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Strata Enabled eFuse EVB User Guide

Table of Contents

Introduction

The Strata Enabled eFuse EVB provides an easy to use evaluation kit within the Strata Development Environment for different eFuses from ON Semiconductor. Through Strata, the developer can access datasheets, BOMs, schematics, and other collateral they may need. This document will provide instructions on how to use the evaluation kits.

Features

- Vin Range from 9.2V to 18V
- 2 independently controlled eFuses that can be placed in parallel
- Multiple overload current options
- Programmable slew rate

Applications

- Hard Drives
- Servers
- Motherboards
- Fan Drives

User Guide

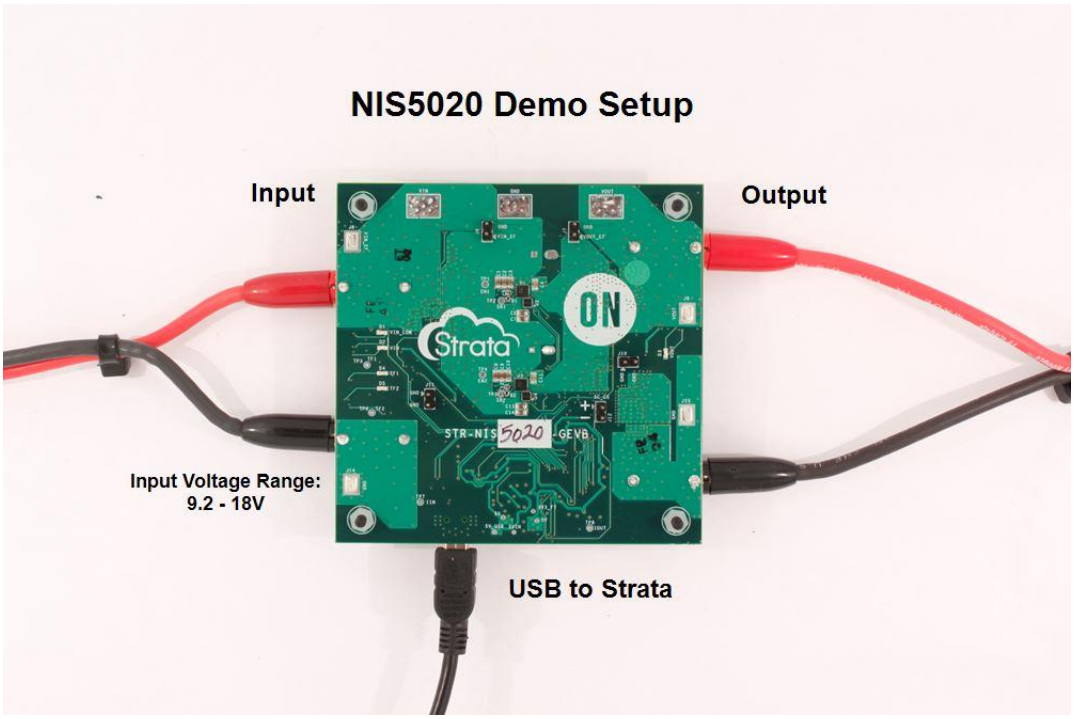
This section will explain how to use the Strata Enabled eFuse EVB in a step by step manner, and will cover the hardware required, how to use the User Interface in Strata, and the controls specific to the eFuse.

Hardware Setup

The hardware required to use the Strata Enabled eFuse EVB are a computer (with Windows), a power supply, and a load. Follow the steps below.

1. Plug the power supply into the input of the eFuse board using the banana plugs J20 and J21. Do not apply over 18V to the input. The minimal amount of voltage needed for the eFuse to turn on is 9.2V.
2. Connect the computer to the eFuse board using the USB connector J25 on the bottom of the board.
3. Plug the load into the output using the banana plugs J19 and J23.

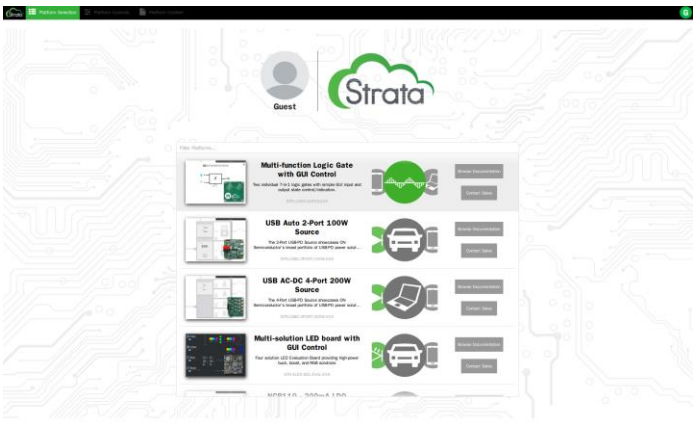
An example picture of the setup can be found below.



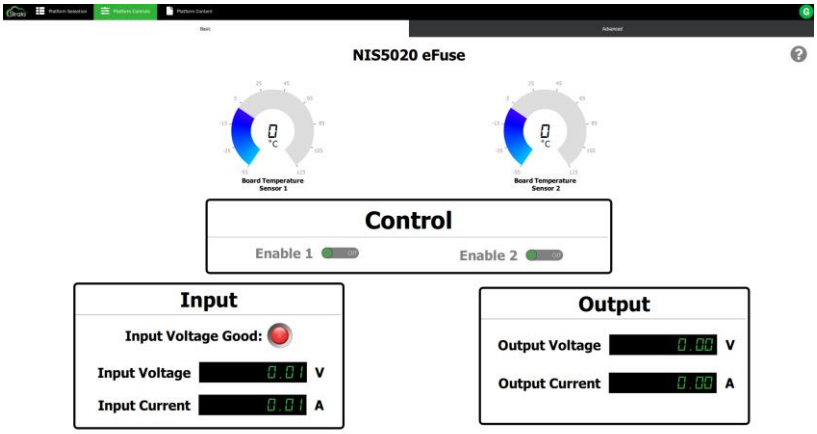
User Interface

The UI within the Strata app will allow the user to control the eFuse and monitor its telemetry without needing other lab equipment or training to do so. The steps below cover what is in the UI.

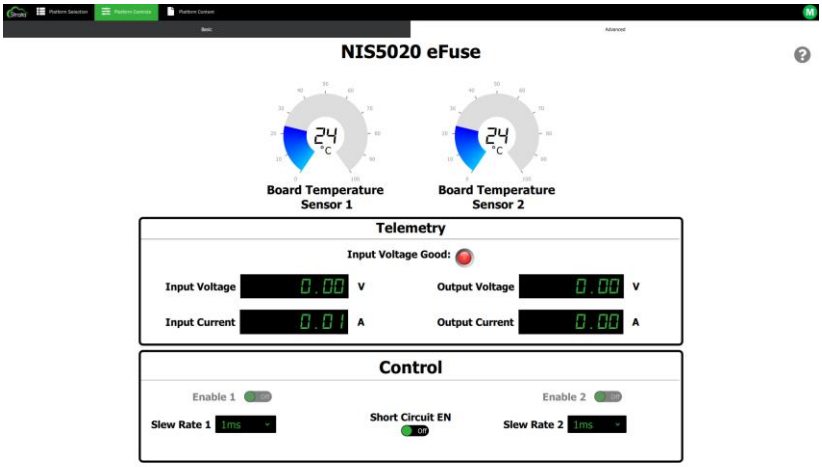
1. First, open the Strata app. Login and the home screen will appear.



2. The app will automatically detect the device that is plugged in and will bring up the UI for the board that is plugged in.



3. The view that comes up is the basic view for the eFuse, which offers basic telemetry and an enable switch for each eFuse.
4. In the top right hand corner the user can switch to the Advanced view which is shown below. The Advanced view offers a programmable slew rate, and short circuit enable to the user in addition to the controls and telemetry from the basic view.



5. The round button with a question mark in the top right corner of the screen is the help button, which will give the user a description of what everything on the UI is doing.
6. To view the collateral provided with the EVB, click on the “Platform Content” tab at the top of the screen.

eFuse Controls and Functionality

This section will go over the specific controls in the UI for the eFuse.

1. Slew Rate – This sets the slew rate of the output voltage for the eFuse on start up.
2. Short Circuit EN – This will enable the on board short circuit load that shorts the output to GND in order to test the short circuit protection of the eFuse.
3. Thermal Shutdown – In the event of a thermal shutdown the eFuse will turn off and a popup window will appear in the UI. This will show which eFuse had the thermal interrupt, and will disable the eFuse and load when the reset button is pressed.

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