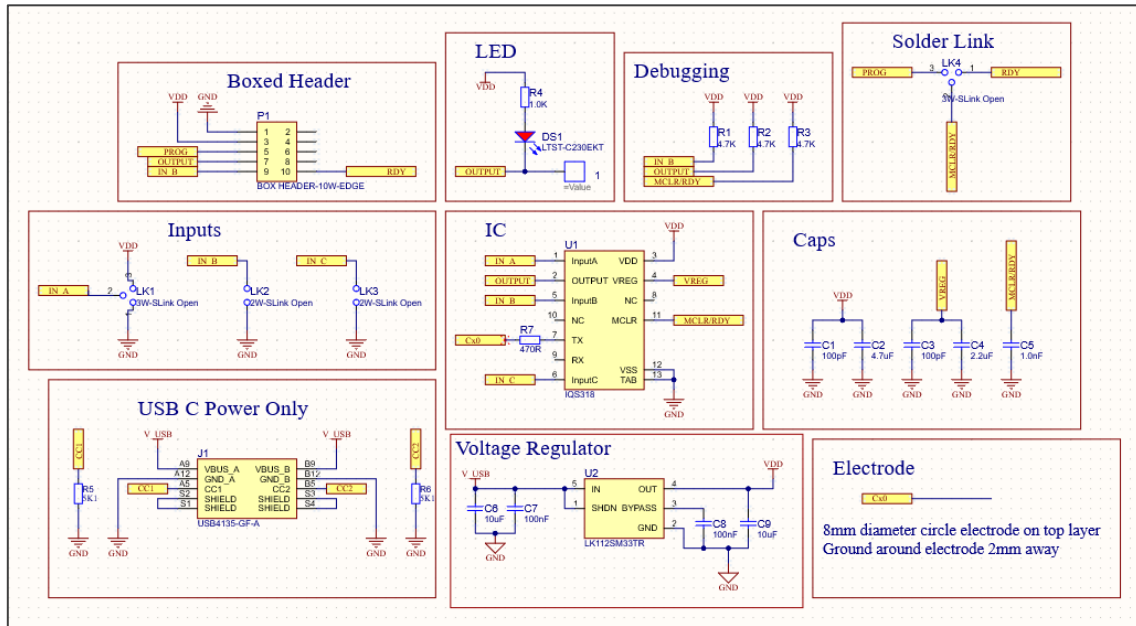
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