

# Embedded Target for the TI TMS320C000 DSP Platform Release Notes

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The “Embedded Target for the TI TMS320C2000 DSP Platform 1.1 Release Notes” on page 1-1 describe the following topics:

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The Embedded Target for the TI TMS320C000 DSP Platform Release Notes also provide information about the initial release of the product.

- “Embedded Target for the TI TMS320C2000 DSP Platform 1.0 Release Notes” on page 2-1

## **Printing the Release Notes**

If you would like to print the Release Notes, you can link to a PDF version.



## **1 Embedded Target for the TI TMS320C2000 DSP Platform 1.1 Release Notes**

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## New Features

This section summarizes the new features and enhancements introduced in the Embedded Target for the TI TMS320C2000 DSP Platform 1.1.

### New DMC Library

A new digital motor control (DMC) library has been added to support C28x boards. This library contains these blocks:

- Clarke Transformation — transforms three-phase into two-phase quadrature quantities
- Inverse Park Transformation — transforms rotating reference frame vectors to two-phase stationary reference frame
- Park Transformation — transforms two-phase stationary system vectors to rotating system vectors
- PID Controller — creates a digital PID controller
- Space Vector Generator — calculates duty ratios to generate stator reference voltage
- Speed Measurement — calculates motor speed

### New C28x Blocks

The following new blocks have been added to support C28x boards:

- C28x GPIO Digital Input — configures the General Purpose I/O pin registers for digital input
- C28x GPIO Digital Output — configures the General Purpose I/O pin registers for digital output
- C28x QEP — configures the quadrature pulse encoder circuit

### New C24x Blocks

The following new blocks have been added to support C24x boards:

- C24x GPIO Digital Input — configures the General Purpose I/O pin registers for digital input
- C24x GPIO Digital Output — configures the General Purpose I/O pin registers for digital output

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- C24x QEP — configures the quadrature pulse encoder circuit

## **Enhancements to Other Blocks**

The C24x and C28x ADC blocks have been enhanced by adding a triggering mode option which synchronizes the ADC with a PWM waveform generated by the same event manager module.

## **Major Bug Fixes**

The Embedded Target for the TI TMS320C2000 DSP Platform includes several bug fixes made since Version 1.0. This section describes the particularly important Version 1.1 bug fixes.

If you are viewing these Release Notes in PDF form, please refer to the HTML form of the Release Notes, using either the Help browser or the MathWorks Web site and use the link provided.



## **Known Documentation and Software Problems**

This section describes some known documentation and known software problems with this release of the Embedded Target for the TI TMS320C2000 DSP Platform.

If you are viewing these Release Notes in PDF form, please refer to the HTML form of the Release Notes, using either the Help browser or the MathWorks Web site and use the link provided.



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# Introduction to the Embedded Target for TI C2000

The Embedded Target for the TI TMS320C2000 DSP Platform 1.0 is a new product from The MathWorks that enables you to create, simulate, and download executable code to your C2000 DSP target board. The following eZdsp™ DSP board kits from Spectrum Digital are supported:

- TMS320F2812 eZdsp™ DSK — the F2812eZdsp DSP Starter Kit
- TMS320LF2407 eZdsp™ DSK — the LF2407eZdsp DSP Starter Kit

A number of demos, which you access from MATLAB, are also included with the product.

For more information about the software and hardware requirements and the capabilities of the Embedded Target for the TI TMS320C2000 DSP Platform refer to the documentation.

## Known Documentation and Software Problems

This section describes some known documentation and known software problems with this release of the Embedded Target for the TI TMS320C2000 DSP Platform.

### Reset Sequence

After using the runtime `Build` option to generate and build code for your application, you must perform the following sequence before you can run that code on your board. If you want to rerun your application manually once it has been generated, you must also use this procedure.

#### F2812 eZdsp

- 1 Reset the board CPU
- 2 Load your code onto the target
- 3 Run your code on the target

#### LF2407 eZdsp

- 1 Load your code onto the target
- 2 Reset the board CPU
- 3 Run your code on the target

