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

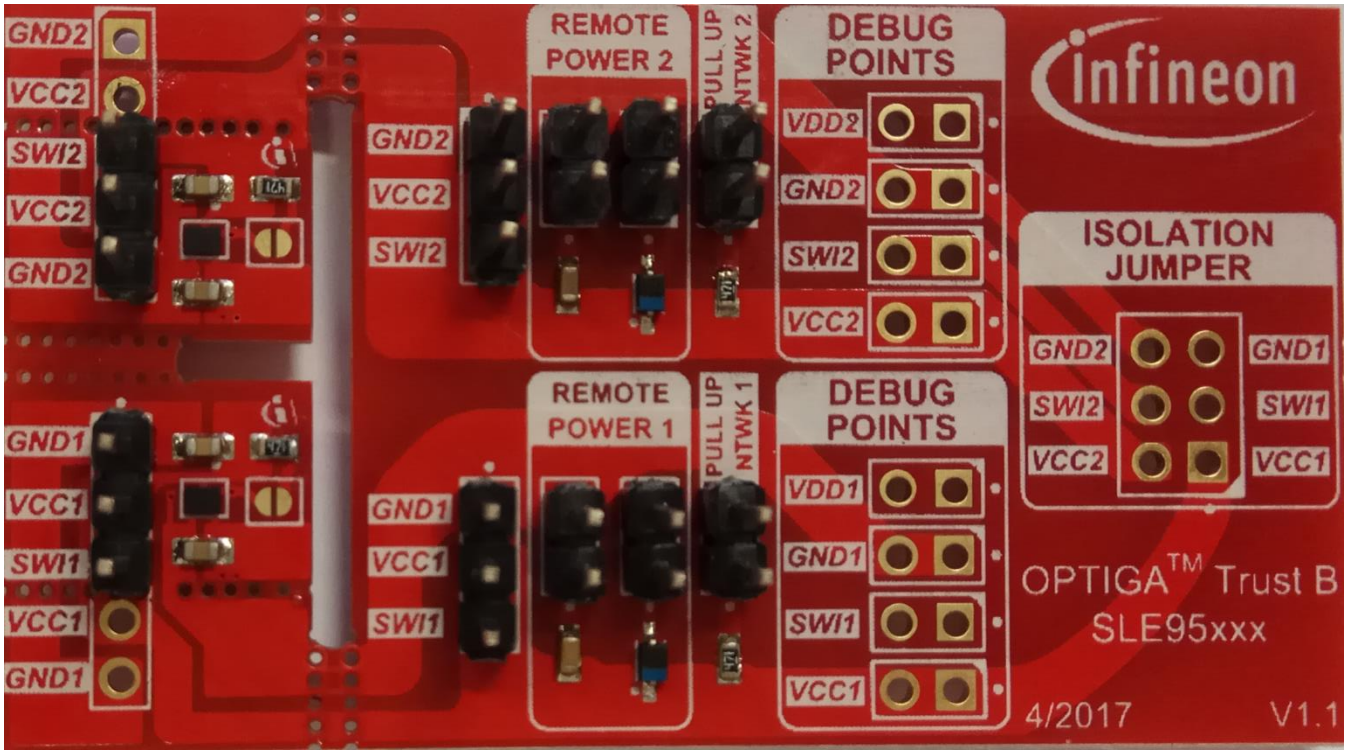
This document is intended for the engineers who want to evaluate OPTIGA™ Trust B. It can also be used to verify the customer system with OPTIGA™ Trust B integrated.

Table of Contents

About this document **1**
Table of Contents **1**
1 Hardware board **2**
1.1 Basic configuration in direct power mode 3
1.2 Enable pull-up resistor for host GPIO 4
1.3 Indirect power mode 5
1.4 Multiple OPTIGA™ Trust B 6
1.5 Debug points 7
2 Schematics **8**
Revision History **9**

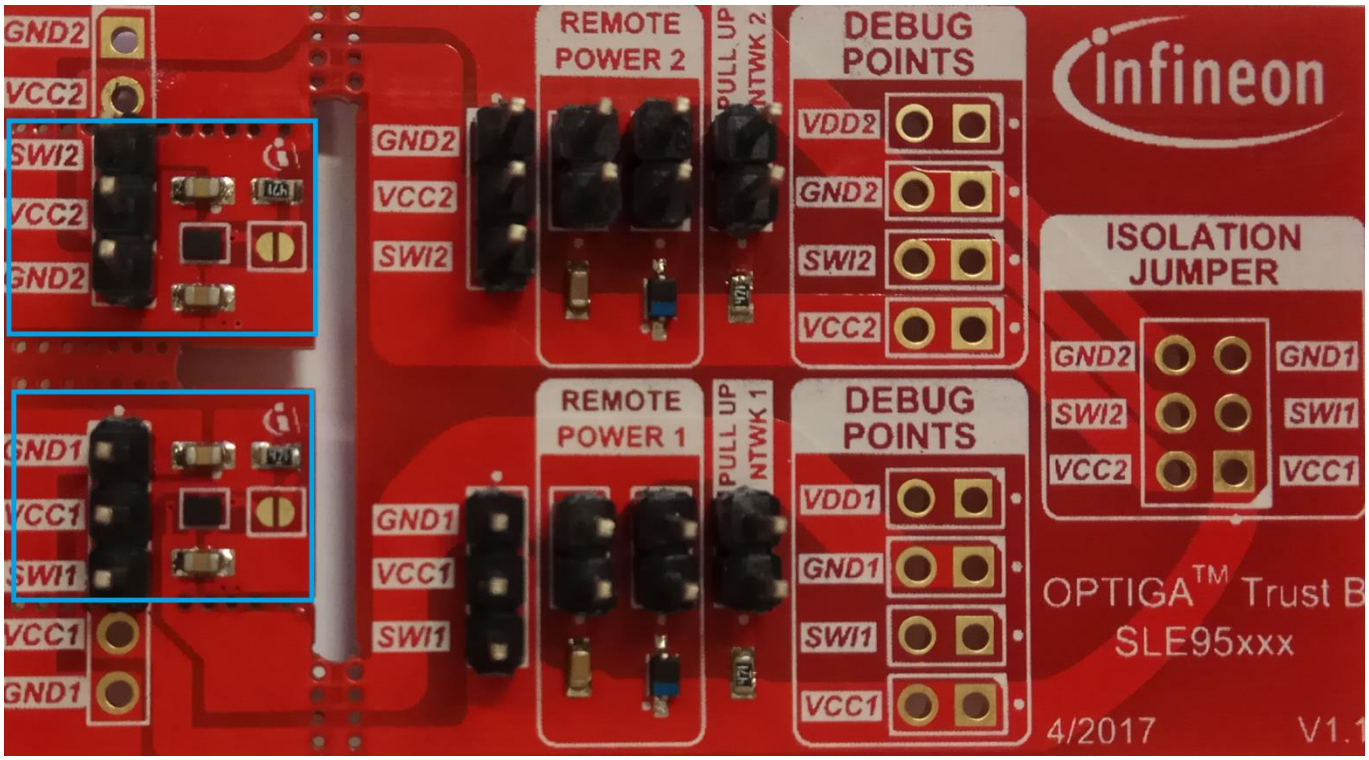
1 Hardware board

OPTIGA™ Trust B application board is a small form factor PCB that allows customer for early evalution 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.



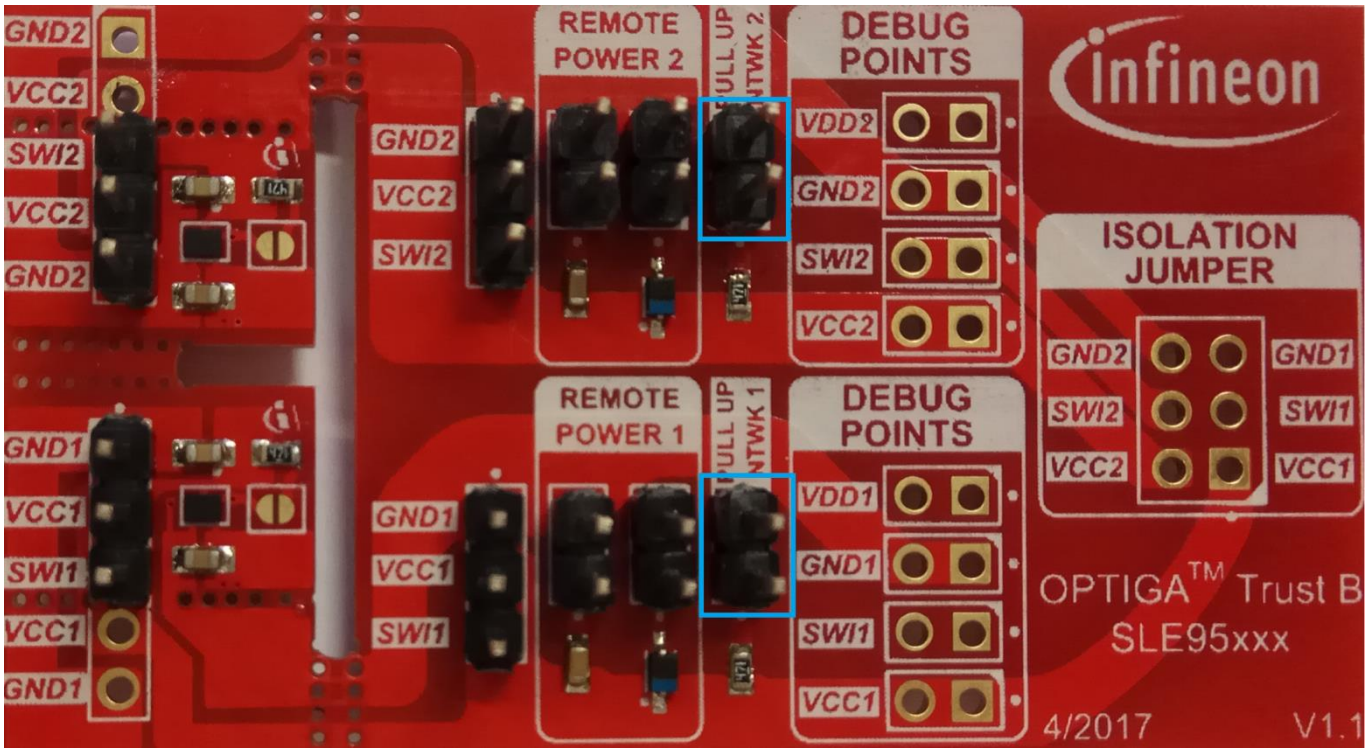
1.1 Basic configuration in direct power mode

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.



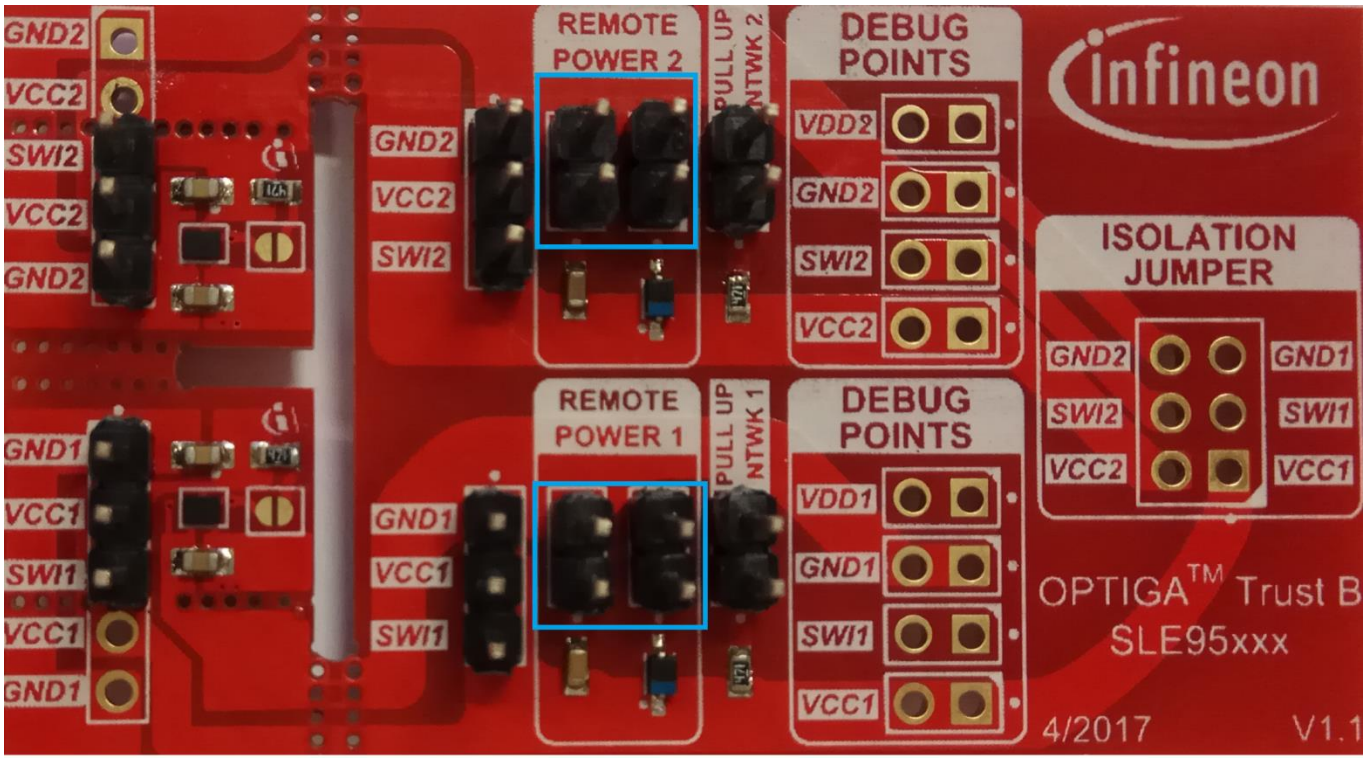
1.2 Enable pull-up resistor for host GPIO

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



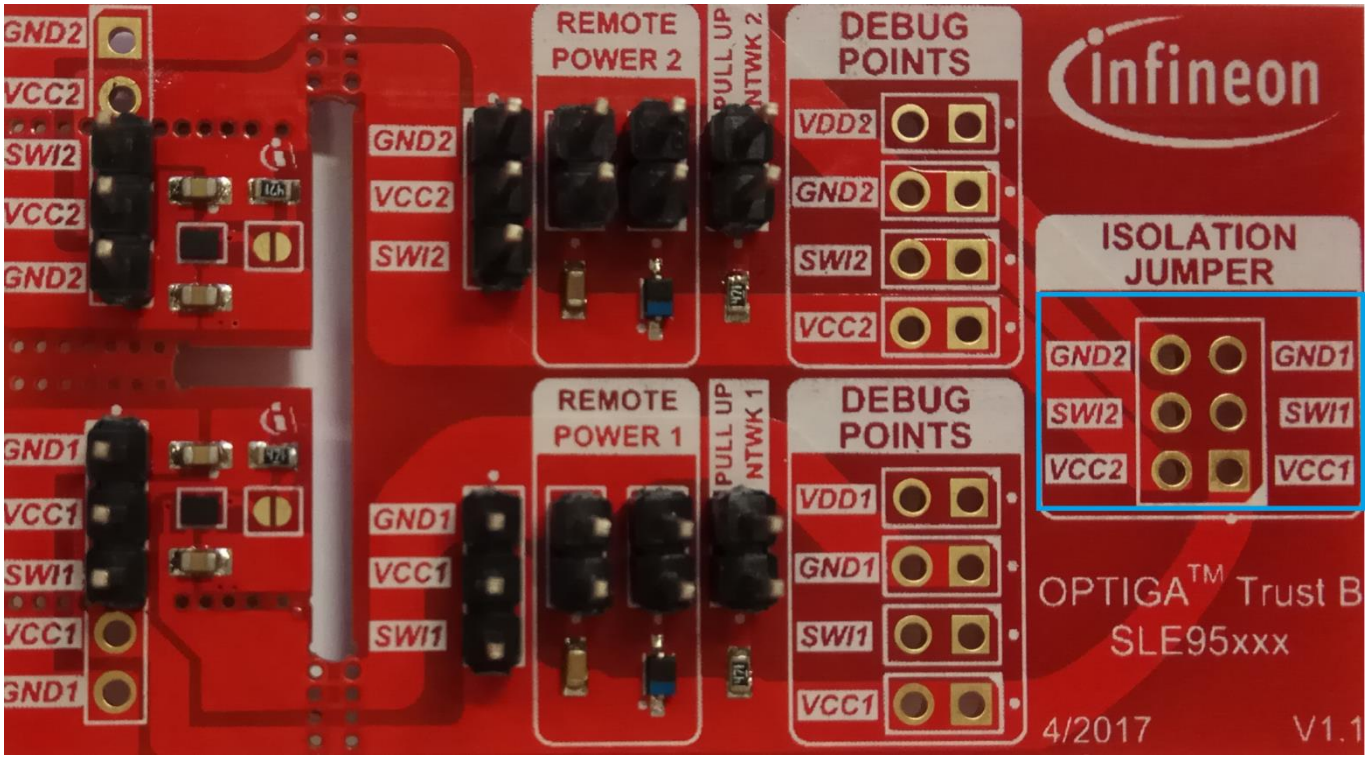
1.3 Indirect power mode

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.



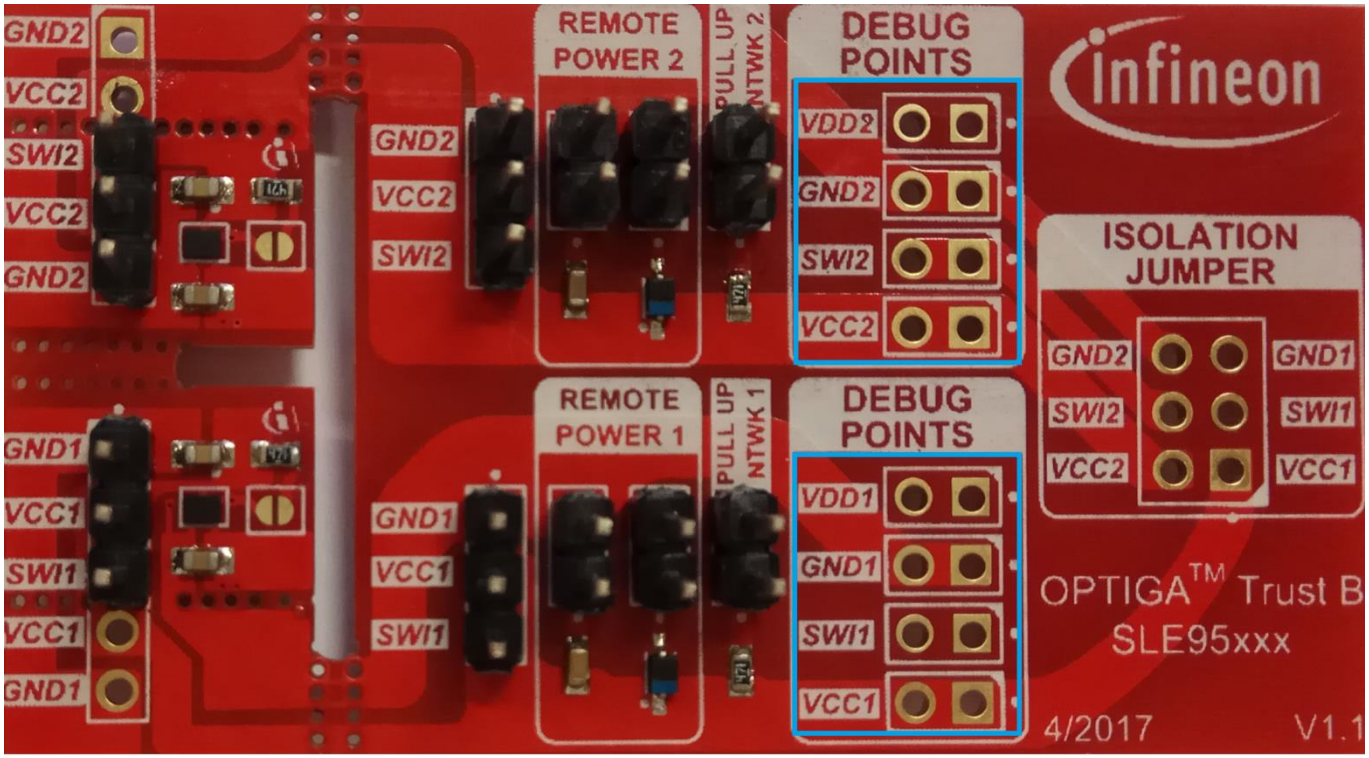
1.4 Multiple OPTIGA™ Trust B

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.



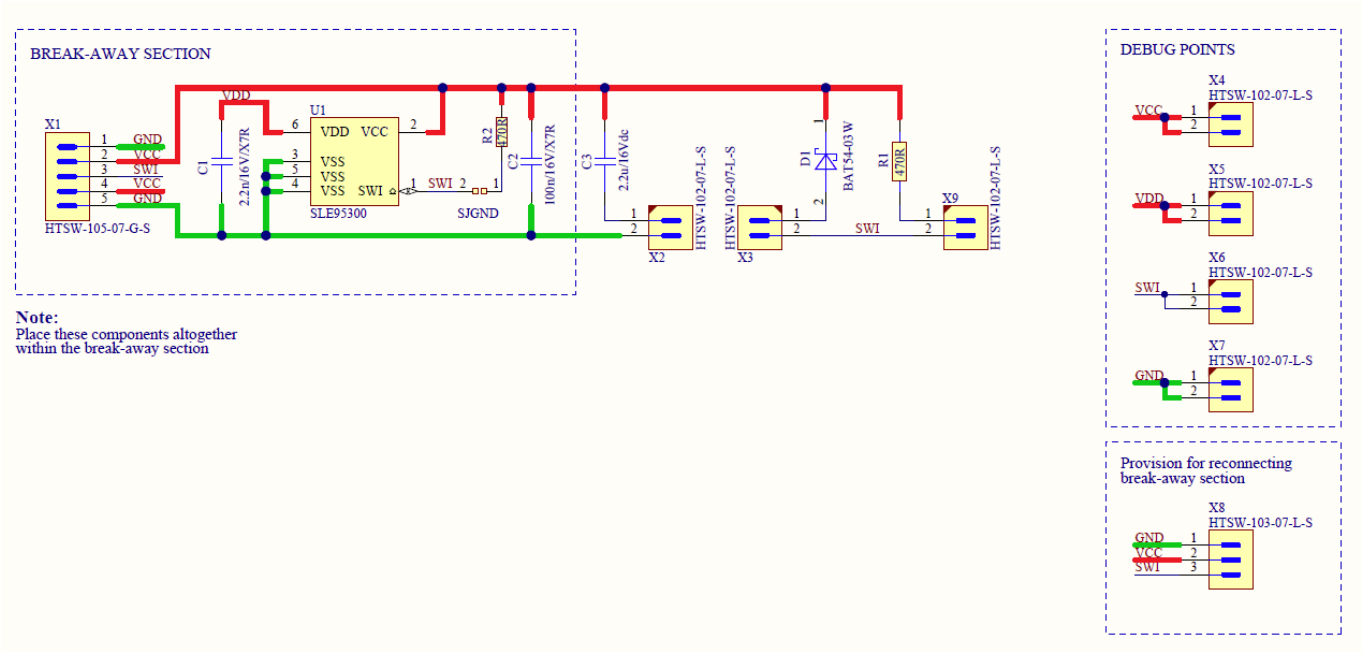
1.5 Debug points

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

Trademarks of Infineon Technologies AG
µHVIC™, µIPM™, µPFC™, AU-ConvertIR™, AURIX™, C166™, CanPAK™, CIPOS™, CIPURSE™, CoolDP™, CoolGaN™, COOLiR™, CoolMOS™, CoolSET™, CoolSiC™, DAVE™, DI-POL™, DirectFET™, DrBlade™, EasyPIM™, EconoBRIDGE™, EconoDUAL™, EconoPACK™, EconoPIM™, EiceDRIVER™, eupec™, FCOS™, GaNpowIR™, HEXFET™, HITFET™, HybridPACK™, iMOTION™, IRAM™, ISOFACE™, IsoPACK™, LEDrivIR™, LITIX™, MIPAQ™, ModSTACK™, my-d™, NovalithIC™, OPTIGA™, OptiMOS™, ORIGA™, PowIRaudio™, PowIRStage™, PrimePACK™, PrimeSTACK™, PROFET™, PRO-SIL™, RASIC™, REAL3™, SmartLEWIS™, SOLID FLASH™, SPOC™, StrongIRFET™, SupIRBuck™, TEMPFET™, TRENCHSTOP™, TriCore™, UHVIC™, XHP™, XMC™

Trademarks updated November 2015

Other Trademarks
All referenced product or service names and trademarks are the property of their respective owners.

Edition <2017-01-01>

Published by

Infineon Technologies AG

81726 Munich, Germany

© 2018 Infineon Technologies AG. All Rights Reserved.

Do you have a question about this document?

Email: erratum@infineon.com

Document reference
AppNote Number

IMPORTANT NOTICE

The information contained in this application note is given as a hint for the implementation of the product only and shall in no event be regarded as a description or warranty of a certain functionality, condition or quality of the product. Before implementation of the product, the recipient of this application note must verify any function and other technical information given herein in the real application. Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind (including without limitation warranties of non-infringement of intellectual property rights of any third party) with respect to any and all information given in this application note.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (**www.infineon.com**).

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.