Embedded Target for the TI TMS320C2000™ DSP Platform Release Notes

The "Embedded Target for the TI TMS320C2000 DSP Platform 1.2.1 Release Notes" on page 1-1 describe the following topics:

- "New Features" on page 1-2
- "Known Documentation and Software Problems" on page 1-3

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

- "Embedded Target for the TI TMS320C2000 DSP Platform 1.2 Release Notes" on page 2-1
- "Embedded Target for the TI TMS320C2000 DSP Platform 1.1.1 Release Notes" on page 3-1
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Printing the Release Notes

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

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Embedded Target for the TI TMS320C2000 DSP Platform 1.2.1 Release Notes

New Features

This section instroduces the new features added in the Embedded Target for the TI TMS320C2000 DSP Platform 1.2.1 since the Version 1.2 release.

CAP Blocks

Two blocks for capturing transitions on the capture unit pins have been added — C24x CAP and C28x CAP.

Known Documentation and Software Problems

The MathWorks Web site includes a list of known software and documentation problems in Version 1.2.1.

If you are viewing these release notes in PDF form on the MathWorks Web site, please refer to the HTML form of the release notes on the MathWorks Web site and use the link provided.

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Embedded Target for the TI TMS320C2000 DSP Platform 1.2 Release Notes

New Features and Enhancements

This section instroduces the new features and enhancements added in the Embedded Target for the TI TMS320C2000 DSP Platform 1.2 since the Version 1.1.1 release.

RTDX

Two blocks for real-time data exchange (RTDX) support in generated code have been added — From RTDX and To RTDX. RTDX enables data exchange between the host, which hosts TI Code Composer Studio™ and the target, which hosts your DSP program.

VectorCAN

Blocks for VectorCAN and CAN message packing and unpacking have been added. VectorCAN blocks configure, read, and transmit CAN channels for use with Vector-Informatik drivers. CAN message packing blocks pack signals into CAN messages.

DC Motor Speed Control Demo

The new 2812 eZdsp DC Motor Speed Control demo requires Signal Processing Blockset.

Major Bug Fixes

The Embedded Target for the TI TMS320C2000 DSP Platform includes several bug fixes made since Version 1.1.1. This section describes a particularly important Version 1.2 bug fix.

To Memory Block and Contiguous Data

The To Memory block now verifies that data at its input port is contiguous.

Embedded Target for the TI TMS320C2000 DSP Platform 1.1.1 Release Notes

Major Bug Fixes

The Embedded Target for the TI TMS320C2000 DSP Platform includes several bug fixes made since Version 1.1. This section describes the particularly important Version 1.1.1 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.

Upgrading from an Earlier Release

This section describes an upgrade issue involved in moving from the Embedded Target for the TI TMS320C2000 DSP Platform 1.1 to Version 1.1.1.

Space Vector Generator Inputs Renamed

The input parameters to the Space Vector Generator block have been renamed from Va and Vb to Ua and Ub, respectively. This change matches the terminology used in Texas Instruments documentation.

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Embedded Target for the TI TMS320C2000 DSP Platform 1.1 Release Notes

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

• C24x QEP — configures the quadrature pulse encoder circuit

Enhancements to Other Blocks

The C24x and C28x ADC blcoks 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.

Embedded Target for the TI TMS320C2000 DSP Platform 1.0 Release Notes

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.