

# OPTIGA™ Trust B SLE95250

## Application Board User Guide – SP001798374

### About this document

#### Scope and purpose

This is the User Guide for OPTIGA™ Trust B application board. It gives the detailed guideline of how to use OPTIGA™ Trust B application board for early evaluation.

#### Intended audience

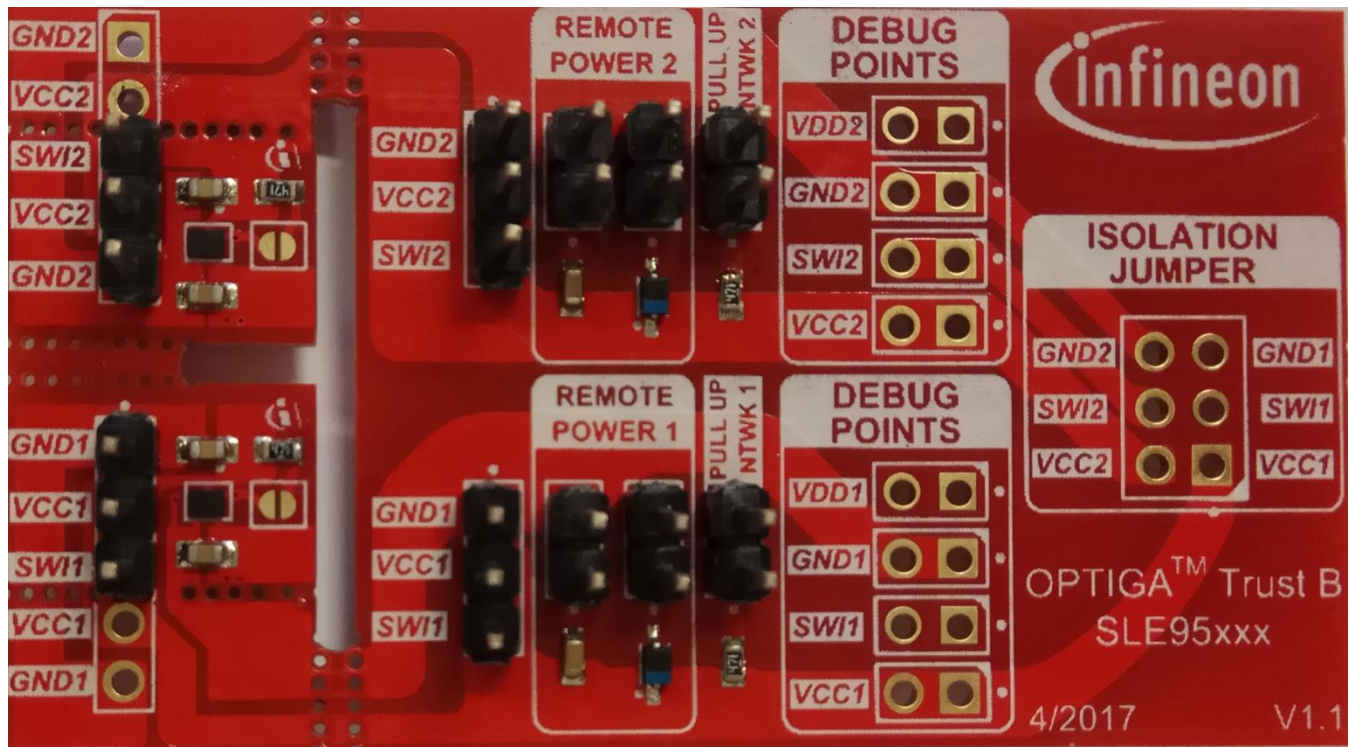
This document is intended for the engineers who want to evaluate OPTIGA™ Trust B. It can also be used to verify the customer system with OPTIGA™ Trust B integrated.

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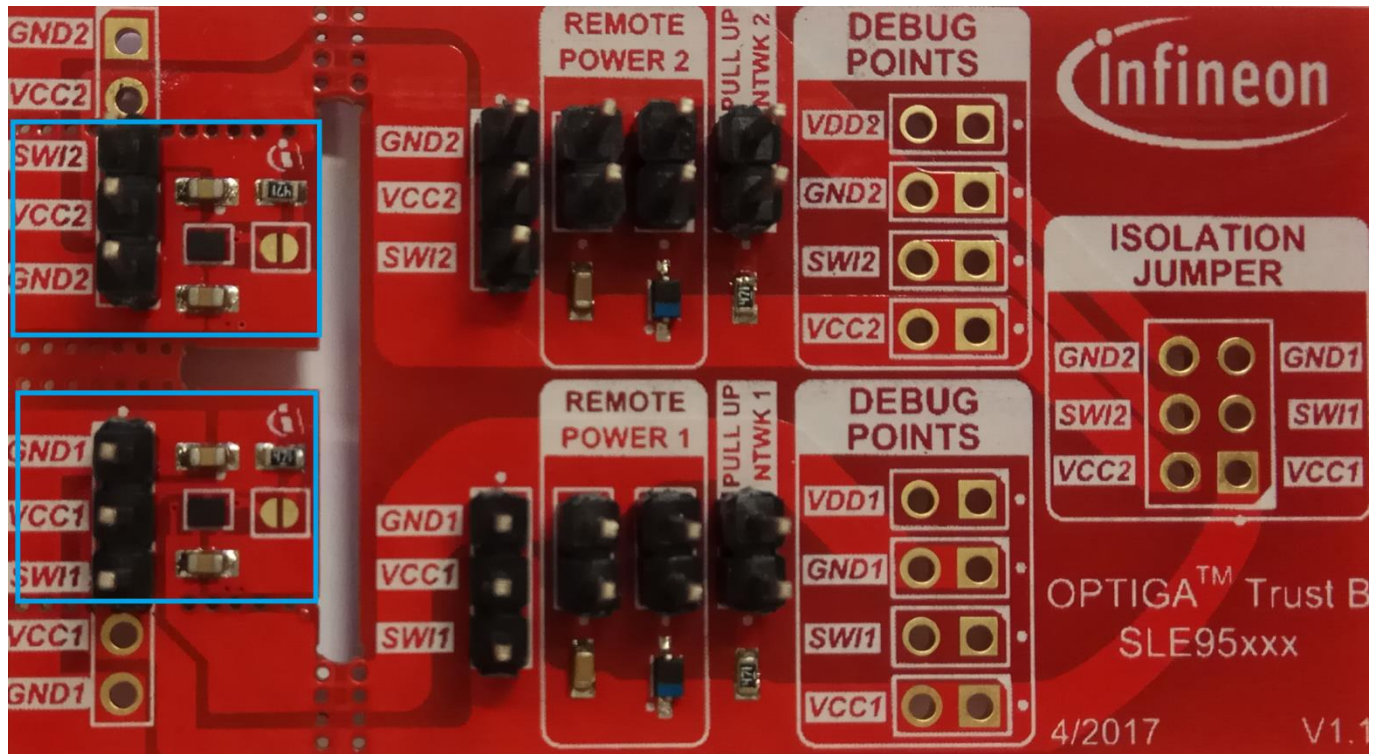
## 1 Hardware board

OPTIGA™ Trust B application board is a small form factor PCB that allows customer for early evaluation without hardware development. The application board comes with two OPTIGA™ Trust B ICs. Customer can either use one of them or both of them if multiple OPTIGA™ Trust B ICs are used in the target system. The board provides debug points for all external signals. It also supports the evaluation of indirect power mode by jumper settings. If an even smaller form factor board is needed, customer can break away the smaller part with only OPTIGA™ Trust B IC and basic external components.



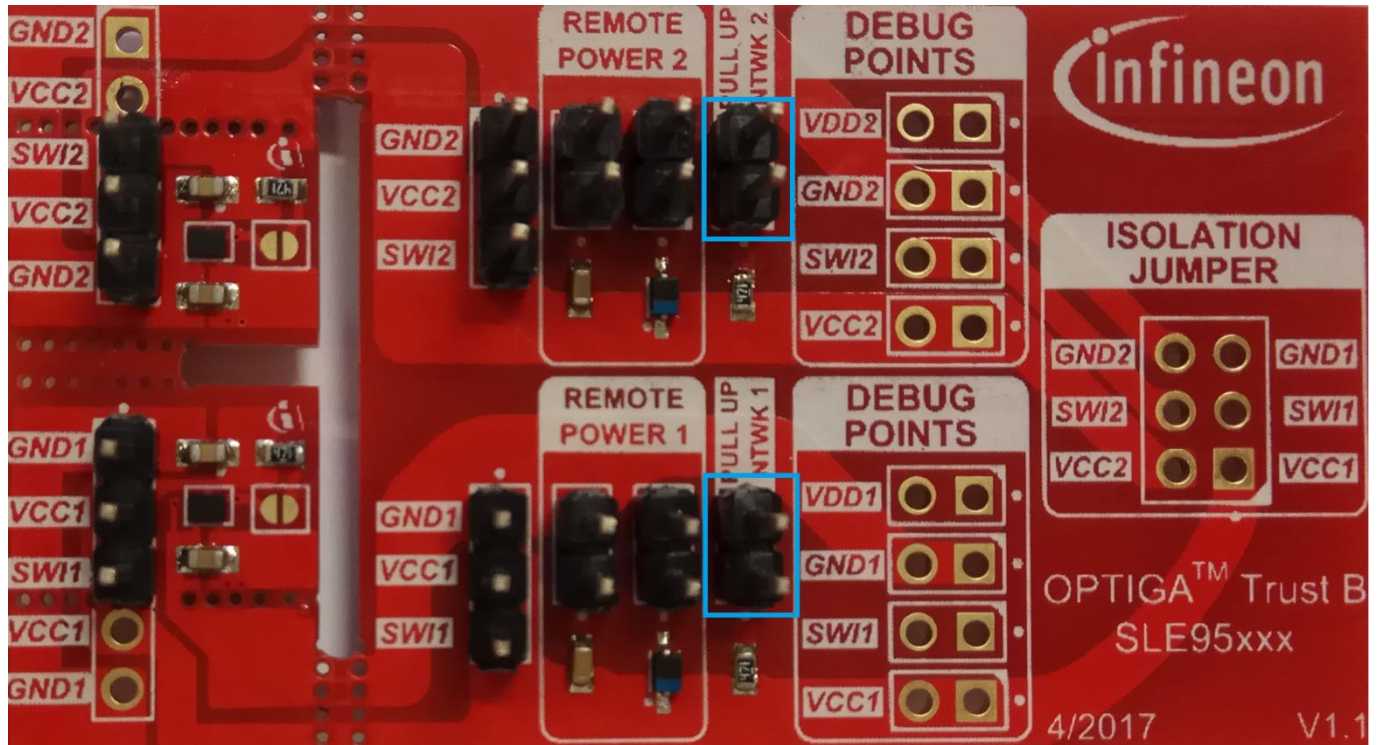
## 1.1 Basic configuration in direct power mode

The basic configuration which is direct power mode doesn't require any jumper settings. Only VCC/SWI/GND need to be connected to the external host. In this configuration, pull up resistor for GPIO is required on the host PCB. Customers have the option to break off the smaller form factor board in blue rectangle box in case form factor is of the concern in evaluation.



## 1.2 Enable pull-up resistor for host GPIO

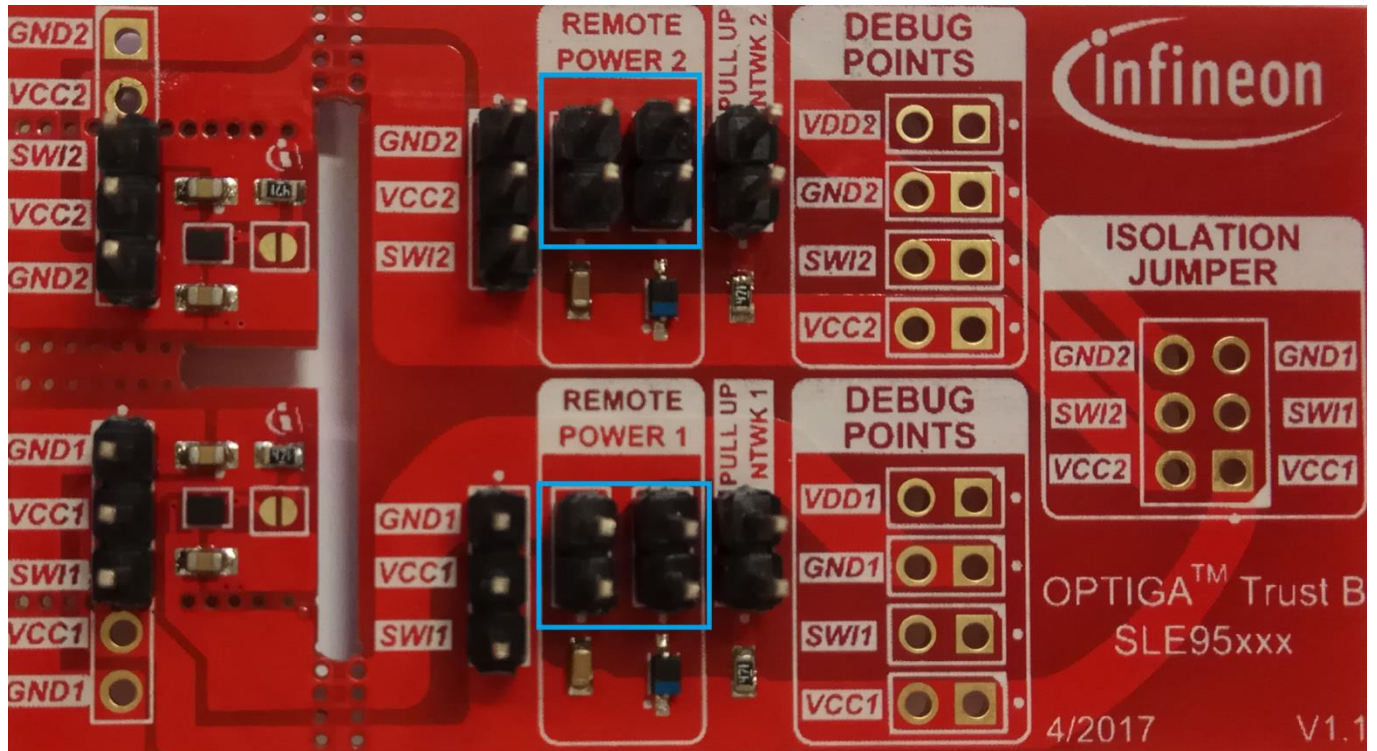
If there is difficult to provide host GPIO pull up resistor during evaluation phase, the jumper in blue rectangle box can be shorted so that pull up resistor of 470ohm can be provided on the OPTIGA board.





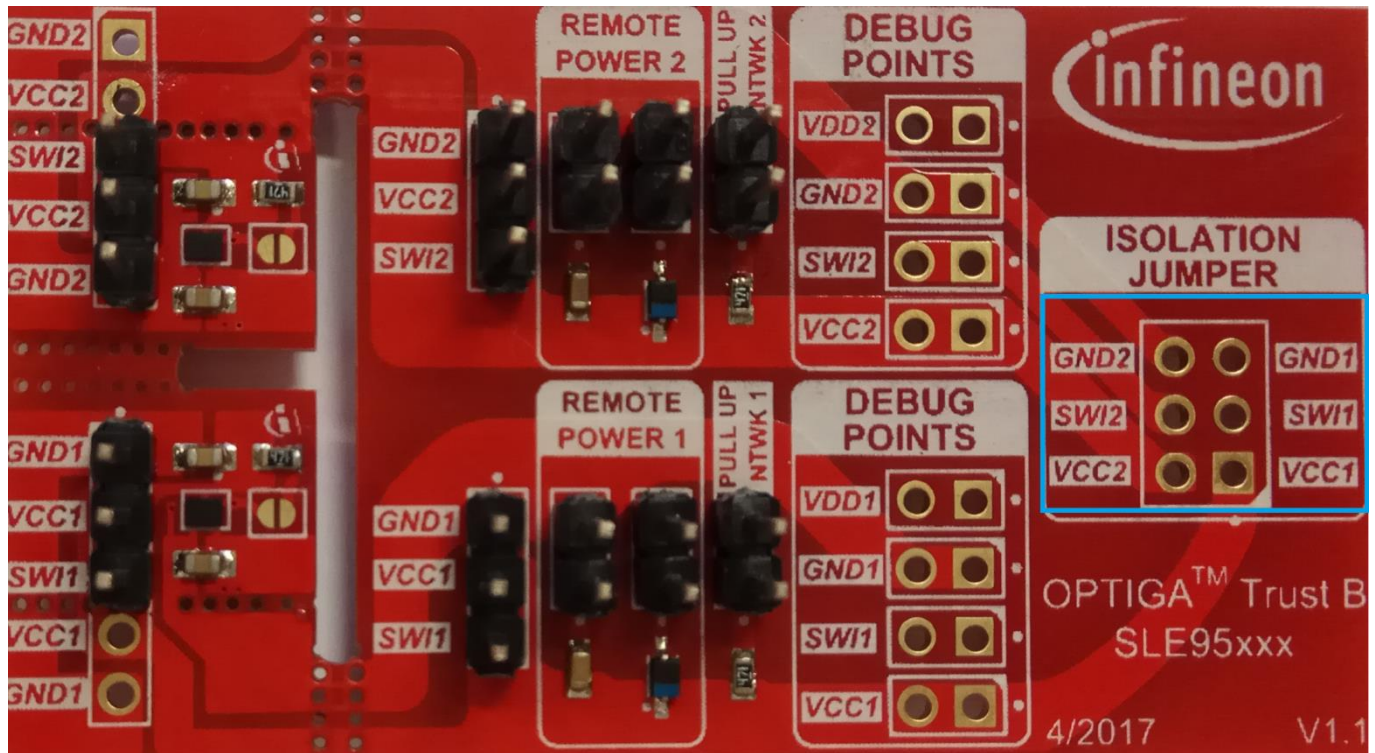
### 1.3 Indirect power mode

If indirect power mode needs to be evaluated, customer can short the two jumpers in “remote power” box so that schottky diode and bigger capacitor can be enabled. In this case, only SWI and GND need to be connected to the host board.



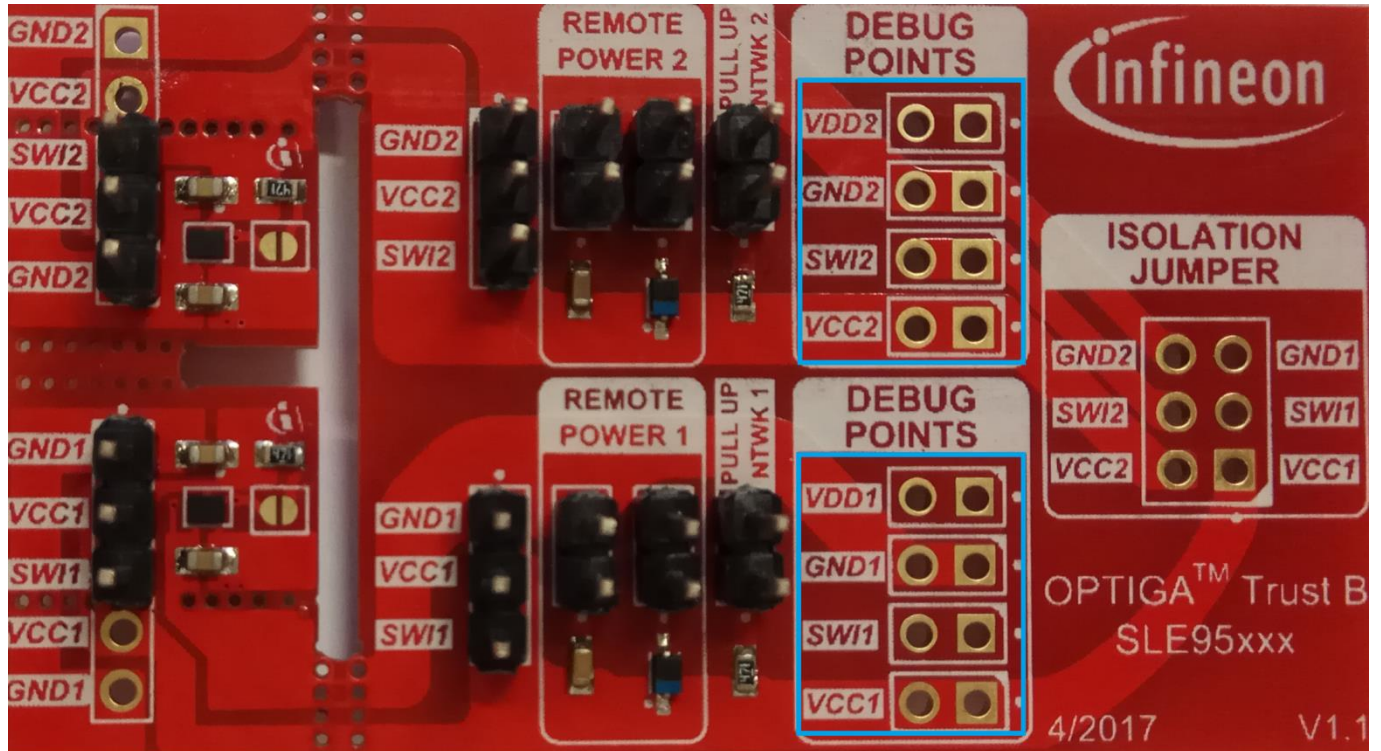
## 1.4 Multiple OPTIGA™ Trust B

If two OPTIGA™ Trust B need to be connected to the same SWI pin, the 3 jumpers in isolation jumper box need to be shorted which means GND1 is shorted to GND2, SWI1 is shorted to SWI2, VCC1 is shorted 2 VCC2. If remote power (indirect power) is enabled at the same time, only SWI and GND need to be shorted.



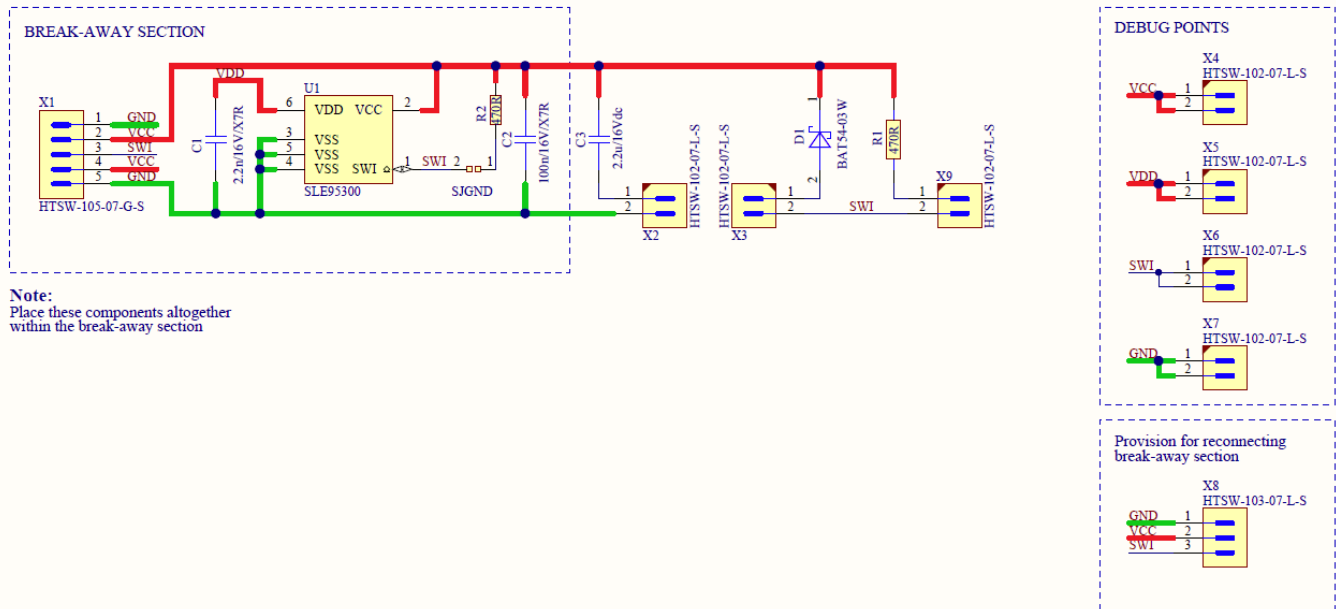
## 1.5 Debug points

Debug points are provided in debug points box.



## 2 Schematics

Schematic of the board is provided as below.





## Revision History

### Major changes since the last revision

Page or Reference	Description of change
	Initial revision

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