Application Brief

TPLD Ordering Process

Brandt Burgdorf

Introduction

Texas Instruments' Programmable Logic Devices (TPLD) are TI's newest and most advanced family of configurable logic devices available today. The TPLD devices leverage license free drag-and-drop configuration software, Interconnect Studio (ICS, click here to view), to make custom logic configuration quick and simple. TPLD devices provide designers access to both analog and digital design blocks within a single chip, allowing for the creation of a highly customized design in a fraction of the time and at much lower cost than a traditional ASIC. This application brief provides a detailed guide for the ordering process after a configuration is finalized.

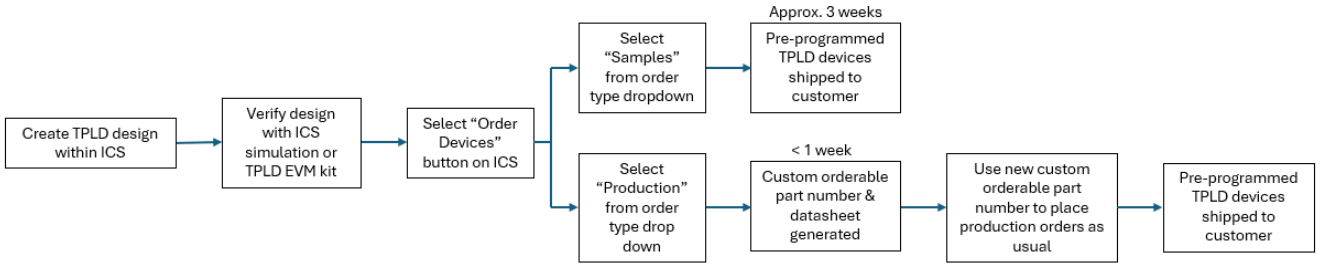


Figure 1. TPLD Ordering Flow Chart

Design and Simulation

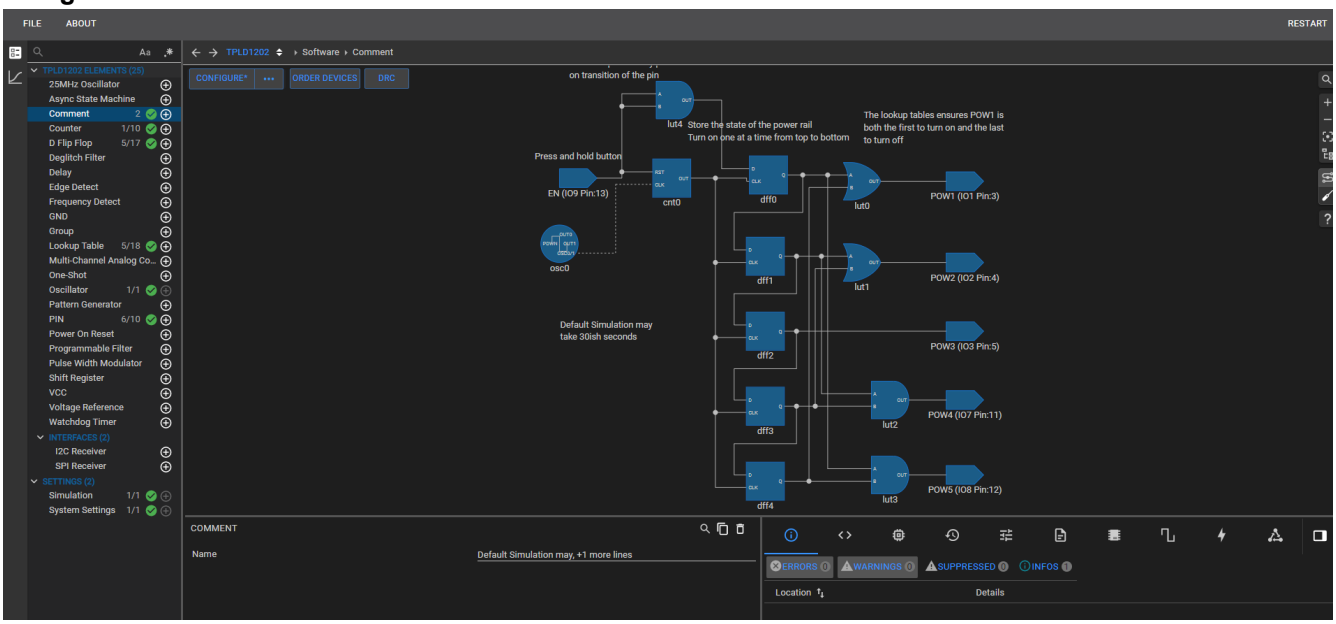


Figure 2. InterConnect Studio Design and Simulation Window

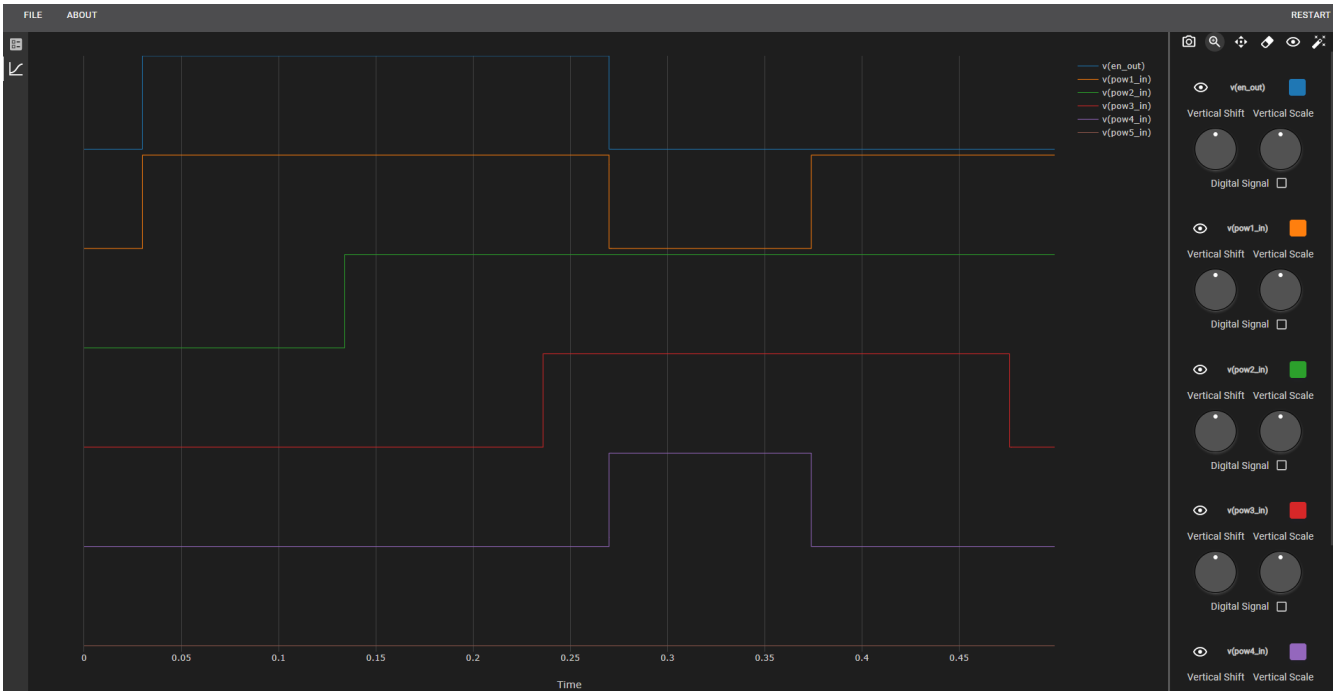


Figure 3. Title Here

Prior to ordering a TPLD device, first use the TPLD programming software (Interconnect Studio) to set the device's configuration. This software can be accessed as a cloud application found on TI.com (or as a standalone application available for download. Download InterConnect studio here.

When finalizing a design, it is recommended to both simulate your design within the InterConnect Studio (ICS) tool as well as with the TPLD-PROGRAM (click here to view) and TPLDXXXX-EVM kits (click to view here) to verify the TPLD design is functioning as desired. It is also recommended to test all TPLD designs on a pre-programmed chip, either obtained using the TPLD-PROGRAM and TPLDXXXX-EVM kits or through pre-programmed sample ordering process detailed in this document. Once verification is complete, submit theTPLD design to TI.

Submitting Designs from the Tool

There are two different options for obtaining pre-programmed TPLD units from Texas Instruments. The first option is to obtain pre-programmed samples for quantities ranging from 20 to 200 units*. The second option is to obtain production units of TPLD for quantities of 3000 units or more. Requests for either type of pre-programmed TPLD devices begins within InterConnect Studio. There are slight differences between the two ordering flows. The following sections outline each flow in detail.

Note

*For pre-programmed sample quantities exceeding 200 units, contact Texas Instruments or the assigned sales representative directly.

Pre-programmed Samples

The pre-programmed samples option offers a way to obtain programmed TPLD devices quickly and simply.While TPLD devices can be permanently programmed at the Engineers desk from the TPLD-PROGRAM and TPLDXXXX-EVM modules, it can be time consuming to create large batches of programmed devices by hand for prototyping purposes. Selecting *Samples* option for order type allows for the ordering of pre-programmed TPLD devices between 20 to 200 units*.

Note

*For pre-programmed sample quantities exceeding 200 units please contact Texas Instruments or your assigned sales representative directly.

Submit The Configuration

The ordering process begins by first clicking the *ORDER DEVICES* button found in the top left corner of the design window shown in Figure 4.

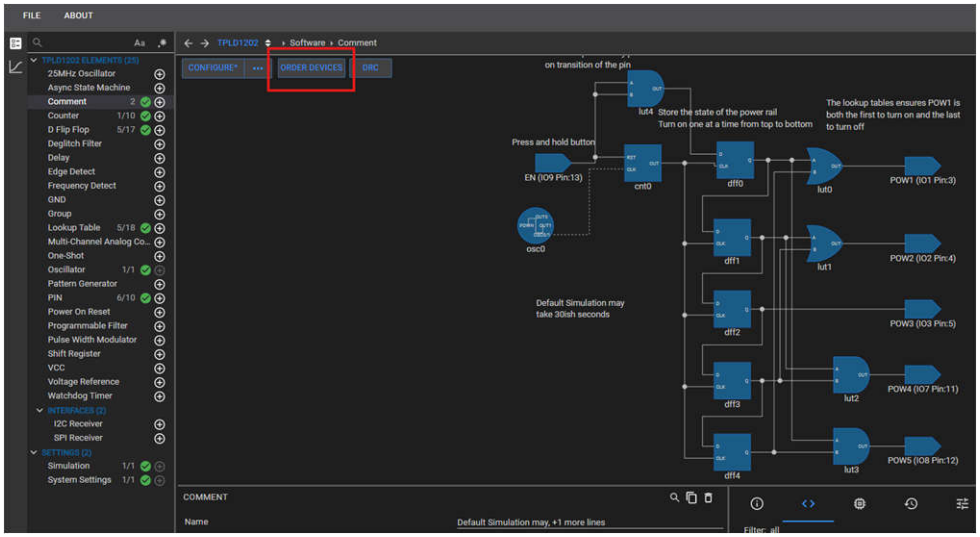


Figure 4. Location of *ORDER DEVICES* Button Within InterConnect Studio

Once *ORDER DEVICES* is selected, complete the device order form that displays on the screen marking *Order Type* as *Samples*. The request is then sent to Texas Instruments and reviewed. This form is shown in Figure 5.

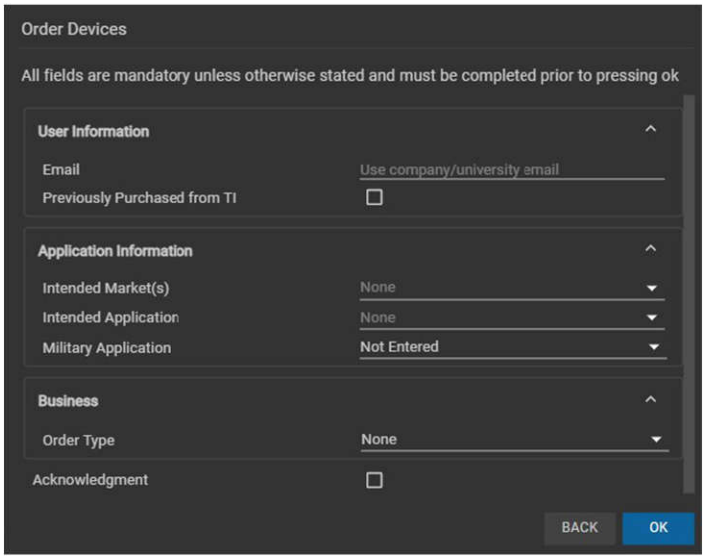


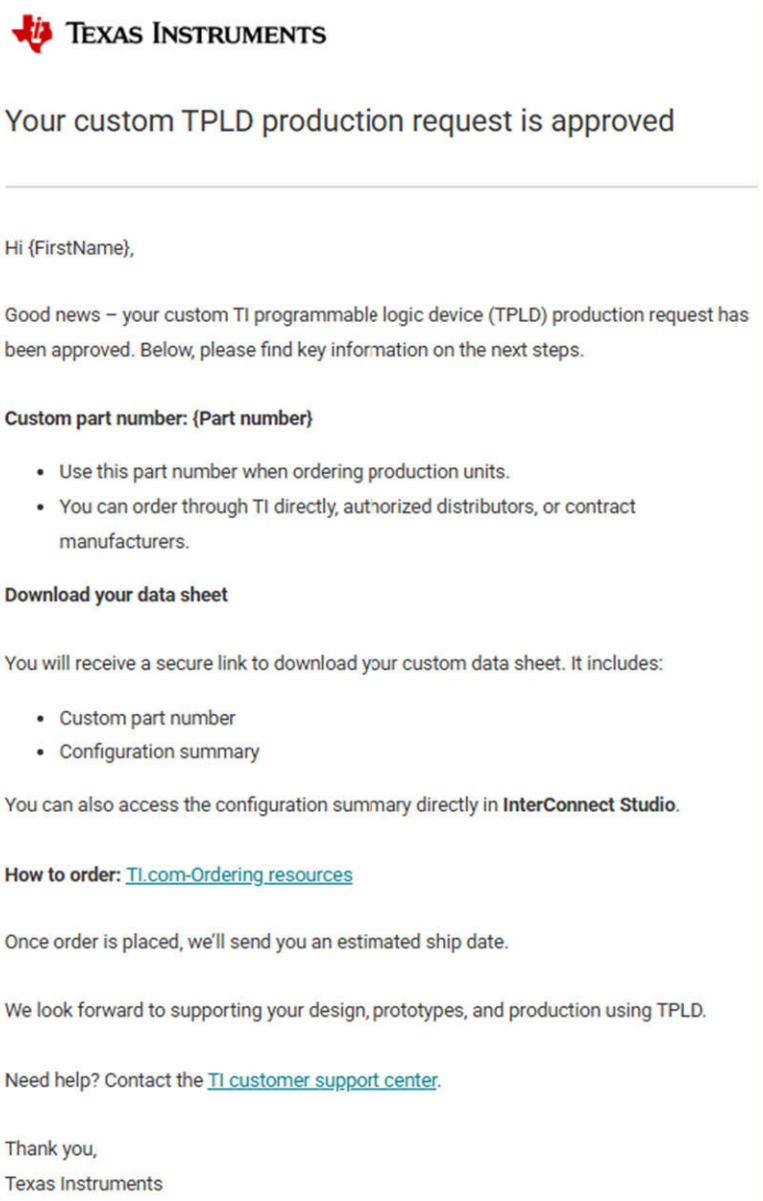
Figure 5. InterConnect Studio Order Devices Popup

After submitting the TPLD sample request, a confirmation email is generated and sent to the email address provided in the ordering form. An example confirmation email is shown in Figure 6.

Figure 6. Example TPLD Sample Request Email Notification

Receive Sample Request Approval

TPLD sample requests are approved within five business days. Upon approval, the requested quantity of TPLD devices specified within the form are programmed with the given design configuration. An automated approval email is sent to the email address specified on the ordering form, an example of this is shown in Figure 7. These pre-programmed devices are sent to the ordering address specified on the ordering form within four weeks after time of initial ordering.



Texas Instruments

Your custom TPLD production request is approved

Hi {FirstName},

Good news – your custom TI programmable logic device (TPLD) production request has been approved. Below, please find key information on the next steps.

Custom part number: {Part number}

- Use this part number when ordering production units.
- You can order through TI directly, authorized distributors, or contract manufacturers.

Download your data sheet

You will receive a secure link to download your custom data sheet. It includes:

- Custom part number
- Configuration summary

You can also access the configuration summary directly in **InterConnect Studio**.

How to order: TI.com-Ordering resources

Once order is placed, we'll send you an estimated ship date.

We look forward to supporting your design, prototypes, and production using TPLD.

Need help? Contact the TI customer support center.

Thank you,
Texas Instruments

Figure 7. Example TPLD Sample Approval Email Notification

This ordering option serves to streamline and simplify prototyping with TPLD devices. However, because this ordering method is intended for prototyping purposes and quantities below TPLD's minimum order quantity of 3000 units there is not a custom orderable part number or custom data sheet generated for these types of orders.

Production Material

If a quantity greater than 3000 units is required, then use the production order flow outlined within this section. Selecting the production order flow will also provide a custom datasheet and custom orderable part number for the specific TPLD configuration that is not available with pre-programmed sample order flow. Assuming that the configuration has been verified through testing, simulation, and prototyping, submit a production request.

Submit the Configuration

Begin by locating the *ORDER DEVICES* button located in the upper left corner of the design window found within InterConnect Studio. This is shown in Figure 8.

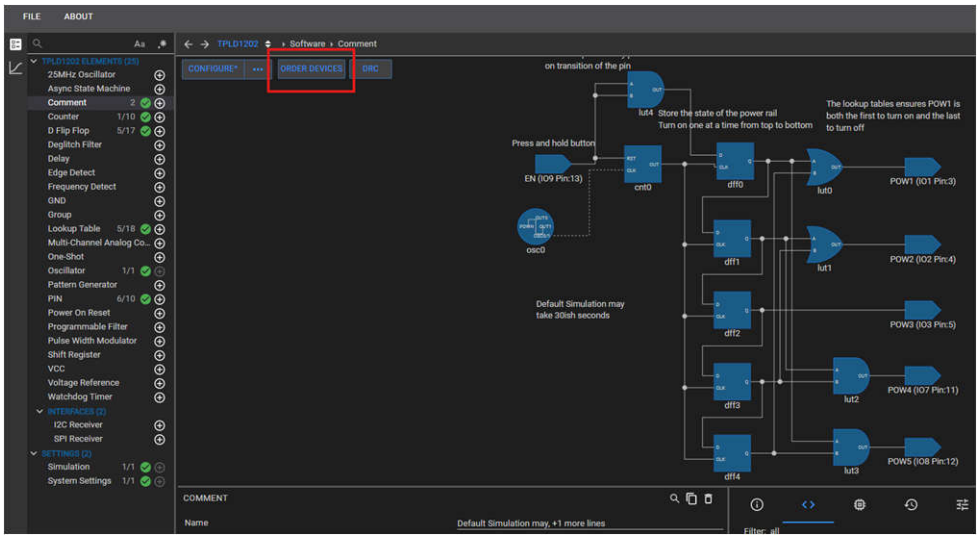


Figure 8. Location of ORDER DEVICES Button Within InterConnect Studio

Then, complete the required fields of entry found within the form being sure to select *Order Type* as *Production*. After the form has been filled out properly it can be submitted. An example of the order form is shown in Figure 9.

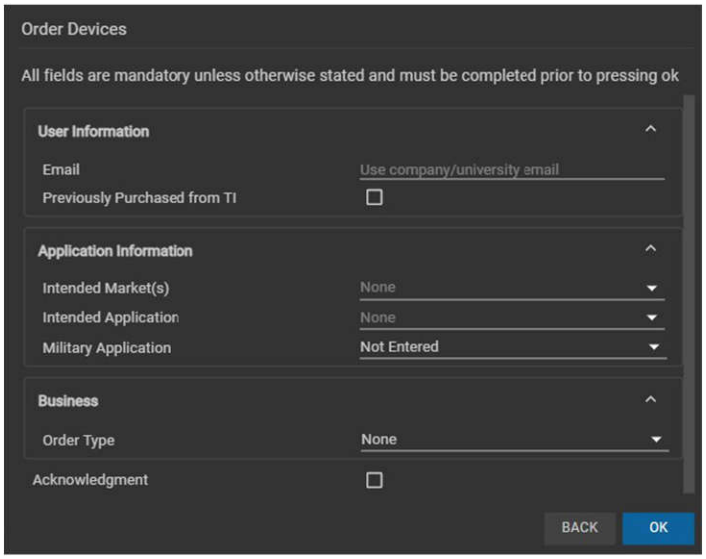
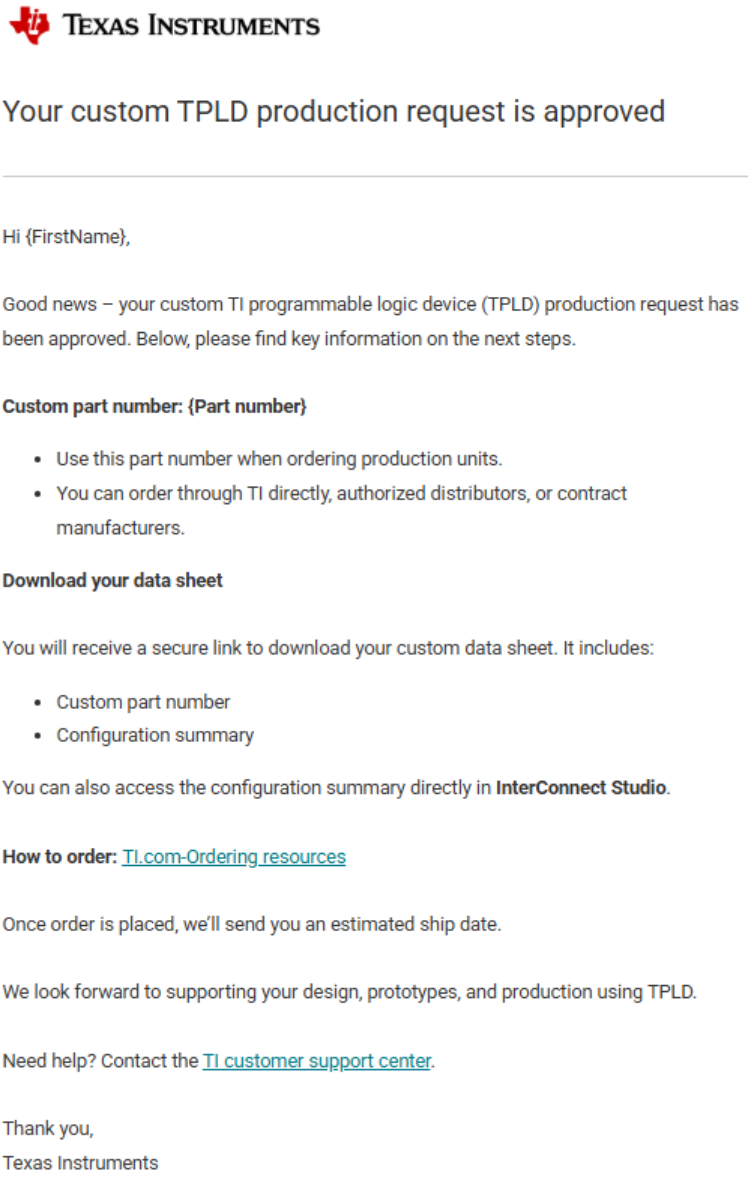


Figure 9. InterConnect Studio Order Devices Popup

Receive Custom Orderable Part Number and Custom Datasheet

After submitting the TPLD production request, a confirmation email is generated and sent to the email address provided in the ordering form. An example confirmation email is shown in Figure 10.



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You will receive a secure link to download your custom data sheet. It includes:

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How to order: TI.com-Ordering resources

Once order is placed, we'll send you an estimated ship date.

We look forward to supporting your design, prototypes, and production using TPLD.

Need help? Contact the TI customer support center.

Thank you,
Texas Instruments

Figure 10. Example TPLD Production Request Email Notification

Once the TPLD order form has been submitted, it takes five business days for the order form to be reviewed and approved by Texas Instruments. Assuming that it is approved, both a custom orderable part number and custom datasheet is supplied back to the email address of the original requester. An example of this is shown in Figure 11. The custom orderable part number is unique to the specific TPLD configuration in question. The datasheet supplied with the custom part number has general information regarding the specific TPLD device used as well as information specific to the configuration of the design.

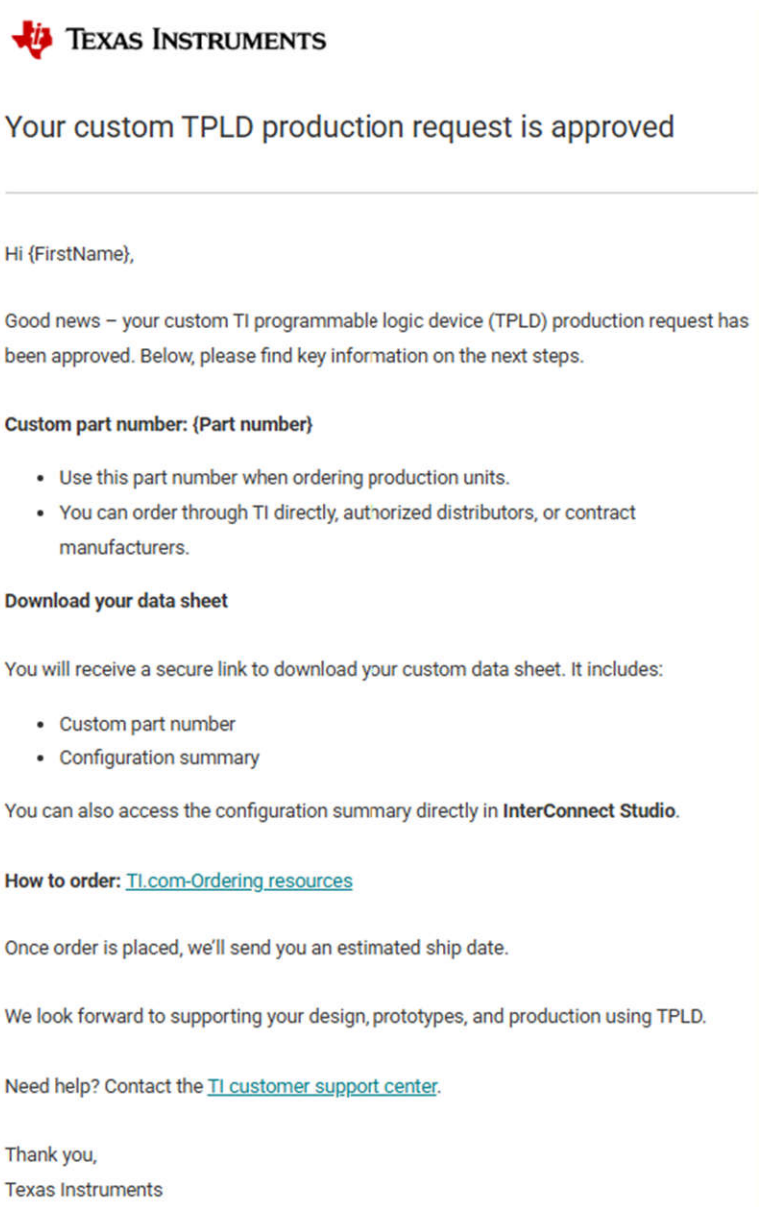

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Figure 11. Example TPLD Production Approval Email Notification

Authorize Third Party to Order TPLD Configuration (Optional)

Custom TPLD devices are only authorized to be ordered by the initial requesting company by default to protect the intellectual property of our customers. However, it is often the case that a third party, such as a contract manufacturer, requires the ability to order devices on behalf of customers. In this case, it is necessary to provide Texas Instruments with a letter of authorization (LOA) to grant this third party the ability to order devices. Texas Instruments does not have a standardized LOA format but any document with official company letterhead that is signed by a representative of said company suffices. After this LOA has been received, Texas Instruments adds the third party to the list of authorized users of the given TPLD design in question. For help with this process or submitting a LOA, please contact your assigned Technical Sales Representative.

Load Custom OPN into Ordering Software and Order Devices

Once the custom orderable part number has been received it can be treated the same as any other orderable part number from Texas Instruments. To order custom TPLD devices, upload the custom TPLD orderable part number into the ordering software and place orders as normal. This document serves as a detailed overview for the TPLD ordering process. This document outlines the different procedures for ordering pre-programmed samples and production devices for the TPLD family of parts. For any questions or further clarification please feel free to visit our E2E forums page (link to Texas Instrument's E2E forum here).

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