

TPLD1202RWS and TPLD1202RWB Evaluation Module



Description

The TPLD1202-RWS-EVM helps users to configure TPLD1202RWS and TPLD1202RWB devices without requiring the soldering of the devices to the board. Users can use InterConnect Studio (ICS) for fast evaluation, development, simulation, and programming. Once programmed, TPLD devices can be removed from the socket and placed in a user's system. Users can program either device without making any changes to the board.

Features

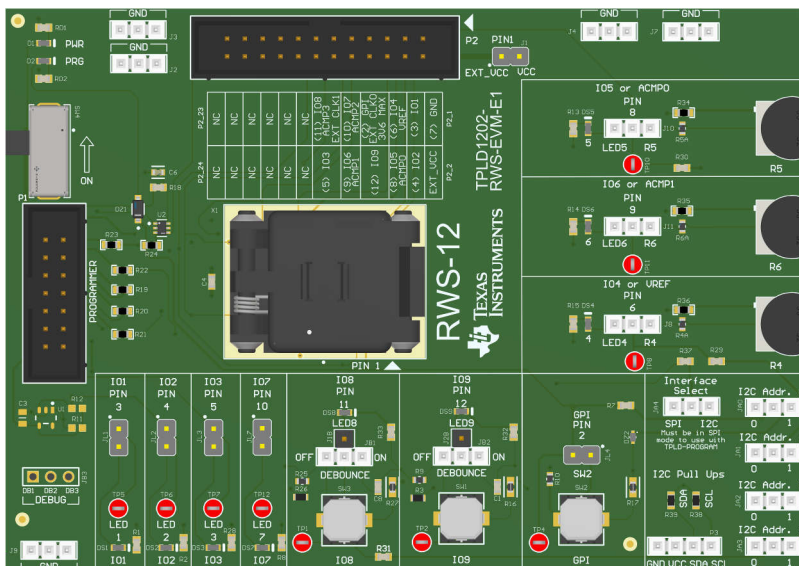
- RWS/RWB socket for easy programming and evaluation of TPLD1202RWS and TPLD1202RWB
- Input buttons, potentiometers, and output LEDs for quick evaluation
- Header pins and test points for interfacing with custom systems
- Interfaces with TPLD-PROGRAM using a standard keyed 14-pin cable

Get Started

1. Order the [TPLD1202-RWS-EVM](#) and [TPLD-PROGRAM](#)
2. Download the latest version of [InterConnect Studio \(ICS\)](#)
3. Use the cables included the TPLD-PROGRAM kit to connect the system
4. Place an unprogrammed TPLD1202RWS or TPLD1202RWB into the socket and configure using ICS

Applications

- [Factory automation and control](#)
- [Communications equipment](#)
- [Retail automation and payment](#)
- [Test and measurement](#)
- [Pro audio, video and signage](#)
- [Personal electronics](#)



1 Evaluation Module Overview

1.1 Introduction

This user's guide contains support documentation for the TPLD1202RWS and TPLD1202RWB evaluation module (EVM). Included is a description of how to set up and configure the EVM, how to use the EVM in conjunction with a TPLD-PROGRAM board, and how to use InterConnect Studio to configure the TPLD1202. Also included are the printed circuit board (PCB) layout, the schematic, and the bill of materials (BOM) of the TPLD1202-RWS-EVM.

The TPLD1202RWS and TPLD1202RWB are part of the TI Programmable Logic Device (TPLD) family of devices that feature versatile programmable logic ICs with combinational logic, sequential logic and mixed-signal functions to provide an integrated, compact, low power design to implement common system functions, such as timing delays, voltage monitors, system resets, power sequencers, and I/O expanders.

Note

To program devices, the TPLD-PROGRAM board and InterConnect Studio are required.

TI only supports the use of the cables provided in the TPLD-PROGRAM kit to interface between the EVM and the programmer board.

1.2 Kit Contents

Table 1-1. TPLD1202-RWS-EVM Kit Contents

Item	Description	Quantity
TPLD1202-RWS-EVM	PCB	1
TPLD1202RWS or TPLD1202RWB	12-pin TI Programmable Logic Device	5
Quick start guide	Guide to setup system	1

1.3 Specification

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{cc}	Powered by programmer		3.3		V
V _{cc}	External Power	1.71		5.5	V
V _i	Per pin input	0		V _{cc}	V
V _o	Per pin output	0		V _{cc}	V
GPI	Input	0		V _{cc}	V

1.4 Device Information

The TPLD1202 is part of the TI Programmable Logic Device (TPLD) family of devices that feature versatile programmable logic ICs with combinational logic, sequential logic and mixed-signal functions. TPLD provides an integrated, compact, low power design to implement common system functions, such as timing delays, voltage monitors, system resets, power sequencers, I/O expanders, and more. This cost optimized device offers a rich set of functionality in a small form factor, supports an extended temperature range from -40°C to 125°C, and operates with supply voltages ranging from 1.71V to 5.5V.

2 Hardware

2.1 Functional Blocks

This section describes the different functional blocks of the TPLD1202-RWS-EVM.

2.1.1 Test Points

Each GPIO and GPI pin of a socketed TPLD1202RWS or TPLD1202RWB part is connected directly to a test point to allow a user to access each pin of the device for probing and testing. The pins are connected to test points as follows:

Table 2-1. Test Points

RWS PIN NUMBER	RWB PIN NUMBER	IO NAME	TEST POINT
11	1	IO8	TP1
12	2	IO9	TP2
2	4	GPI	TP4
3	5	IO1	TP5
4	6	IO2	TP6
5	7	IO3	TP7
6	8	IO4	TP8
8	10	IO5	TP10
9	11	IO6	TP11
10	12	IO7	TP12

Each test point is connected directly to the corresponding pin, so any disconnected header pins do not disconnect the test points from the pins.

2.1.2 Programmer Header Block (P1)

The programmer header block accepts the 14-position cable used to connect the TPLD1202-RWS-EVM to the TPLD-PROGRAM. TI recommends using this header to connect only to the TPLD-PROGRAM using the cables included in the TPLD-PROGRAM kit. The header is keyed, so the 14-position cable can only be inserted to the case with the key facing the correct direction. To connect the TPLD1202-RWS-EVM to a TPLD-PROGRAM, follow the steps in [Section 3.2](#).

SW4 connects the 3V3 line of the programmer header to the VCC line of the EVM. When powering the EVM from the TPLD-PROGRAM, the 3V3 line must be in the ON position.

2.1.3 External Connection Header Block

Use the P2 header block to interface the TPLD1202-RWS-EVM with an external system. Using the guide printed on the EVM silkscreen, interface the TPLD pins with an external system to allow for prototyping and testing in customer systems. When supplying power to the TPLD using the P2 header block, SW4 must be in the OFF position and a shunt placed on J1, connecting the external VCC supply from P2 (VCC_EXT) to the VCC net of the EVM. TI recommends not connecting the board to an external system and to the TPLD-PROGRAM at the same time to avoid the risk of damage to the TPLD-PROGRAM and the external system.

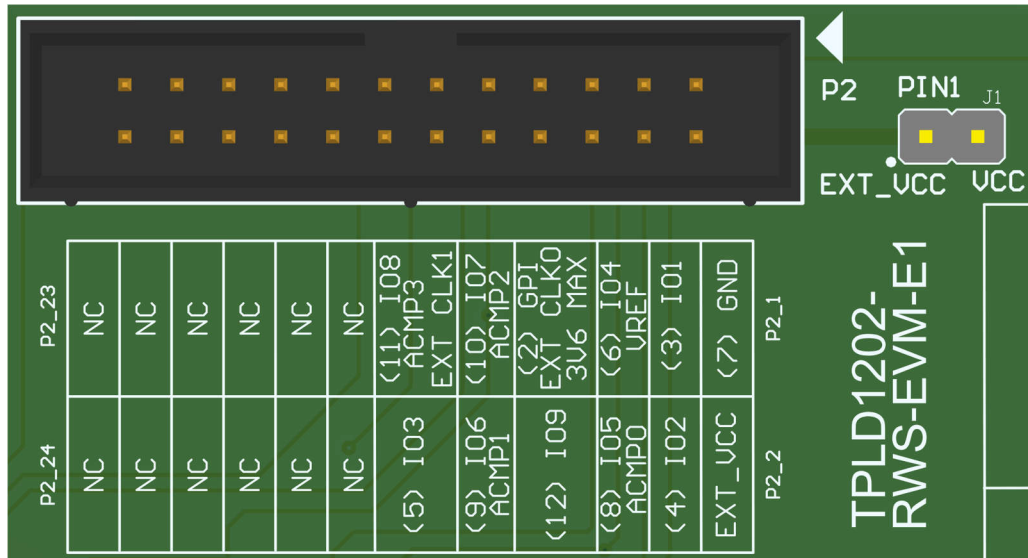


Figure 2-1. P2 and J1 Headers

2.1.4 GPI Protection Block

During the permanent programming process, 8V is applied to the GPI pin of the TPLD. This circuit prevents the voltage at P2 from exceeding 3.3V.

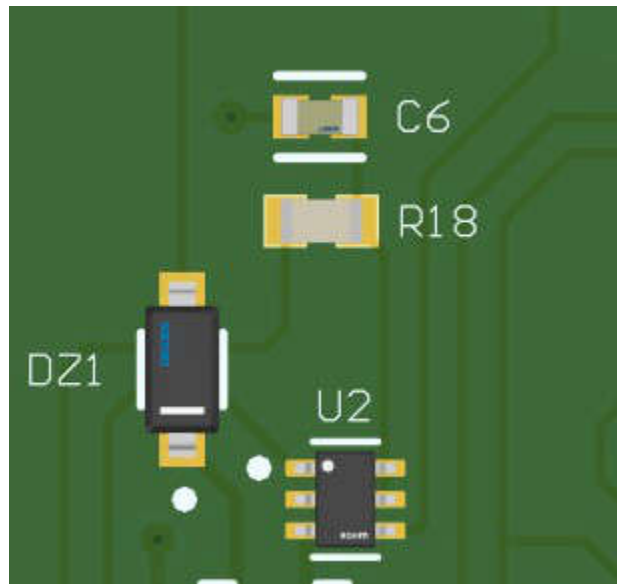


Figure 2-2. GPI Protection Block

2.1.5 I2C Address Block

The TPLD1202 has an optional I2C address hardware configuration feature that allows the I2C address of the TPLD1202 to be set using the state of certain pins on device start-up. This block contains pull-up and pull-down resistors that can be used to set the I2C address of the TPLD1202. To set the I2C address of the device, use shunts to set each bit of the address as either 1 or 0. To set a bit as 1, place a shunt between the middle pin of the address bit and the pin labeled 1. To set a bit as 0, place a shunt between the middle pin of the address bit and the pin labeled 0.

Table 2-2. I2C Address Block

I2C Address Bit	Pin Number	IO Name
0	4	GPI

Table 2-2. I2C Address Block (continued)

I2C Address Bit	Pin Number	IO Name
1	8	IO4
2	10	IO5
3	1	IO8

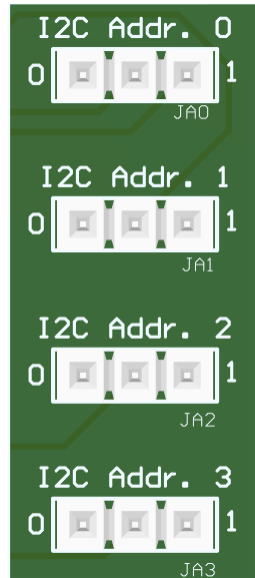


Figure 2-3. I2C Address Block

2.1.6 Interface Select Block

Program the TPLD1202 with either I2C or SPI. During device start up, an unprogrammed TPLD selects either SPI or I2C by which to be programmable. This selection is made by the voltage on IO1 during start up. If the voltage is high, the device starts up in SPI mode. If the voltage is low, the device starts up in I2C mode. The device has an internal pull down on that pin, so the device defaults to I2C mode.

The Interface Select block consists of a 3-state switch select either SPI mode (pull up) or I2C mode (pull down).

To prevent conflicts when programming a TPLD whose address has been pre-configured, the TPLD-PROGRAM uses SPI to communicate with the device in the socket. This means that the Interface Select block must be set to SPI mode to program the device with a TPLD-PROGRAM.

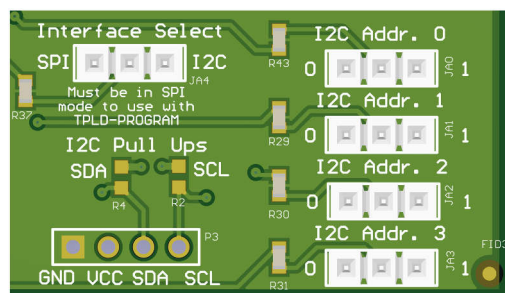


Figure 2-4. I2C Address and Interface Select Blocks

2.1.7 RWS/RWB Socket

The RWS/RWB socket for testing and programming TPLD devices without soldering a device to the EVM. The socket can accommodate both TPLD1202RWS and TPLD1202RWB devices with no changes to the board.

To place a device in the socket, follow the steps in [Section 3.2](#).

2.2 GPIO Testing Blocks

The 10 GPIO pins on the device are connected to various testing blocks to allow for prototyping. [GPIO Testing Blocks](#) indicates the connections.

Table 2-3. GPIO Testing Blocks

RWS Pin Number	RWB Pin Number (not printed on board)	IO Name	Testing Block	Testing Block Name
3	5	IO1	LED	LED1
4	6	IO2	LED	LED2
6	7	IO3	LED	LED3
10	12	IO7	LED	LED7
11	1	IO8	SW/LED	SW3/LED8
12	2	IO9	SW/LED	SW1/LED9
2	4	GPI	SW	SW2
6	8	IO4	LED/POT	LED4/R4
8	10	IO5	LED/POT	LED5/R5
9	11	IO6	LED/POT	LED11/R6

2.2.1 LED Blocks

Each LED block consists of an LED that can connect or disconnect from the TPLD pin using a header. To connect the LED to the corresponding pin, place a shunt on the corresponding header between the two header pins.

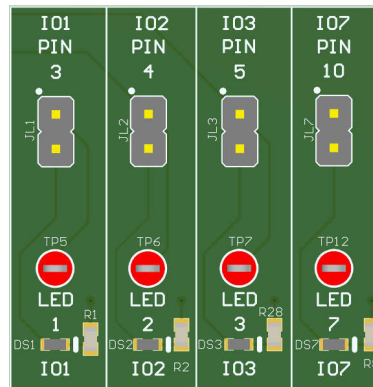


Figure 2-5. LED Blocks

2.2.2 Switch/LED Blocks

Each SW/LED block consists of a 4-position header that can connect to a tactile switch with an optional debounce circuit, or to an LED. One side of the 4-position header, labeled OFF, connects directly to the switch output, and the other side of the 4-position header, labeled ON, connects to a debounce circuit leading to the switch output. The pin labeled LED connects to an LED. The middle pin of the header connects to the corresponding TPLD pin. To connect directly to the switch output, place a shunt between the middle pin of the header and the OFF pin. To connect to the debounce circuit, place a shunt between the middle pin of the header and the OFF pin. To connect to the LED, place a shunt between the middle pin of the header and the LED pin. If no shunt is placed between any set of pins, the TPLD pin is floating.

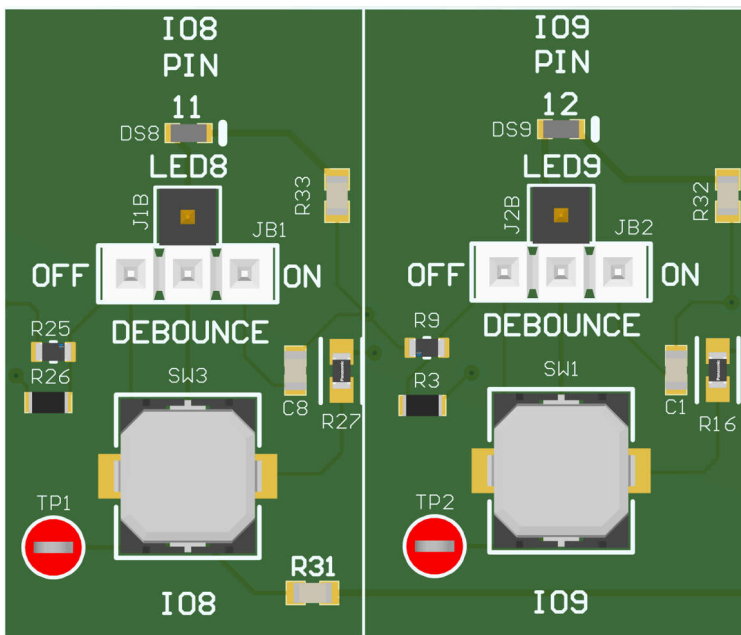


Figure 2-6. Switch/LED Blocks

2.2.3 Switch Block

The GPI line is connected to a tactile switch. This switch has no debounce features. This is to protect the GPI signal during programming.

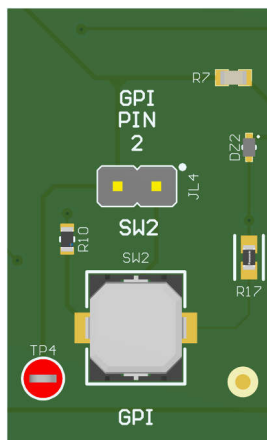


Figure 2-7. Switch Block

2.2.4 LED/Potentiometer Blocks

Each LED/POT block consists of a 3-state header pin that is used to connect the corresponding GPIO pin to either an analog voltage source or an LED. The middle pin of the header connects to the corresponding GPIO pin of the TPLD. The left side of the header pin, marked LED, connects to the LED. The right side of the header pin, marked R, leads to the analog voltage source. To connect the corresponding GPIO to the LED, place a shunt between the middle pin and the LED pin. To connect the GPIO to the analog voltage source, place a shunt between the middle pin and the R pin.

The analog voltage source consists of a voltage divider using a POT. When the POT is turned fully clockwise, the analog voltage source outputs at most 0.2V. When the POT is turned fully counterclockwise, the analog voltage source outputs at least $VCC - 0.2V$.

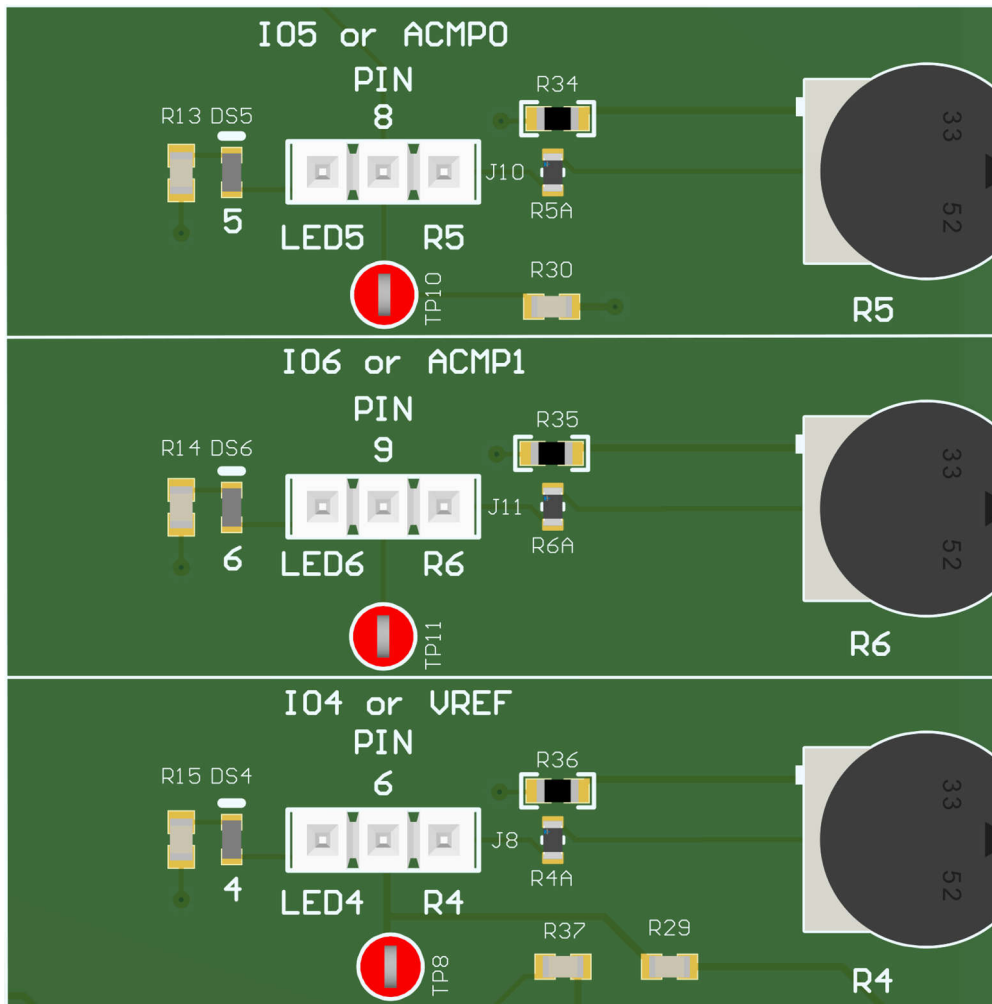


Figure 2-8. LED/POT Blocks

3 Software

3.1 Using the TPLD1202-RWS-EVM

This section describes using the TPLD1202-RWS-EVM to program TPLD1202. For more help using InterConnect Studio (ICS) to create your own circuit, see the [InterConnect Studio User's Guide](#).

3.1.1 Equipment Needed for Programming

To program a TPLD device with the TPLD1202-RWS-EVM, a TPLD-PROGRAM kit and a computer running InterConnect Studio are needed. The TPLD-PROGRAM kit includes everything required to interface a computer to the TPLD1202-RWS-EVM. Download InterConnect Studio from TI.com by following the instructions in [Section 3.1.2](#).

Note

When the TPLD-PROGRAM is powered and connected the TPLD1202-RWS-EVM, LED1 and LED2 turns on if a shunt is placed on the associated jumpers. This is normal and is caused by I2C pull-ups installed on those lines on the TPLD-PROGRAM.

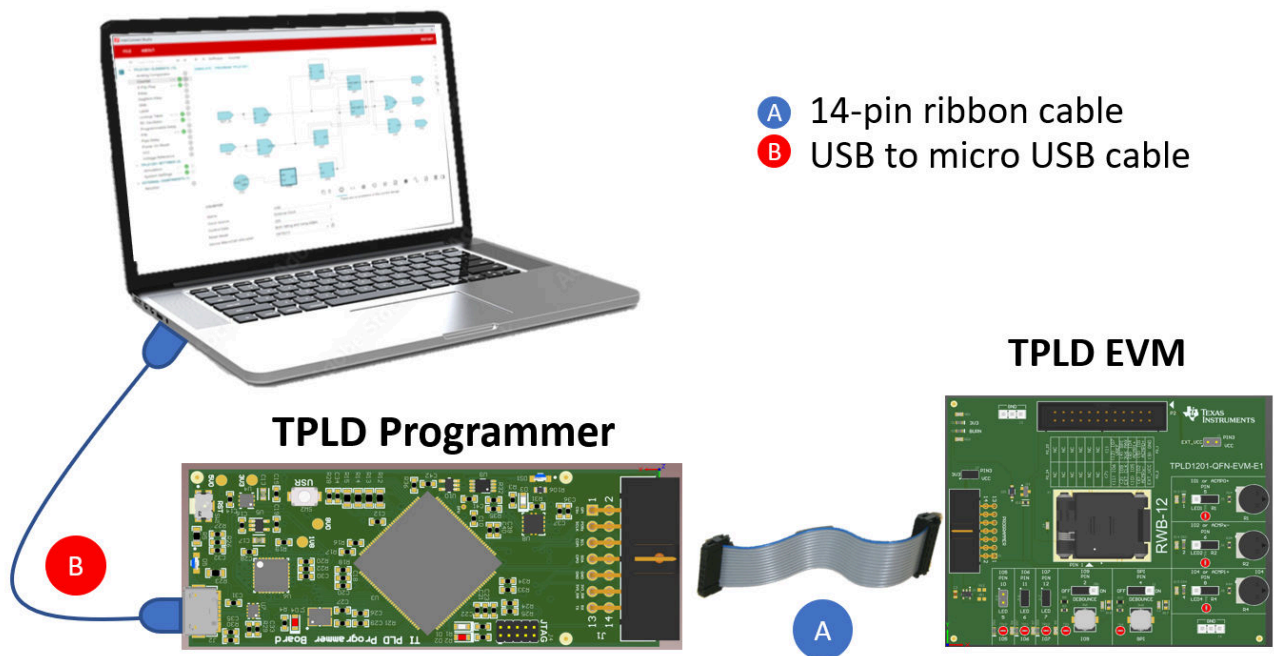


Figure 3-1. Connecting a TPLD EVM and Programmer

3.1.2 Installing Software

InterConnect Studio (ICS) is available free of charge at interconnect_studio.itg.ti.com

For more information on using InterConnect Studio (ICS), reference the InterConnect Studio User's Guide.

3.2 Configuring a TPLD Device

This section describes the steps to use the TPLD1202-RWS-EVM and a TPLD-PROGRAM kit to program TPLD1202RWS or TPLD1202RWB.

3.2.1 TPLD1202-RWS-EVM Setup for Programming

Make sure that the following conditions are met:

1. Set SW4 to the ON position
2. Remove the I2C Addr. 0 jumper
3. Remove the EXT_VCC (J1) jumper

4. Disconnect P2 from any external system
5. Place a resistor between the SPI side and middle pin of the Interface Select block

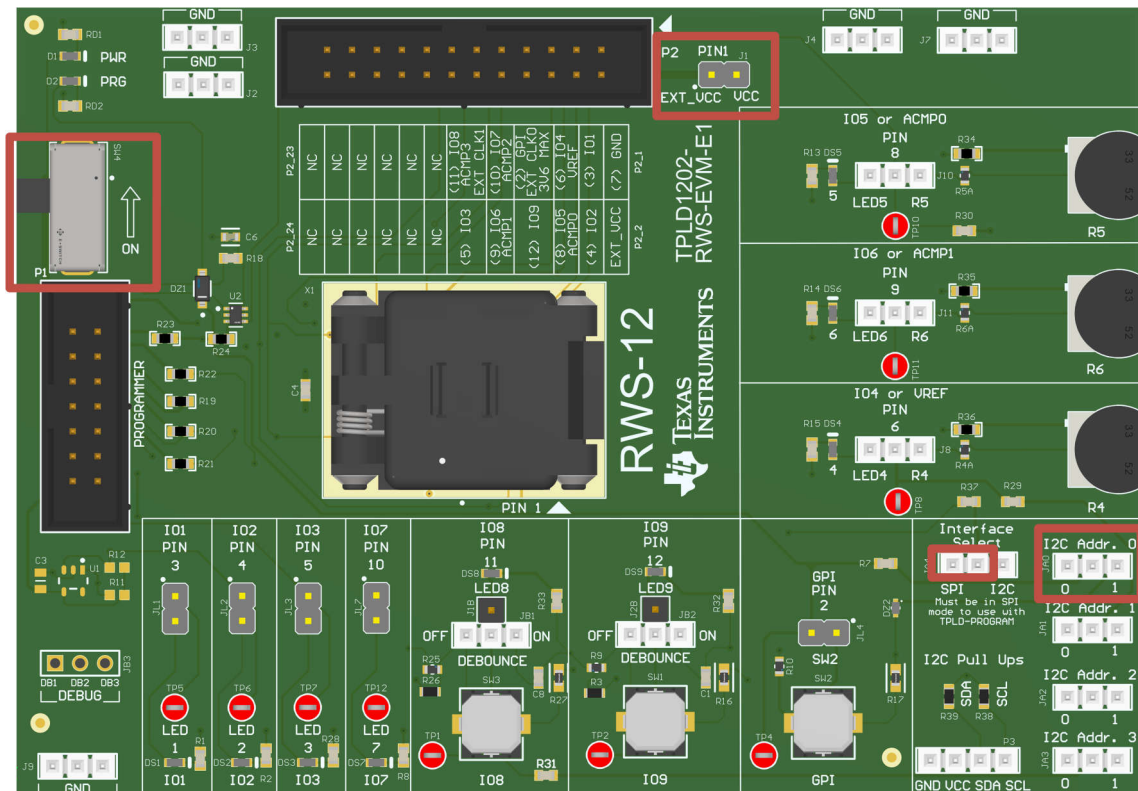


Figure 3-2. Components Considered in Programming Setup

3.2.2 Inserting a TPLD1202RWS into the RWS/RWB Socket

Do not remove, replace, or add a TPLD device to or from a powered board. Do not place fingers inside the socket or touch the contacts on the bottom of the socket. TI recommends following typical ESD protection procedures while handling the TPLD1202RWS or TPLD1202RWB.

1. Open the socket by gently pulling the latch until the lid snaps open.
2. Make sure that the socket is clean by blowing off socket contacts and device pads with clean compressed air.
3. Use a vacuum pen or antistatic tweezers to guide the part into the socket. Align pin 1 of the part to pin 1 of the socket as shown below.
4. Close the socket lid until the latch snaps and holds the lid in place.

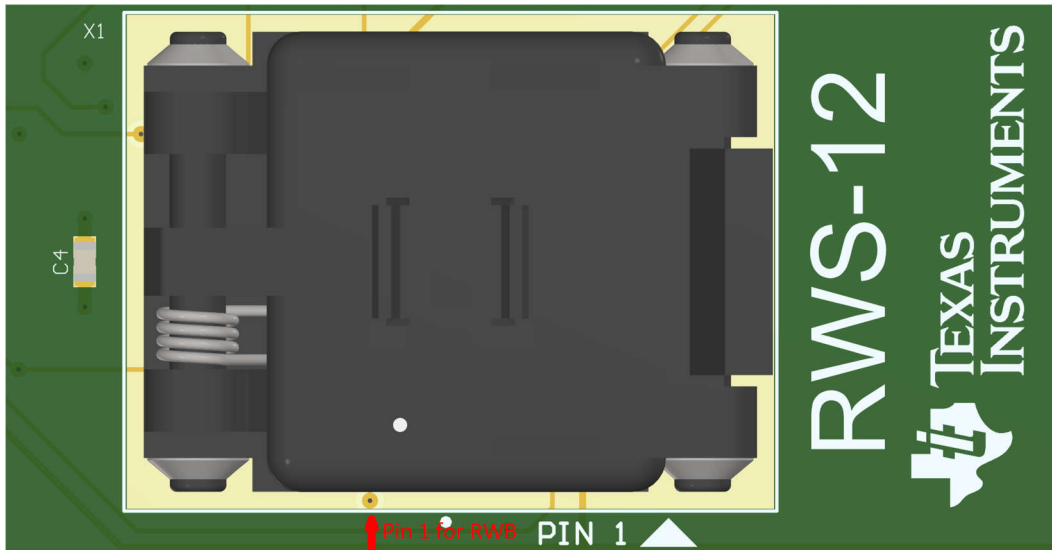


Figure 3-3. RWS/RWB Socket

3.2.3 Connecting the TPLD1202-RWS-EVM to a TPLD-PROGRAM Board

All cables included are keyed and can only be plugged in when facing the correct direction. If a cable cannot be inserted with the application of a gentle amount of force, try swapping the orientation of the cable and making sure that the header housings are unobstructed before trying again. Forcing the connections can cause damage to the cables and boards.

1. Connect the programmer board to a computer running InterConnect Studio using the provided USB cable. Make sure that a good connection is made between the TPLD-PROGRAM and the computer, indicated by the two blue LEDs on the TPLD-PROGRAM both being on. An example of a fully connected EVM can be seen in [Using the TPLD1202-RWS-EVM](#).
2. Connect the TPLD-PROGRAM to the TPLD1202-RWS-EVM using the provided 14-position ribbon cable. Make sure that a good connection is made between the TPLD1202-RWS-EVM and the TPLD-PROGRAM, indicated by the 3V3 LED in the top left of the EVM being on.

Note

When the TPLD-PROGRAM is powered and connected the TPLD1202-RWS-EVM, LED1 and LED2 turns on if a shunt is placed on the associated jumpers. This is normal and is caused by I2C pull-ups installed on those lines on the TPLD-PROGRAM.

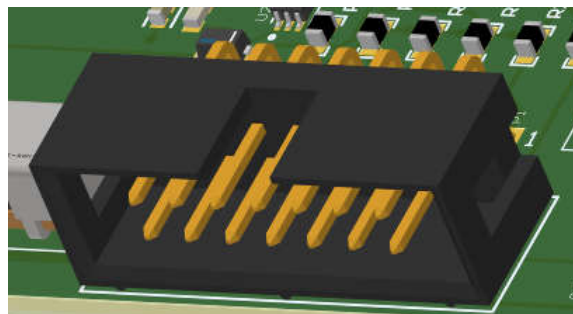


Figure 3-4. Keyed Header Socket

3.2.4 Temporarily Configuring a TPLD Device

This section describes using InterConnect Studio to configure a TPLD1202.

When the TPLD is temporarily configured, removing power from the device causes the TPLD to reset and the configured circuit to be erased. The TPLD can be reconfigured multiple times without needing to be reset between configurations.

1. Open InterConnect Studio on the computer to which the TPLD-PROGRAM is connected. Under *Device*, select *TPLD1202*. Under *Package*., select *RWS (X2QFN, 12)* or *RWB (X2QFN, 12)*.
2. Select a demo from the list of pre-designed circuits, or select *Empty Design* to build a custom circuit.

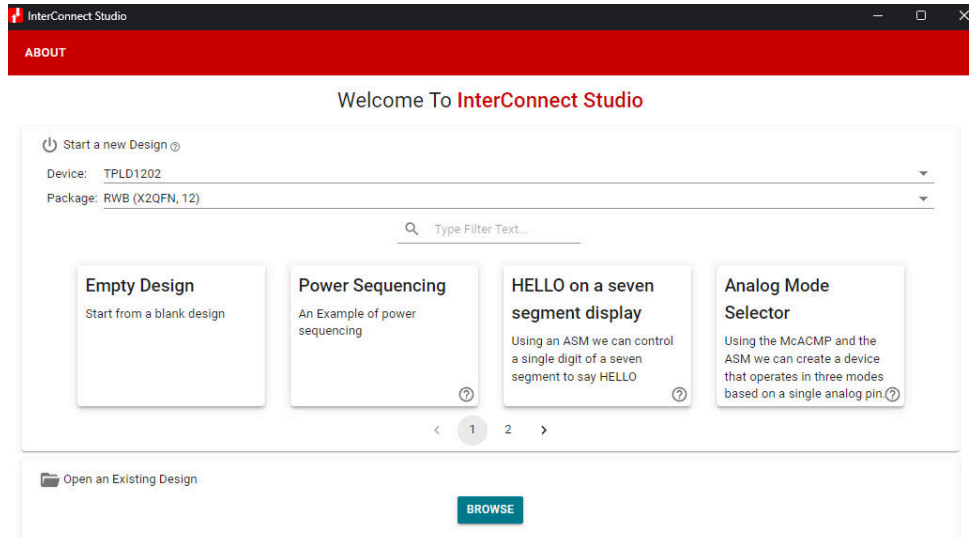


Figure 3-5. Selecting the TPLD1202RWS or TPLD1202RWB in ICS

3. InterConnect Studio opens the selected circuit.
4. Select *CONFIGURE TPLD1202* in the top left corner of InterConnect Studio to configure the TPLD in the socket of the EVM with the circuit shown by InterConnect Studio. Select the serial port connected to the TPLD-PROGRAM, then select *OK*.

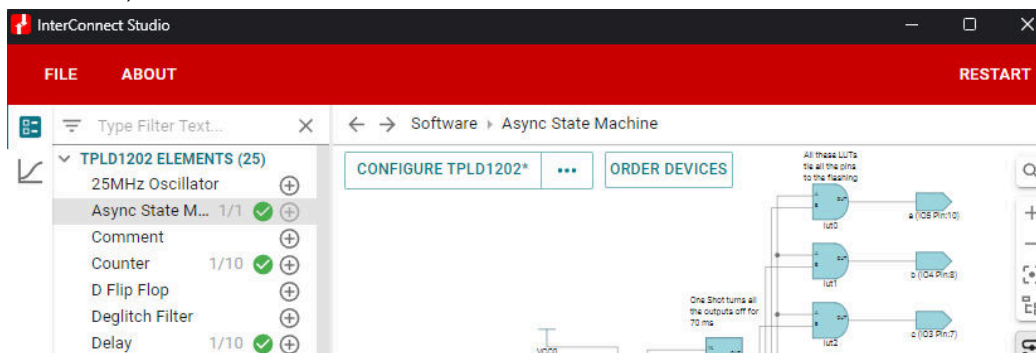


Figure 3-6. Temporarily Configuring in ICS

- a. Some LEDs on the TPLD1202-RWS-EVM flash during the programming sequence, which is normal.
- b. If the configuration fails, check the connections between the EVM and the computer, make sure SW4 is ON, check the connection between the TPLD device and the socket contacts, and retry.

Once the programming sequence is completed, the TPLD device on the board is temporarily configured with the circuit built in InterConnect Studio. The configured circuit can be tested using the buttons, potentiometers and LEDs provided on the EVM.

3.2.5 Permanently Programming a TPLD Device

This section describes using InterConnect Studio to permanently program a TPLD1202. Permanently programmed devices retain the configuration the devices are programmed with after power is reset.

Permanently programmed devices must not be permanently programmed again to avoid damaging the device.

1. Open the desired configuration to be permanently programmed in the TPLD1202 in InterConnect Studio.
2. Open the Configure Settings by selecting the three dots icon beside the *CONFIGURE TPLD1202* button.
3. Select *Permanently Configure Device*. If using a TPLD-PROGRAM to power the EVM, then leave the Power Source as *Programmer*. Select *OK*.

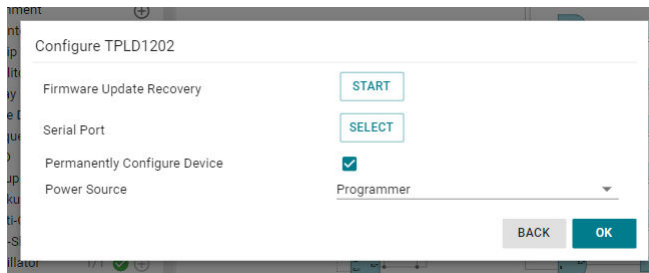


Figure 3-7. Permanent Programming in ICS

4. Select the serial port connected to the TPLD-PROGRAM, then select *OK* again.
 - a. Some LEDs on the TPLD1202-RWS-EVM can flash during the programming sequence, which is normal.
 - b. If the configuration fails, then check the connections between the EVM and the computer, make sure SW4 is ON, check the connection between the TPLD device and the socket contacts, and retry.
5. Remove power from the EVM before removing the permanently programmed TPLD1202.

3.3 Using the TPLD1202-RWS-EVM to Program TPLD1202RWB or TPLD1202RWS

The TPLD1202-RWS-EVM can program both TPLD1202RWS and TPLD1202RWB without any changes to the board. To program a TPLD1202RWB, insert a TPLD1202RWB device into the RWS/RWB socket following the instructions in [Section 3.2.2](#). Using the TPLD1202-RWS-EVM, select the TPLD1202RWB design and ICS, and configure normally, as described in [Section 3.2](#).

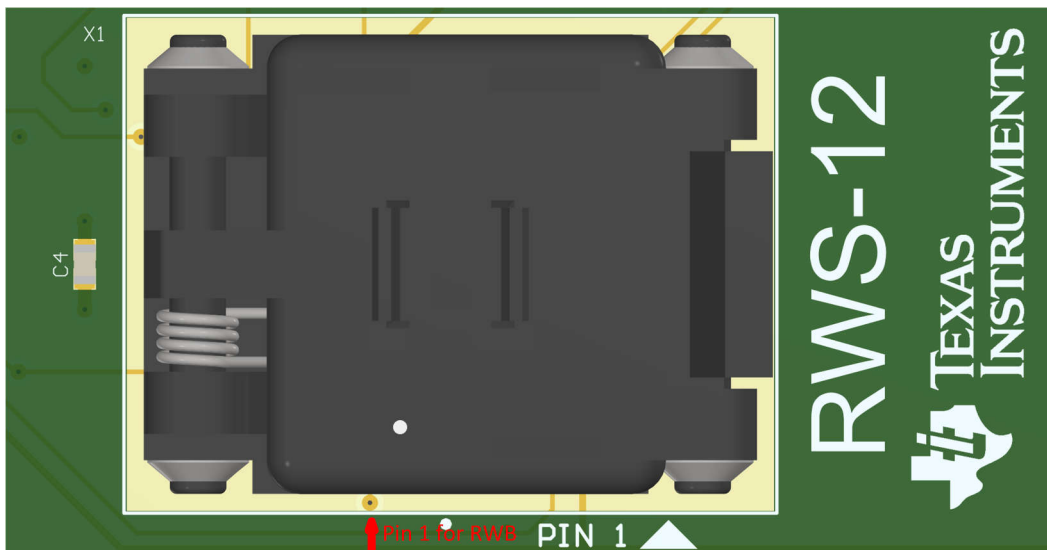


Figure 3-8. RWS/RWB Socket

When evaluating a TPLD1202RWB or TPLD1202RWS device, the IO map printed on the EVM is correct, but the pin numbers map to the incorrect pins of the device as the map corresponds to the pins of the TPLD1202RWS or TPLD1202RWS. Use this chart to determine the correct pin number for the RWB device from the markings on the board.

Pin Name	RWS Pin Number	RWB Pin Number
IO1	3	5
IO2	4	6
IO3	5	7

Pin Name	RWS Pin Number	RWB Pin Number
IO4	6	8
IO5	8	10
IO6	9	11
IO7	10	12
IO8	11	1
IO9	12	2
GPI	2	4
VCC	1	3
GND	7	9

4 Hardware Design Files

4.1 Schematics

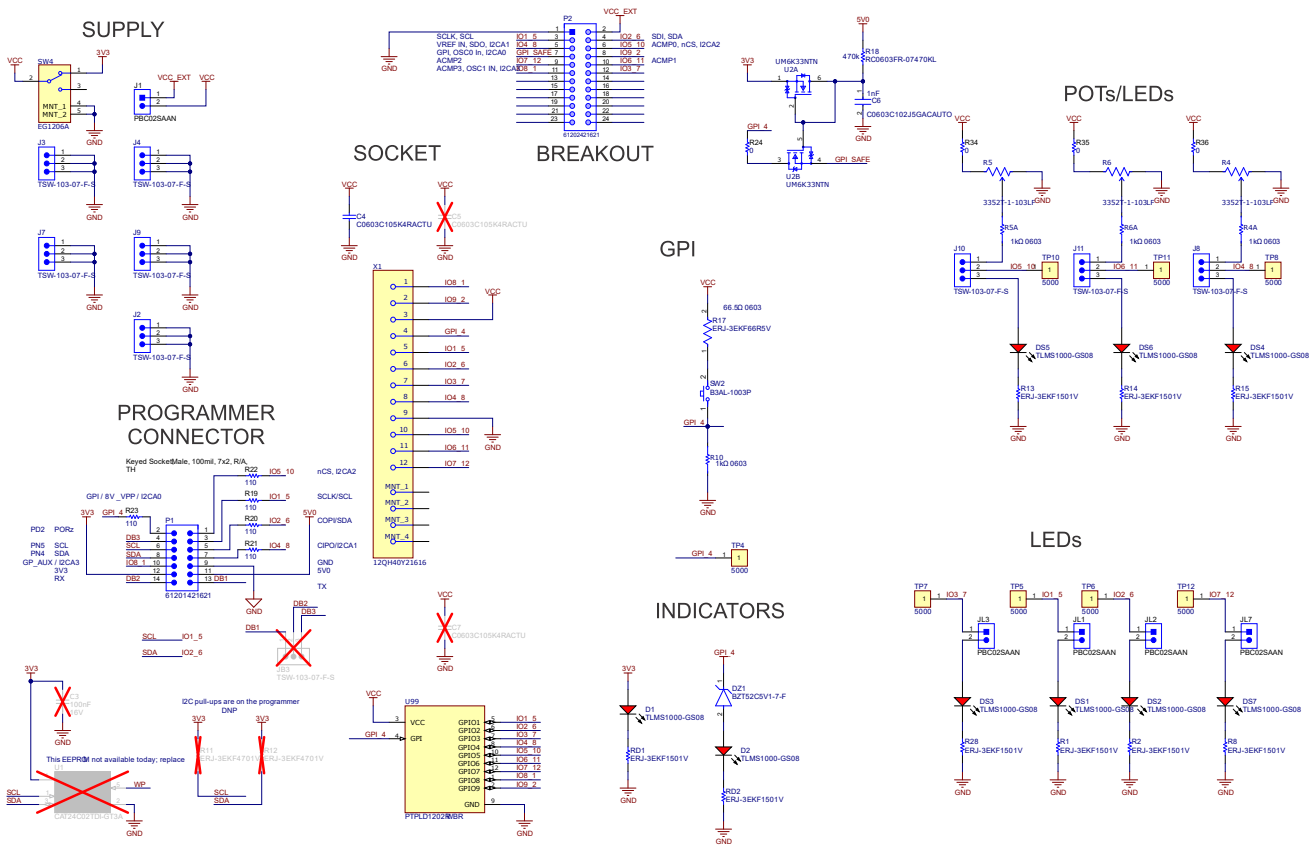
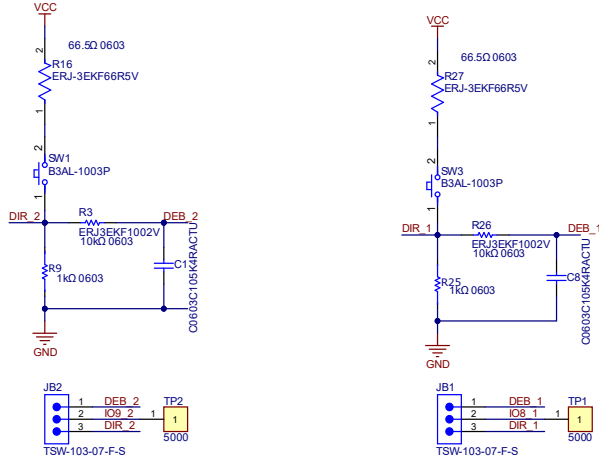


Figure 4-1. TPLD1202-RWS-EVM Schematic 1

Switches / LEDs



I2C Address Selector

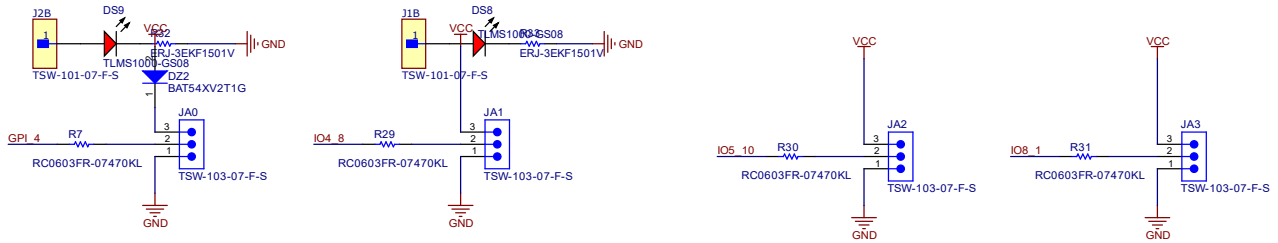


Figure 4-2. TPLD1202-RWS-EVM Schematic 2

4.2 PCB Layout

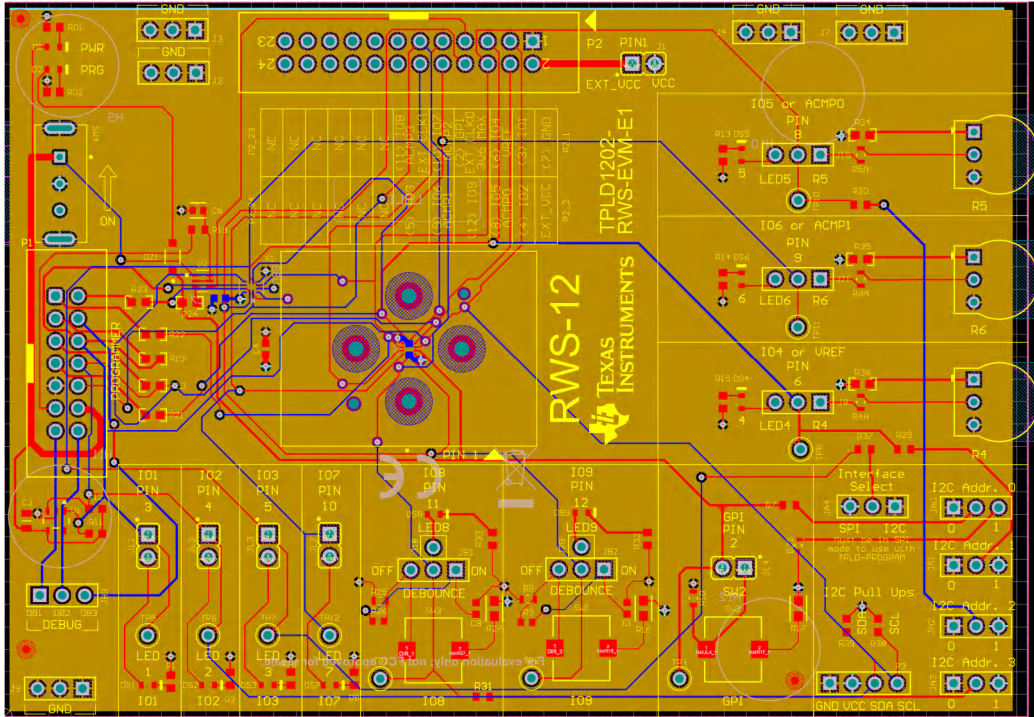


Figure 4-3. TPLD1202-RWS-EVM Layout

4.2.1 PCB Overview

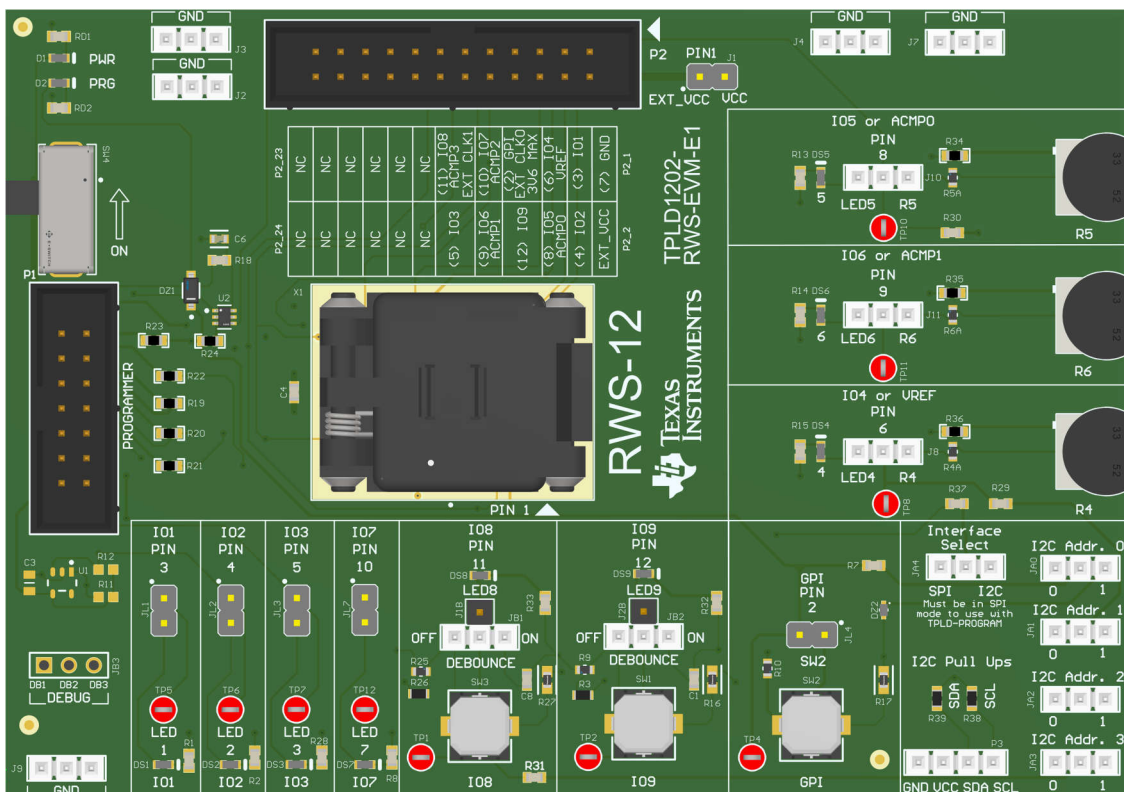


Figure 4-4. TPLD1202-RWS-EVM Board Front

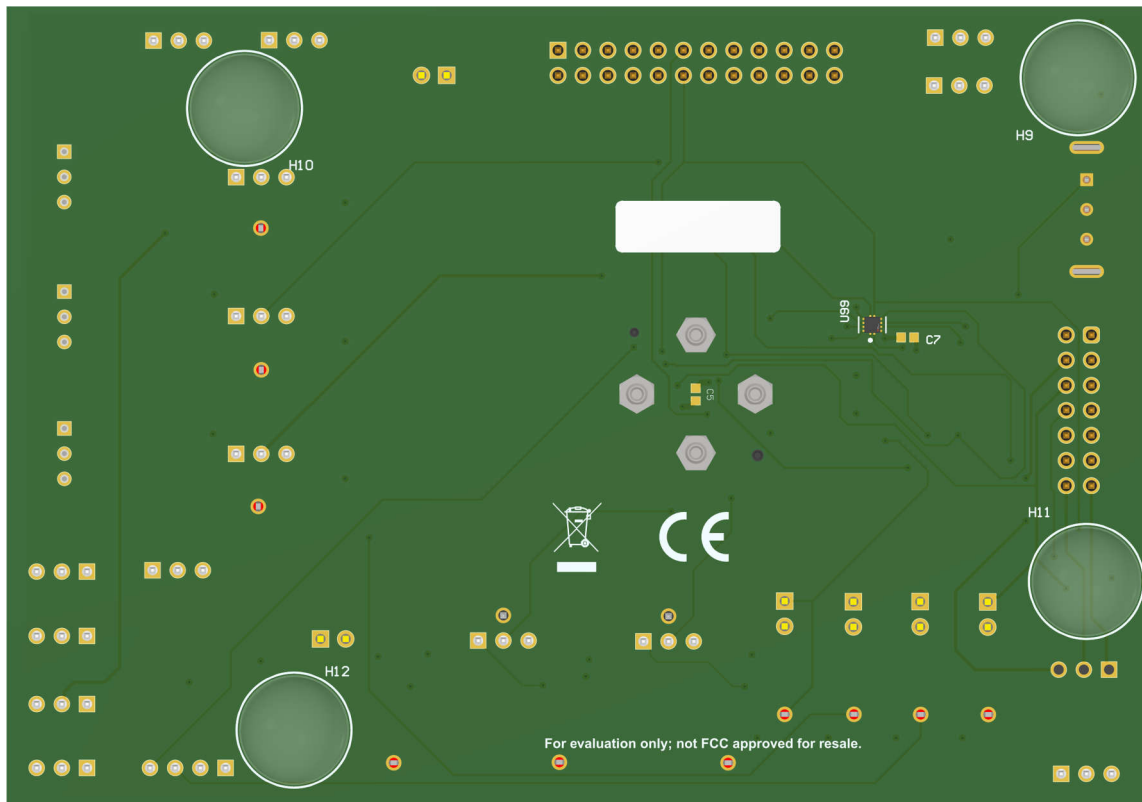


Figure 4-5. TPLD1202-RWS-EVM Board Bottom

4.3 Bill of Materials

This section provides information on the components that can be used with the TPLD1202-RWS-EVM. Other components can be used as long as the components are able to fit the provided plated holes and pads.

Table 4-1. TPLD1202-RWS-EVM Bill of Materials

Designator	Item	Value	Manufacturer	Part Number
C1, C4, C8	Capacitor	1uF	Yageo	C0603C105K4RACTU
C5, C7	Capacitor	DNP	Knowles Syfer	060330160104JXT
C6	Capacitor	1000pF	KEMET	C0603C102J5GACAUTO
D1, D2, DS1, DS2, DS4, DS6, DS7, DS8	LED	Red	Vishay	TLMS1000-GS08
DZ1	Diode	5.1V	Diodes	BZT52C5V1-7F
DZ2	Diode	800mV	ON Semiconductor	BAT54XV2T1G
H9, H10, H11, H12	Bumpon	Clear	3M	SJ-5303 (CLEAR)
J1, JL1, JL2, JL3, JL7	Header	2x1	Sullins	PBC02SAAN
J1B, J2B	Header	1x1	Samtec	TSW-101-07F-S
J2, J3, J4, J7, J8, J9, J10, J11, JA0, JA1, JA2, JA3, JB1, JB2	Header	3x1	Samtec	TSW-103-07F-S
P1	Header	7x2	Würth Electronics	61201421721
P2	Header	12x2	Würth Electronics	61202421621
R4, R5, R6	Resistor	10kΩ	Bourns	3352T-1-103LF
R4A, R5A, R6A, R9, R10, R25	Resistor	1kΩ	Vishay	CRCW06031K00FKEAC
R3, R26	Resistor	10kΩ	Vishay Dale	CRCW060310K0FKEC
R1, R2, R8, R13, R14, R15, R28, R32, R33, RD1, RD2	Resistor	1.5kΩ	Panasonic	ERJ-3EKF1501V
R11, R12	Resistor	DNP	Yageo	ERJ-3EKF4701V
R16, R17, R27	Resistor	66.5Ω	Panasonic	ERJ-3EKF66R5V
R7, R18, R29, R30, R31	Resistor	470kΩ	Yageo	RC0603FR-07470KL
R24, R34, R35, R36	Resistor	0Ω	Stackpole Electronics Inc	RMCF0603ZT0R00
R19, R20, R21, R22, R23	Resistor	110Ω	Vishay Dale	CRCW0603110RJNEA
SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9, SH-J10, SH-J11, SH-J12, SH-J13	Shunt		Sullins Connector Solutions	SPC02SYAN
SW4	Switch	Slide	E-Switch	EG1206A
SW1, SW2, SW3	Switch	Tactile	Omron	B3AL-1003P
TP1, TP2, TP4, TP5, TP6, TP7, TP8, TP10, TP11, TP12	Test Point	Red	Keystone Electronics	5000
U1	EEPROM	DNP	Microchip / Atmel	CAT24C02TDI-GT3A
U2	Transistor		Rohm	UM6K33NTN
X1	Socket	RWB	Plastronics	12QH40Y21616
U99	TPLD	DNP	Texas Instruments	TPLD1202RWSR

5 Additional Information

5.1 Trademarks

All trademarks are the property of their respective owners.

6 References

1. Texas Instruments, [Implications of Slow or Floating CMOS Inputs application note](#)

7 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision A (December 2025) to Revision B (June 2026)	Page
• Updated EVM device from TPLD1202-RWB-EVM to TPLD1202-RWS-EVM.....	1
• Added TPLD1202RWB throughout.....	1
• Moved device information paragraph to introduction.....	1
• Added title to Table 2-1	3
• Added title to Table 2-2	4
• Added title to Table 2-3	6
• Moved Using the TPLD1202-RWS-EVM to Program TPLD1202RWB or TPLD1202RWS into Software.....	13

Changes from Revision * (August 2024) to Revision A (December 2025)	Page
• Updated hardware image.....	1

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WARNING

Evaluation Kits are intended solely for use by technically qualified, professional electronics experts who are familiar with the dangers and application risks associated with handling electrical mechanical components, systems, and subsystems.

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NOTE:

EXPOSURE TO ELECTROSTATIC DISCHARGE (ESD) MAY CAUSE DEGRADATION OR FAILURE OF THE EVALUATION KIT; TI RECOMMENDS STORAGE OF THE EVALUATION KIT IN A PROTECTIVE ESD BAG.

3 Regulatory Notices:

3.1 United States

3.1.1 Notice applicable to EVMs not FCC-Approved:

FCC NOTICE: This kit is designed to allow product developers to evaluate electronic components, circuitry, or software associated with the kit to determine whether to incorporate such items in a finished product and software developers to write software applications for use with the end product. This kit is not a finished product and when assembled may not be resold or otherwise marketed unless all required FCC equipment authorizations are first obtained. Operation is subject to the condition that this product not cause harmful interference to licensed radio stations and that this product accept harmful interference. Unless the assembled kit is designed to operate under part 15, part 18 or part 95 of this chapter, the operator of the kit must operate under the authority of an FCC license holder or must secure an experimental authorization under part 5 of this chapter.

3.1.2 For EVMs annotated as FCC – FEDERAL COMMUNICATIONS COMMISSION Part 15 Compliant:

CAUTION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement for Class A EVM devices

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Interference Statement for Class B EVM devices

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

3.2 Canada

3.2.1 For EVMs issued with an Industry Canada Certificate of Conformance to RSS-210 or RSS-247

Concerning EVMs Including Radio Transmitters:

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Concernant les EVMs avec appareils radio:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Concerning EVMs Including Detachable Antennas:

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This radio transmitter has been approved by Industry Canada to operate with the antenna types listed in the user guide with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Concernant les EVMs avec antennes détachables

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés dans le manuel d'usage et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

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3.3.1 *Notice for EVMs delivered in Japan:* Please see http://www.tij.co.jp/lstds/ti_ja/general/eStore/notice_01.page 日本国内に輸入される評価用キット、ボードについては、次のところをご覧ください。

<https://www.ti.com/ja-jp/legal/notice-for-evaluation-kits-delivered-in-japan.html>

3.3.2 *Notice for Users of EVMs Considered "Radio Frequency Products" in Japan:* EVMs entering Japan may not be certified by TI as conforming to Technical Regulations of Radio Law of Japan.

If User uses EVMs in Japan, not certified to Technical Regulations of Radio Law of Japan, User is required to follow the instructions set forth by Radio Law of Japan, which includes, but is not limited to, the instructions below with respect to EVMs (which for the avoidance of doubt are stated strictly for convenience and should be verified by User):

1. Use EVMs in a shielded room or any other test facility as defined in the notification #173 issued by Ministry of Internal Affairs and Communications on March 28, 2006, based on Sub-section 1.1 of Article 6 of the Ministry's Rule for Enforcement of Radio Law of Japan,
2. Use EVMs only after User obtains the license of Test Radio Station as provided in Radio Law of Japan with respect to EVMs, or
3. Use of EVMs only after User obtains the Technical Regulations Conformity Certification as provided in Radio Law of Japan with respect to EVMs. Also, do not transfer EVMs, unless User gives the same notice above to the transferee. Please note that if User does not follow the instructions above, User will be subject to penalties of Radio Law of Japan.

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-
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 - 4.3.2 EVMs are intended solely for use by technically qualified, professional electronics experts who are familiar with the dangers and application risks associated with handling electrical mechanical components, systems, and subsystems. User assumes all responsibility and liability for proper and safe handling and use of the EVM by User or its employees, affiliates, contractors or designees. User assumes all responsibility and liability to ensure that any interfaces (electronic and/or mechanical) between the EVM and any human body are designed with suitable isolation and means to safely limit accessible leakage currents to minimize the risk of electrical shock hazard. User assumes all responsibility and liability for any improper or unsafe handling or use of the EVM by User or its employees, affiliates, contractors or designees.
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