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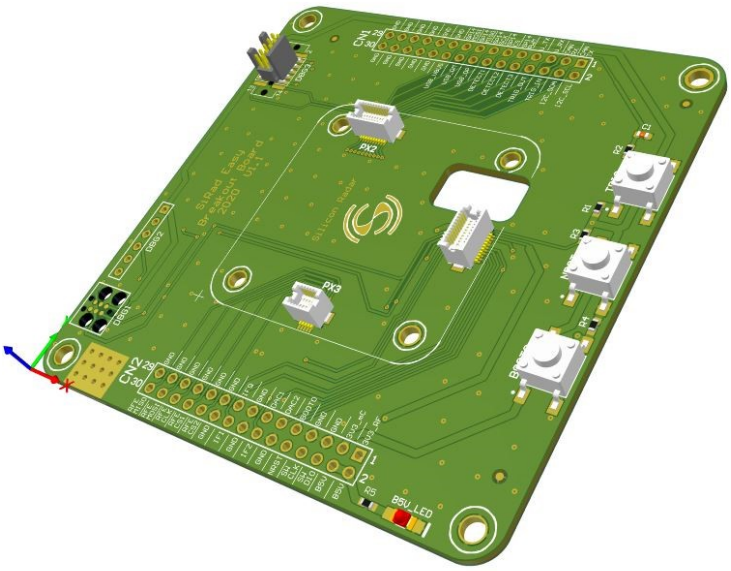
Product Sheet

SiRad Easy r4
Breakout Board*



*Available as SiRad_Easy_r4_Breakout_Board+.

Status:	Date:	Author:	Filename:	
Release	22-Mar-2021	Silicon Radar GmbH	Product_Sheet_SiRad_Easy_r4_Breakout_Board	
Version:	Document number:	Package:	Marking:	Page:
1.0	-	-	-	1 of 5

Version Control

Version	Changed section	Description of change	Reason for change
1.0	all		Initial document

Table of Contents

1 Overview

- 80 mm x 80 mm PCB with 4 x M2.5 screw holes and 4 x M3 screw holes
- Pluggable *SiRad Easy® r4* Base and RFE Board (not included)
- Power over *SiRad Easy® r4* Base Board or optional 2.54 mm pitch standard pin header
- 3 x Base Board connectors mounted (PX1, PX2, PX3)
- 3 x debug ports (DGB1, DBG2, DBG3)
- 2 x standard 30 pin header I/O port (2.54 mm pitch) (CN1, CN2)
- Flash, NRST, trigger buttons (BOOT0, NRST, TRIG)

Suitable for/Operated in combination with:

- Option 1: *SiRad Easy® r4* Base Board and Micro-B to Type-A USB cable, part number GC 2510-MB02 by GE, included in the package with SiRad_Easy_r4_Base_Board+.
- Option 2: *SiRad Easy® r4* Base Board and external DC supply (5 V / GND) with suitable power cables (socket header ends, if pin header bar was mounted).
- *SiRad Easy® r4* RFE board, e.g. *SiRad Easy® r4* RFE Board TRA_120_002.

2 Specifications

Parameter	Value
Size	80 mm x 80 mm x 7 mm
Weight	23.8 g (with DBG3 connector mounted)
Power Supply	Provided by either • *SiRad Easy® r4* Base Board (over USB port) • 5 V / GND on pin header port (B5V / GND) DC supply or active USB Hub with ≥ 1000 mA max. current supply is recommended.
Interfaces	3 x Base Board connectors mounted (PX1, PX2, PX3) • 1 x signal I/O port (10 pins), BTB connector (0.5 mm pitch) • 2 x signal I/O port (20 pins), BTB connector (0.5 mm pitch) 3 x Debug connectors (DGB1, DBG2, DBG3) • 1 x tag connect SWD port (6 pins) for STLINK-V2 or NUCLEO-64 debugger • 1 x pin header SWD port (6 pins) for STLINK-V2 or NUCLEO-64 debugger • 1 x SWD port / socket (10 pins) for STLINK-V3MINI debugger 2 x standard 30 pin header I/O port (CN1, CN2), pin header bar mountable (2.54 mm pitch) • Power: B5V / GND • SWD debug + reset/boot + trigger lines • RFE data + control: IF channels, control SPI + DAC lines • UART port, see *SiRad Easy® r4* Base Board for the settings • User SPI, I2C + CAN port (needs IC) • User I/O lines

3 Mechanical Drawing

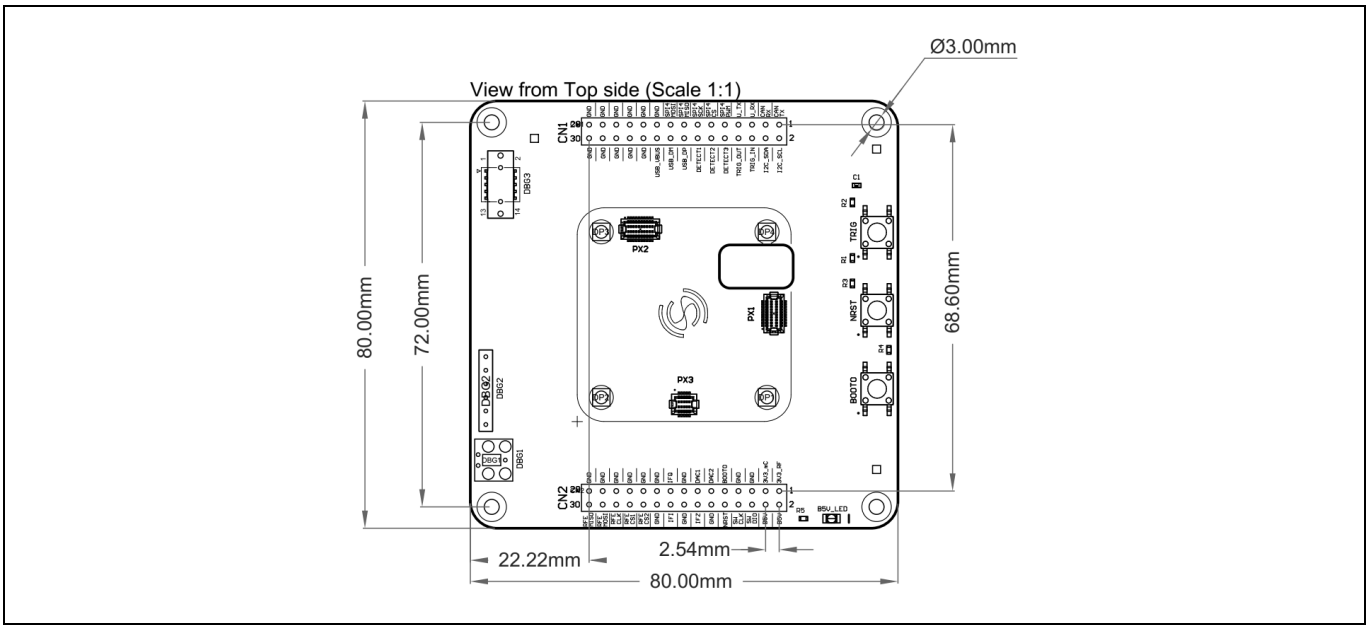


Figure 1 Mechanical Drawing

4 Pinout Description

Below figures show the pinout descriptions of the Breakout Board connectors, connected test points and header bar pins.

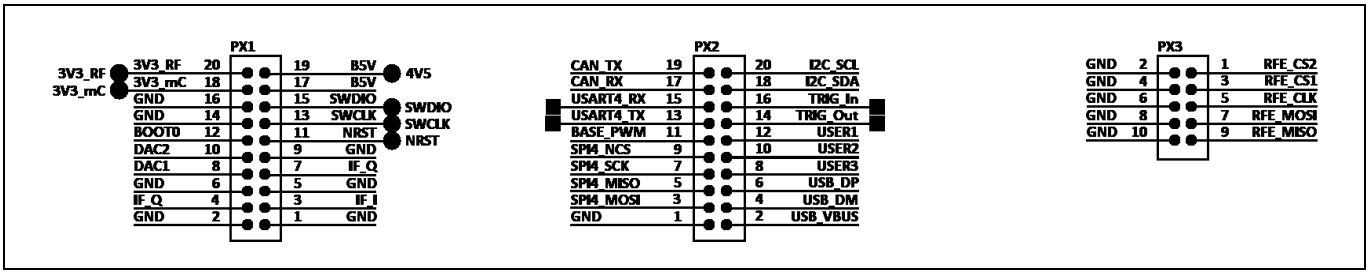


Figure 2 Pinout Description - Version 1.0 / 1.1

5 Modular System

The *SiRad Easy® r4* Breakout Board is part of the *SiRad Easy® r4* modular evaluation kit, consisting of Base Board, exchangeable RFE boards covering select radar transceivers of Silicon Radar's portfolio, Breakout Board and other accessories. A detailed description and compatibility information of related parts can be found under *SiRad Easy® r4* Boards & Accessories.

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