GreenPAK SLG46537-EV Socket Adapter

Description

GreenPAK™ SLG46537-EV Socket Adapter (SA) is a compact, easy-to-use tool that provides hardware support for design emulation, programming, and real-time testing. SA is controlled by Go Configure™ Software Hub with emulation and IC programming functionality.

Specifications

The GreenPAK SLG46537-EV Socket Adapter works under the following operating conditions:

- V_{DD} voltage range: 1.71 V to 5.50 V
- Static pin current: up to 30 mA

Features

- Can be used with GreenPAK Advanced Development Board
- Can be used with GreenPAK Lite Development Board
- Can be used with Go Configure Development Board via GreenPAK Extension Card

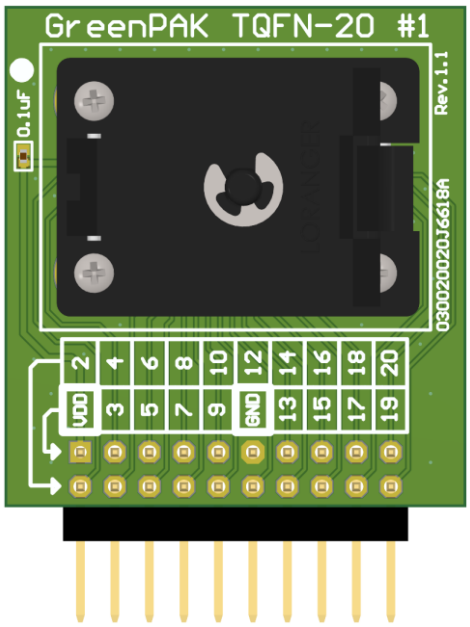


Figure 1. SLG46537-EV Socket Adapter

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1. Terms and Definitions

ACMP	Analog Comparator
GPI	General Purpose Input
GPIO	General Purpose Input/Output
IC	Integrated Circuit
OSC	Oscillator
SA	Socket Adapter
SCL	Serial Clock Line
SDA	Serial Data Line
TS	Temperature Sensor
TP	Test Point

2. References

1 – SLG46537-E Datasheet, Renesas Electronics

2 – GreenPAK Lite Development Board Manual

3 – GreenPAK Advanced Development Platform User Guide

4 – Go Configure Development Board User Manual

3. Introduction and Board Overview

SLG46537-EV SA X1 connector and its pin functions are shown in Figure 2 and described in Table 1. Figure 3 illustrates the layout and numbering of the pins in the X1 connector. The pin labels on the top side of the SA correspond to SLG46537-EV`s IC pin assignments.

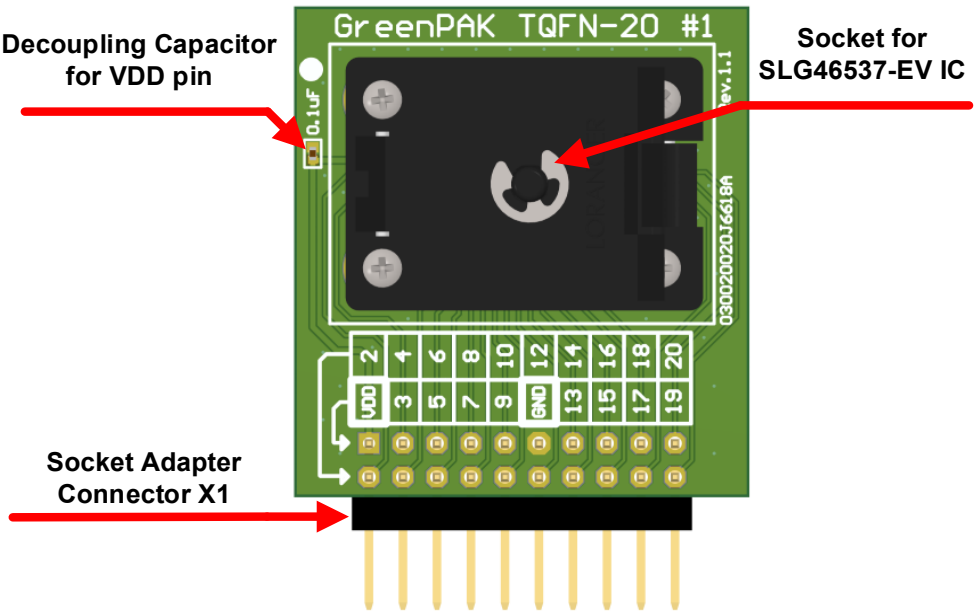


Figure 2. Socket Adapter Top View

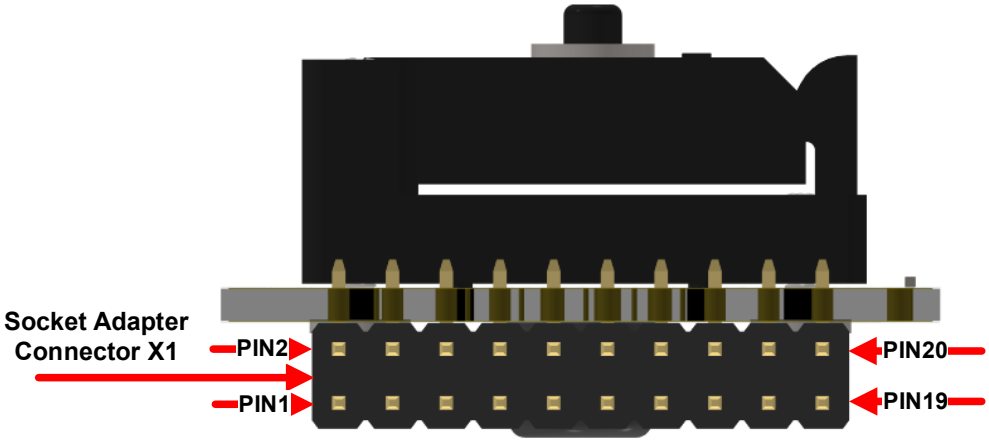


Figure 3. Socket Adapter Connector Pinout

Table 1. Socket Adapter Pinout Description

Chip PIN #	SA PIN #	TP Name	PIN Functions
1	1	VDD	Power Supply. VDD
2	2	TP2	GPI
3	3	TP3	GPIO
4	4	TP4	GPIO
5	5	TP5	GPIO
6	6	TP6	GPIO. ACMP0,1,2,3 IN+
7	7	TP7	GPIO. ACMP0 IN-
8	8	TP8	GPIO. I^2C SCL
9	9	TP9	GPIO. I^2C SDA
10	10	TP10	GPIO. ACMP1 IN+
11	11	GND	GND
12	12	TP12	GPIO. ACMP0,1,2,3 IN-
13	13	TP13	GPIO. ACMP2,3 IN+
14	14	TP14	GPIO. ACMP2,3 IN-
15	15	TP15	GPIO. ACMP3 IN+
16	16	TP16	GPIO
17	17	TP17	GPIO. OSC1 ext. CLK
18	18	TP18	GPIO. OSC0 ext. CLK
19	19	TP19	GPIO. TS
20	20	TP20	GPIO. OSC0 ext. CLK

1. TP Name in Table 1 reflects a 20-pin connector test point name of the selected development platform (see Figure 5).

4. Design Emulation, Programming, and Real-Time Testing

Complete the following procedure to properly mount the SLG46537-EV IC in the SA and connect it to the development board:

1. Place the SLG46537-EV device into the socket adapter.
2. Align the pin 1 indicator (dot mark) on the device with the corresponding mark on the SA (see Figure 4).
3. Once the device is correctly positioned, close the socket adapter cover.
4. Connect the SA to the development board (see section 4.1 Development Board Connection).

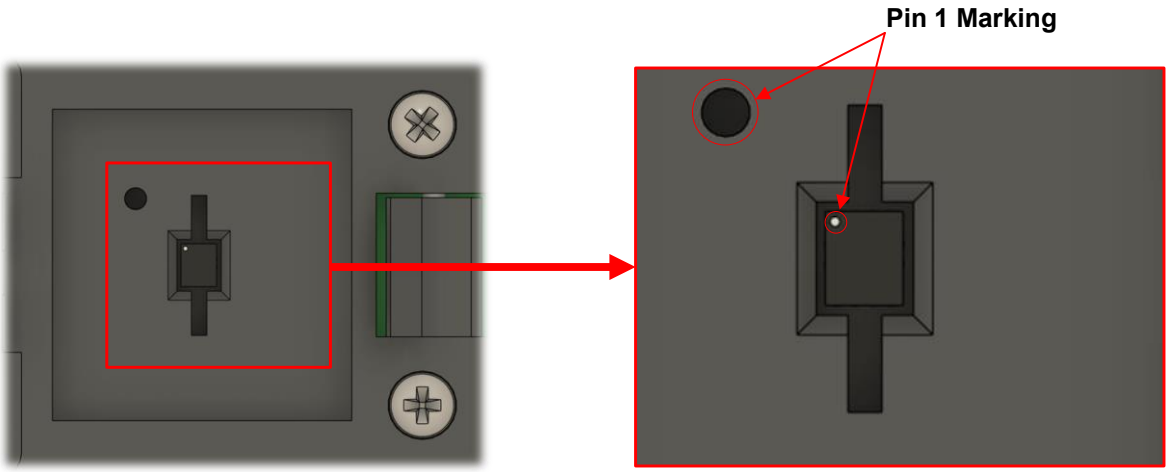


Figure 4. IC Positioning in Socket Adapter

4.1 Development Board Connection

This socket adapter is designed to be used with the following development platforms:

- GreenPAK Advanced Development Board
- GreenPAK Lite Development Board
- Go Configure Development Board via GreenPAK Extension Card.

Follow the steps below to connect the SLG46537-EV SA to the development platform:

1. Identify the 20-pin connector on the selected development platform.
2. Align the SA with the 20-pin connector on the development board.
3. Insert the SA into the 20-pin connector, as shown in Figure 5.
4. Verify that the socket adapter is securely connected.

More information about the development boards can be found in the relevant documentation by visiting the Renesas website.

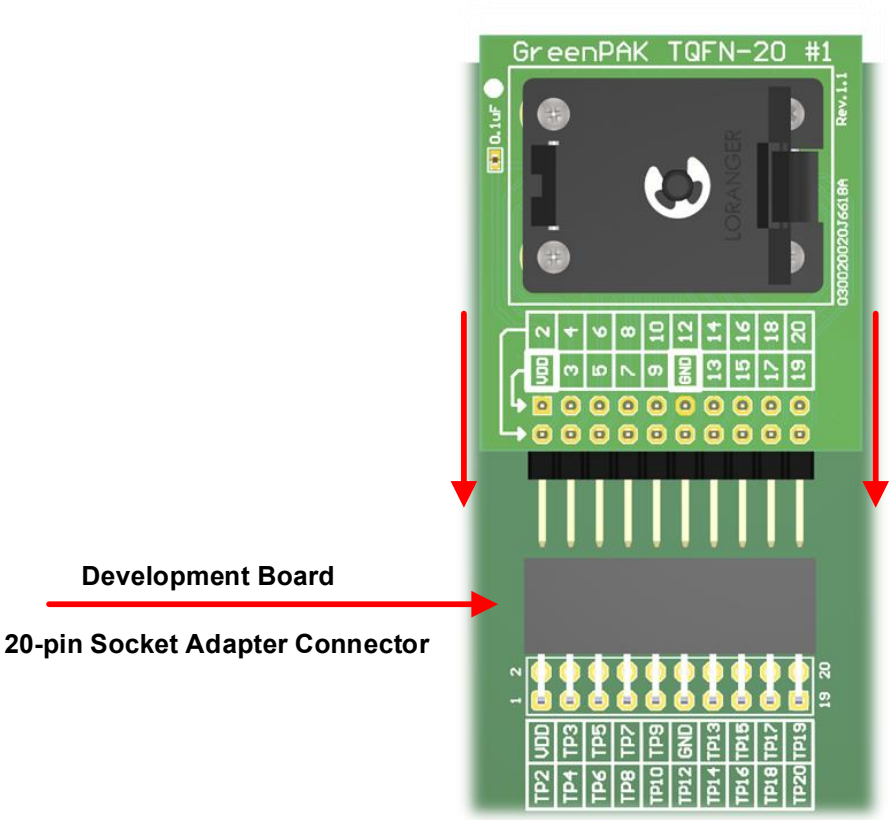


Figure 5. Socket Adapter Connection to Development Board 20-pin Adapter Connector

After selecting a development board and starting Go Configure Software Hub, ensure that the development board and GreenPAK IC were recognized correctly. For that, follow the guidance mentioned in section 2.2.6 of the Go Configure Software Hub User Guide.

5. Board Dimensions

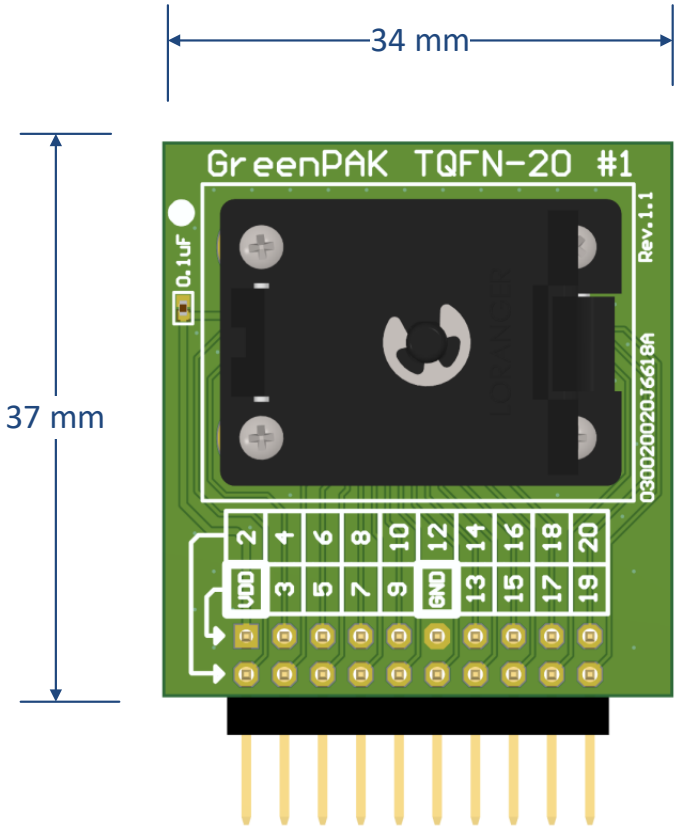


Figure 6. Dimensions – Top View

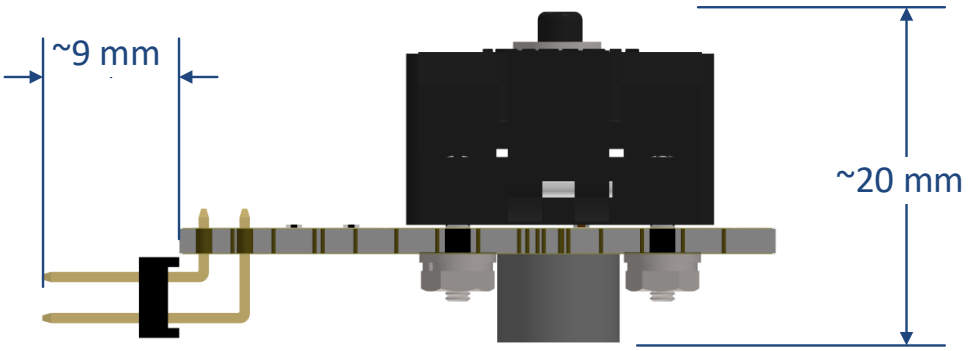


Figure 7. Dimensions – Side View

6. Board Schematic

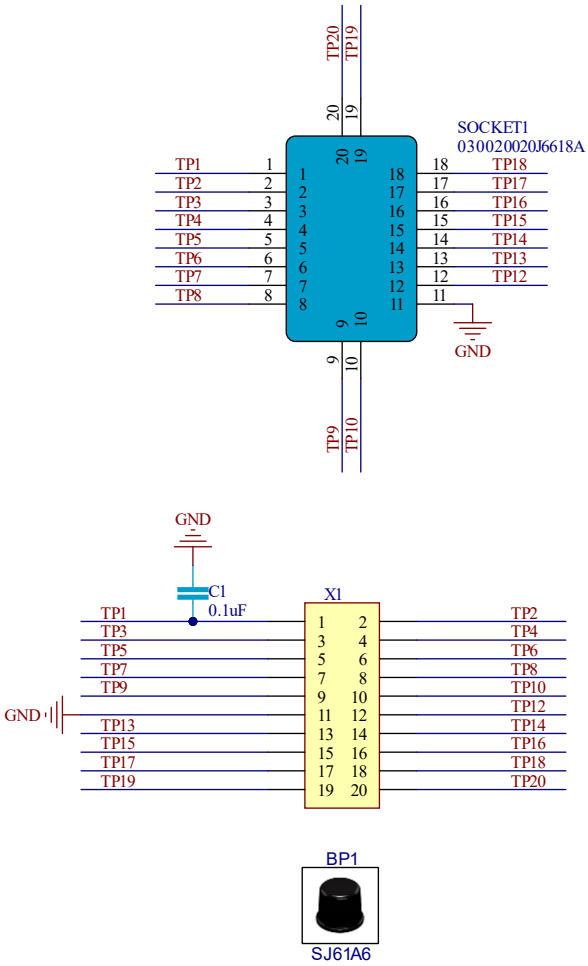


Figure 8. Board Schematic

7. Bill of Materials

#	Designator	Manufacturer Part Number	Manufacturer	Quantity
1	C1	CL05A104MP5NNNC	Samsung Electro-Mechanics	1
2	SOCKET1	030020020J6618A	Loranger	1
3	X1	68021-220HLF	Amphenol ICC (FCI)	1
4	BP1	SJ61A11	3M	1

8. Ordering Information

Part Number	Description
SLG4SA20-20x30	GreenPAK SLG46537-EV Socket Adapter, PCB top marking: TQFN-20 #1
SLG46537EV-SKT	GreenPAK SLG46537-EV Socket Adapter (SLG4SA20-20x30) and 50 Samples of SLG46537-EV

9. Certifications

The GreenPAK Extension Card #1 complies with the following certifications/standards.

9.1 EMC/EMI Standards

- FCC Notice (Class A)

This device complies with FCC 47 CFR part 15, subpart B. Operation is subject to the following two conditions:
(1) This equipment should be handled using standard CMOS device precautions. The user must take all precautions to avoid the build-up of static electricity while working with this equipment. All test and measurement tools, including the workbench, must be grounded. The user/operator must be grounded using the wrist strap. The connectors and/or device pins should not be touched with bare fingers.

(2) This Class A digital device complies with the FCC rules outlined in 47 CFR Part 15. This equipment may cause radio frequency noise when used in a residential area. In such cases, the user/operator of the equipment may be required to take appropriate countermeasures at their own responsibility.

- CE Class B (EMC)

This product is in conformity with the following Directive(s) of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to Electromagnetic Compatibility 2014/30/EU (EMC Directive). The equipment can be operated under the following conditions:

(1) This equipment should be handled using standard CMOS device precautions. The user must take all precautions to avoid the build-up of static electricity while working with this equipment. All test and measurement tools, including the workbench, must be grounded. The user/operator must be grounded using the wrist strap. The connectors and/or device pins should not be touched with bare fingers.

(2) This is a ‘Class B’ (EN 55032:2015) device. This equipment may cause radio frequency noise when used in a residential area. In such cases, the user/operator of the equipment may be required to take appropriate countermeasures at their own responsibility.

- UKCA Class B (EMC)

This product conforms to the following relevant UK Statutory Instrument(s) (and their amendments): 2016 No. 1091 Electromagnetic Compatibility Regulations 2016. The equipment can be operated under the following conditions:

(1) This equipment should be handled using standard CMOS device precautions. The user must take all precautions to avoid the build-up of static electricity while working with this equipment. All test and measurement tools, including the workbench, must be grounded. The user/operator must be grounded using the wrist strap. The connectors and/or device pins should not be touched with bare fingers.

(2) This is a ‘Class B’ (BS EN 55032:2015) equipment. This equipment may cause radio frequency noise when used in a residential area. In such cases, the user/operator of the equipment may be required to take appropriate countermeasures at their own responsibility.

9.2 Material Selection, Waste, Recycling, and Disposal Standards

- 2011/65/EU Restriction of Hazardous Substances (RoHS Directive) + amendment (EU) 2015/863 (RoHS3)
- 2012/19/EU Waste Electrical and Electronic Equipment (WEEE Directive)
- 2012 No. 3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
- 2013 No. 3113 Waste Electrical and Electronic Equipment Regulations

10. Revision History

Revision	Date	Description
1.00	Oct 19, 2026	Initial release.

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