Real-Time Windows Target™ Release Notes

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Real-Time Windows Target™ Release Notes

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Contents

Summary by Version

This table provides quick access to what's new in each version. For an explanation of the table, and instructions for using these release notes, see "Using Release Notes" on page 2.

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
V3.8 (R2011b)	Yes Details	No	Bug Reports Includes fixes
V3.7 (R2011a)	Yes Details	Yes Summary	Bug Reports Includes fixes
V3.6 (R2010b)	Yes Details	No	Bug Reports Includes fixes
V3.5 (R2010a)	Yes Details	No	Bug Reports Includes fixes
V3.4 (R2009b)	Yes Details	No	Bug Reports Includes fixes
V3.3 (R2009a)	Yes Details	No	Bug Reports Includes fixes
V3.2 (R2008b)	Yes Details	No	Bug Reports Includes fixes
V3.1 (R2008a)	Yes Details	No	Bug Reports Includes fixes
V3.0 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V2.7 (R2007a)	Yes Details	No	Bug Reports Includes fixes
V2.6.2 (R2006b)	Yes Details	No	Bug Reports Includes fixes
V2.6.1 (R2006a)	No	No	Bug Reports
V2.6 (R14SP3)	Yes Details	No	Bug Reports

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
V2.5.2 (R14SP2)	Yes Details	Yes Summary	Bug Reports
V2.5.1 (R14SP1)	Yes Details	Yes Summary	No bug fixes
V2.5 (R14)	Yes Details	Yes Summary	Fixed Bugs
V2.2 (R13)	Yes Details	No	No bug fixes
V2.0 (R12)	Yes Details	Yes Summary	Fixed Bugs

Using Release Notes

Use release notes when upgrading to a newer version to learn about:

- New features
- Changes
- Potential impact on your existing files and practices

Review the release notes for other MathWorks® products required for this product (for example, MATLAB® or Simulink®). Determine if enhancements, bugs, or compatibility considerations in other products impact you.

If you are upgrading from a software version other than the most recent one, review the current release notes and all interim versions. For example, when you upgrade from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

What Is in the Release Notes

New Features and Changes

- New functionality

- Changes to existing functionality

Version Compatibility Considerations

When a new feature or change introduces a reported incompatibility between versions, the **Compatibility Considerations** subsection explains the impact.

Compatibility issues reported after the product release appear under Bug Reports at the MathWorks Web site. Bug fixes can sometimes result in incompatibilities, so review the fixed bugs in Bug Reports for any compatibility impact.

Fixed Bugs and Known Problems

MathWorks offers a user-searchable Bug Reports database so you can view Bug Reports. The development team updates this database at release time and as more information becomes available. Bug Reports include provisions for any known workarounds or file replacements. Information is available for bugs existing in or fixed in Release 14SP2 or later. Information is not available for all bugs in earlier releases.

Access Bug Reports using your MathWorks Account.

Documentation on the MathWorks Web Site

Related documentation is available on `mathworks.com` for the latest release and for previous releases:

- Latest product documentation
- Archived documentation

Version 3.8 (R2011b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.8 (R2011b).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports Includes fixes

Support for National Instruments PXIe-6251 and PXIe-6259 boards

The V3.8 block library supports the National Instruments PXIe-6251 and PXIe-6259 boards for the PXI Express bus.

Version 3.7 (R2011a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.7 (R2011a).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

Change in Packet Input and Output Blocks

The Packet Input and Packet Output blocks now let you choose the order in which you can send multibyte values. You can choose little-endian or big-endian format. In previous releases, you were able to send and receive multibyte values in little-endian format only.

Open Watcom Upgrade to 1.9

The Real-Time Windows Target™ software now uses Version 1.9 of the Open Watcom C/C++ Compiler.

Real-Time Windows Target Product Now in Simulink Start, Help, and Demos Category

The Simulink category now contains the Real-Time Windows Target software product.

Compatibility Considerations

This change impacts you in the following ways:

- Finding and viewing this product through the MATLAB Desktop **Start** button and in the Help browser **Contents** and **Demos** panes

- Using the `demo` command to access the product demos

Version 3.6 (R2010b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.6 (R2010b).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

Support for Simscape and SimDriveline Environments

Real-Time Windows Target software now enables you to generate and download models created or edited with the Simscape™ and SimDriveline™ environments.

Enhanced Serial Port Drivers

- The serial port drivers for the Packet Output and Stream Output blocks now support higher sample rates (up to 10 KHz). In previous releases, these blocks supported sample rates up to 500 Hz.
- The serial port drivers for the Packet Output and Packet Input blocks can now support any baud rate. You can enter a baud rate using the `Other` option. In previous releases, these drivers supported baud rates up to 256000.

Version 3.5 (R2010a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.5 (R2010a).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

Support for National Instruments PCI/PXI-660x Boards

The Real-Time Windows Target product now supports the National Instruments® PCI/PXI-660x boards.

Change in UDP Packet and Stream Blocks

The UDP Packet and Stream blocks now require port addresses to be in decimal format. In previous releases. these blocks required port addresses to be in Hex format.

Version 3.4 (R2009b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.4 (R2009b).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

Support for File I/O Using Packet and Stream I/O Blocks

The Packet Input, Packet Output, Stream Input, and Stream Output blocks now support a file I/O driver. To access the driver, click the **Install new board** button of one of these blocks and select **Standard Devices > File**. This driver reads and writes data from/to files on a local file system. For example, you can use this driver to import arbitrarily formatted data from a file without recompiling the model. In previous releases, importing such data with the From Workspace block required model recompilation.

New PWM Frequency and Duty Measurement Demo

The Real-Time Windows Target software now includes a demo that shows how to measure pulse width measurement (PWM) signal frequency and duty. See the PWM Frequency and Duty Measurement demo.

Support for Pulse Width Measurement with Counter Input Block

The Real-Time Windows Target software now supports pulse width measurements. The Counter Input block has the following new options to support this ability:

- **Clock input source**
  - `internal clock`
- **Gate input functionality**
  - `enable when high, latch & reset on edge`
  - `enable when low, latch & reset on edge`

The National Instruments PCI/PXI-60xx and National Instruments PCI/PXI-62xx drivers have been enhanced to work with this block for pulse width measurement.

Open Watcom Upgrade to 1.8

The Real-Time Windows Target software now uses Version 1.8 of the Open Watcom C/C++ Compiler.

Version 3.3 (R2009a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.3 (R2009a).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

- "Support for Vector CAN Boards " on page 11
- "Support for Counter and Encoder Blocks for National Instruments Boards " on page 11

Support for Vector CAN Boards

The Real-Time Windows Target product now supports Vector Informatik CAN devices supported by the Vector XL driver library, including CANcardX, CANcardXL, CANboardXL, and CANboardXL pxi.

Support for Counter and Encoder Blocks for National Instruments Boards

Counter and encoder support have been added for the following National Instruments boards:

- National Instruments boards:
  - PCI-6220
  - PCI-6221
  - PCI-6221 37-pin
  - PCI-6224
  - PCI-6225
  - PCI-6229
  - PCI-6250
  - PCI-6251

- PCI-6254
- PCI-6259
- PCI-6280
- PCI-6281
- PCI-6284
- PCI-6289
- PCIe-6251
- PCIe-6259
- PXI-6220
- PXI-6221
- PXI-6224
- PXI-6225
- PXI-6229
- PXI-6250
- PXI-6251
- PXI-6254
- PXI-6259
- PXI-6280
- PXI-6281
- PXI-6284
- PXI-6289

Version 3.2 (R2008b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.2 (R2008b).

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

New features and changes introduced in this version are:

Support for Model Referencing

The Real-Time Windows Target product now supports model referencing. See "Model Referencing" in the *Real-Time Windows Target User's Guide* guide.

Real-Time Workshop Embedded Coder Support

The Real-Time Windows Target product now supports the Real-Time Workshop® Embedded Coder™ product. This feature requires the Real-Time Workshop Embedded Coder software.

For information on how to configure your Real-Time Windows Target model to work with the Real-Time Workshop Embedded Coder software, see "Entering Simulation Parameters" in the *Real-Time Workshop® User's Guide*.

Version 3.1 (R2008a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.1 (R2008a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

New Features and Changes

Microsoft Windows 2000 Operating System Not Supported

As of R2008a, Real-Time Windows Target does not support the Microsoft® Windows® 2000 operating system. Real-Time Windows Target supports only the Microsoft Windows XP 32-bit operating system and the Microsoft Windows Vista ™ 32-bit operating system.

Increased Memory for Local Variables

The memory available for storing local variables has increased from 4KB to 1MB. The increased memory better supports blocks like the Lookup Table block, Embedded MATLAB Function block, and others with large local data requirements.

Additional Supported I/O Boards

The 3.1 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- Measurement Computing™ boards:
  - PCI-DDA02/12
  - PCI-DDA04/12
  - PCI-DDA08/12
  - PCI-DDA02/16
  - PCI-DDA04/16

- PCI-DDA08/16

For a complete list of supported I/O boards, see Real-Time Windows Target Supported I/O Boards.

Documentation Changes

The Real-Time Windows Target documentation now includes a separate Reference Manual, which contains:

- The information on blocks and parameters that previously appeared in the User's Guide
- Documentation of the `rtwinconfigset` function, which previously had no reference page

See *Real-Time Windows Target Reference*.

"What's This?" Context-Sensitive Help Available for Simulink Configuration Parameters Dialog

R2008a introduces "What's This?" context-sensitive help for parameters that appear in the Simulink Configuration Parameters dialog. This feature provides quick access to a detailed description of the parameters, saving you the time it would take to find the information in the Help browser.

To use the "What's This?" help, do the following:

1. Place your cursor over the label of a parameter.
2. Right-click. A **What's This?** context menu appears.

   For example, the following figure shows the **What's This?** context menu appearing after a right-click on the **Start time** parameter in the **Solver** pane.

3 Click **What's This?** A context-sensitive help window appears showing a description of the parameter.

Version 3.0 (R2007b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 3.0 (R2007b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports

New Features and Changes

I/O Blocks Support Non-Double Data Types to Conform to Simulink Software

Previously, all Real-Time Windows Target data input and output was of type `double`. Input blocks could produce only `double` data, and Output blocks could accept only `double` data. In R2007b, every Input and Output block supports all Simulink datatypes. See "Blocks — Alphabetical List" for details about each block.

New Blocks and Drivers Provide Serial Port and UDP Support

Four new blocks, Packet Input, Packet Output, Stream Input, and Stream Output provide serial port and UDP support. For serial port support, use the blocks with the new driver **Standard Devices > Serial Port**. For UDP support, use the blocks with the new driver **Standard Devices > UDP Protocol**. See the documentation of the new blocks in "Blocks — Alphabetical List".

New Frequency Output Block Is Available

A Frequency Output block is available in the Real-Time Windows Target library. The block generates a pulse-width-modulated square wave that alternates between low (0) and high (1) with a specified frequency and duty cycle. For details, see the Frequency Output block documentation.

New Counter Input Block Demo

The Real-Time Windows Target software now includes a demo that shows the operation of the Counter Input block. To see this demo, type `rtcounter` in the Matlab Command Window, or launch MATLAB Online Help and choose **Real-Time Windows Target > Demos > Real-Time Counter**.

Open Watcom Version 1.6 Is the Standard Bundled Compiler

The Real-Time Windows Target software now uses Version 1.6 of the Open Watcom C/C++ Compiler. The Open Watcom source code is available under the terms of the Open Watcom License. For more information, visit http://www.openwatcom.org.

Link and Target Products Regrouped in New Start, Help, and Demos Category

A new product category, Links and Targets, now contains all MathWorks software products that link, target, or cosimulate code.

Compatibility Considerations

This change impacts you in the following ways:

- Finding and viewing these products through the MATLAB Desktop **Start** button and in the Help browser **Contents** and **Demos** panes.
- Using the `demo` command to access the product demos.

For more about this new product category, see "Demos and Help Browser Contents Now Include New Category for Links and Targets", in the *MATLAB Release Notes*.

Version 2.7 (R2007a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.7 (R2007a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

New Features and Changes

Enhanced External Mode Communication Protocol

The External Mode communication protocol has been reworked and streamlined. The upgrade increases communication reliability and removes some capacity-related restrictions. Existing applications do not require any changes in order to take advantage of these improvements.

Additional Supported I/O Boards

The V2.7 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- Measurement Computing boards:
  - PC104-DI48
  - PCI-DAS6013
  - PCI-DAS6014
  - PCI-DAS6023
  - PCI-DAS6025
  - PCI-DAS6030
  - PCI-DAS6031
  - PCI-DAS6032
  - PCI-DAS6033

- PCI-DAS6034
- PCI-DAS6035
- PCI-DAS6036
- PCI-DAS6040
- PCI-DAS6052
- PCI-DAS6070
- PCI-DAS6071
- PCI-DAS6402-12
- PCI-DAS6402-16
- PCI-DIO24LP
- PCI-DIO24S
- PCI-PDISO16
- PCI-PDISO8
- PCIDAS64-M1-16
- PCIDAS64-M2-16
- PCIDAS64-M3-16

For a complete list of supported I/O boards, see Real-Time Windows Target Supported I/O Boards.

Version 2.6.2 (R2006b) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.6.2 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

New Features and Changes

Additional Supported I/O Boards

The V2.6.2 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- National Instruments boards:
  - M-series boards for analog and digital I/O, but not for counters
  - PCI-6220
  - PCI-6221
  - PCI-6221 37-pin
  - PCI-6224
  - PCI-6225
  - PCI-6229
  - PCI-6250
  - PCI-6251
  - PCI-6254
  - PCI-6259
  - PCI-6280
  - PCI-6281

  - PCI-6284
  - PCI-6289
  - PCIe-6251
  - PCIe-6259
  - PXI-6220
  - PXI-6221
  - PXI-6224
  - PXI-6225
  - PXI-6229
  - PXI-6250
  - PXI-6251
  - PXI-6254
  - PXI-6259
  - PXI-6280
  - PXI-6281
  - PXI-6284
  - PXI-6289
- Humusoft® boards:
  - AD622
  - MF624

For a complete list of supported I/O boards, see Real-Time Windows Target Supported I/O Boards.

Version 2.6.1 (R2006a) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.6.1 (R2006a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
No	No	Bug Reports

Version 2.6 (R14SP3) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.6 (R14SP3):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports

New Features and Changes

C++ Code Generation

Version 2.6 supports generating C++ code, which previous versions did not.

Version 2.5.2 (R14SP2) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.5.2 (R14SP2):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports

New Features and Changes

Bidirectional Counters

Version 2.5.2 supports bidirectional counters for National Instruments 60XX and 67XX boards.

Compatibility Considerations

C++ Code Generation

Although Real-Time Workshop software Version 6.2 supports generating C++ code, Real-Time Windows Target software Version 2.5.2 does not.

Version 2.5.1 (R14SP1) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.5.1 (R14SP1):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	No bug fixes

New Features and Changes

Additional Supported I/O Boards

The V2.5.1 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- National Instruments boards:
  - PC-DIO-96PnP
  - PCI-6503
  - PCI-6711
  - PCI-6713
  - PCI-6731
  - PCI-6733
  - PCI-DIO-96
  - PXI-6508
  - PXI-6711
  - PXI-6713
  - PXI-6733

Compatibility Considerations

Techniques for Pausing Simulation

In V2.5.1, opening a source block dialog box during simulation causes simulation to pause. You can edit parameter values while simulation is paused. Simulation remains paused as long as the dialog remains open. When you close the dialog box, the changes take effect simulation resumes.

Version 2.5 (R14) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.5 (R14):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Fixed Bugs

New Features and Changes

Updated Compiler Support

In V2.5, Real-Time Windows Target applications are compiled with the Open Watcom C/C++ compiler. For your convenience, this compiler is shipped with the Real-Time Windows Target software. Third-party compilers are no longer necessary.

Default Configuration Set

Version 2.5 provides a default configuration set. This configuration set quickly configures a Simulink model for default Real-Time Windows Target behavior. See the Simulink documentation for additional information on configuration sets.

SimMechanics Support

Real-Time Windows Target software Version 2.5 supports SimMechanics.

USB Joystick Support

In V2.5, the Microsoft Windows Joystick driver supports USB joysticks, including force-feedback joysticks.

Additional Supported I/O Boards

The V2.5 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- Humusoft boards:
  - AD612
  - MF614
- Meilhaus® Electronic boards:
  - ME-2000
  - ME-2600
- National Instruments boards:
  - DAQCard-6036E
  - PCI-6013
  - PCI-6014
  - PCI-6036E
  - PCI-6703
  - PCI-6704
  - PXI-6704

Compatibility Considerations

System Target File Name

In V2.5 the system target file name was changed from `rtwintmf` to `rtwin.tmf`. Using the Simulink model **Configuration Parameters** dialog box, you should reconfigure existing Real-Time Windows Target models before building them.

Fixed Bugs

Version 2.5 includes some bug fixes that are described at Fixed Bugs.

Version 2.2 (R13) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.2 (R13):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	No bug fixes

New Features and Changes

Visual C/C++ Support

V2.2 supports Microsoft Visual C/C++® Version 7.0.

Counter Input and Encoder Input Blocks

The V2.2 documentation includes a description of the Counter Input block and the Encoder Input block. These Real-Time Windows Target blocks allow you to select and connect specific counter and encoder input channels to your Simulink model.

Additional Supported I/O Boards

The V2.2 I/O library supports I/O boards in addition to those previously documented. See the Real-Time Windows Target documentation

Version 2.0 (R12) Real-Time Windows Target Software

This table summarizes what's new and changed in Version 2.0 (R12):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Fixed Bugs

New Features and Changes

I/O Device Driver Architecture

Version 2.0 includes a new I/O device driver architecture that simplifies the use of I/O blocks in Simulink block diagrams. After installing a new I/O board in your PC, you place a device driver block in your model and specify board-specific settings (e.g., board address) for this board.

Once you have added a new I/O board to your PC and you have used the device driver dialog box to specify board information, the board information is retained for future sessions. When you add additional blocks, you select an I/O board from a list of installed boards. You do not have to re-enter the same board information for each driver block.

You can use multiple I/O boards in your computer. When doing so, the driver blocks show a list of installed boards for you to choose. This reduces the need to search through a growing list of device drivers.

New I/O drivers allow you to use either normalized units for analog inputs and outputs, or allow you to directly specify units as voltage.

I/O driver blocks now provide a separate I/O block for digital inputs, digital outputs, analog inputs, and analog outputs. This avoids any confusing signal indexing required to specify a combination of analog and digital I/O.

C Compiler Support

Version 2.0 supports Microsoft Visual C/C++ Version 5.0 and 6.0.

Additional Supported I/O Boards

The V2.0 I/O library supports these boards in addition to those previously documented in Real-Time Windows Target release notes and documentation:

- ComputerBoards (now Measurement Computing) boards
  - PCI-DAS1000
  - PCI-DAS1001
  - PCI-DAS1002
  - PCI-DAS1200
  - PCI-DAS1200/JR
  - PCI-DAS1602/12
  - PCI-DAS1602/16
  - PCI-DAS1602/16-JR
  - PCM-DAC08
  - PCM-DAS16S/330
  - PCM-DAS16D/12
  - PCM-DAS16S/12
  - PCM-DAS16D/16
  - PCM-DAS16S/16
  - CIO-QUAD02
  - CIO-QUAD04
- National Instruments boards
  - Lab-PC-1200
  - Lab-PC-1200AI
  - PCI-1200
  - PXI-6025E
  - PXI-6031E
  - PXI-6040E

  - PXI-6052E
  - PXI-6070E
  - PXI-6071E

- Technology 80 board:
  - Technology 80 5312B

Compatibility Considerations

Reinstall the Real-Time Windows Target Kernel

When upgrading from an earlier release, first uninstall the Real-Time Windows Target kernel. In the MATLAB Command Window, type

```
rtwintgt -uninstall
```

After you install Real-Time Windows Target software Version 2.0, install the new Real-Time Windows Target kernel. In the MATLAB Command Window, type:

```
rtwintgt -install
```

Depending on which version of Windows you are using on your PC, you may need to reboot your PC before using the Real-Time Windows Target software. If a reboot is required, a message appears indicating a reboot is needed.

Enter New External Mode Interface Filename

The name of the external mode interface file was changed from `win_tgt` to `rtwinext`. If you create a new Simulink model, the new filename is entered correctly. If you have a Simulink model that used Real-Time Windows Target software Versions 1.0 or 1.5, you need to change the filename using the following procedure:

1. In the Simulink window, from the **Tools** menu, click **External mode control panel**.
2. On the External Mode Control Panel dialog box, click the **Target interface** button.

3 In the External Target Interface dialog box, and in the **MEX-file for external mode** box, enter:

```
rtwinext
```

4 Click **OK**.

Remove I/O Adapter Blocks from Your Simulink Model

I/O Adapter blocks have been eliminated from Real-Time Windows Target software Version 2.0. You need to remove all I/O Adapter blocks from your Simulink model. Before removing these blocks, we recommend that you record board and connectivity information.

You now enter specific board information in the individual driver blocks. However, you only have to do this once. After entering information in the first block, you can select your board from a pull-down list in subsequent blocks.

Replace I/O Driver Blocks in Your Simulink Model

Real-Time Windows Target software Versions 1.0 and 1.5 had only two driver blocks: RT Input and RT Output. In Real-Time Windows Target software Version 2.0, the drivers are divided into Analog Input (A/D), Analog Output (D/A), Digital Input, Digital Output, and others.

Remove all Real-Time Windows Target software Version 1.0 and 1.5 blocks from your Simulink model and replace them with Version 2.0 blocks. Replace RT Input blocks with Analog Input and Digital Input blocks, and replace RT Output blocks with Analog Output and Digital Output blocks. If you had a block with both analog input and digital input, you must replace this block with two new blocks.

Fixed Bugs

External Mode Interface

Minor changes and bug fixes have been made to the V2.0 external mode interface. Data is displayed at the end of a simulation even when the number of points collected differs from the specified buffer size.

Compatibility Summary for Real-Time Windows Target Software

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

Version (Release)	Version Compatibility Considerations
Latest Version V3.8 (R2011b)	None
V3.7 (R2011a)	See **Compatibility Considerations** for this new feature or change: • "Real-Time Windows Target Product Now in Simulink Start, Help, and Demos Category" on page 5
V3.6 (R2010b)	None
V3.5 (R2010a)	None
V3.4 (R2009b)	None
V3.2 (R2009a)	None
V3.2 (R2008b)	None
V3.1 (R2008a)	None
V3.0 (R2007b)	See **Compatibility Considerations** for this new feature or change: • Link and Target Products Regrouped in New Start, Help, and Demos Category
V2.7 (R2007a)	None
V2.6.2 (R2006b)	None
V2.6.1 (R2006a)	None
V2.6 (R14SP3)	None

Version (Release)	Version Compatibility Considerations
V2.5.2 (R14SP2)	See **Compatibility Considerations** for this new feature or change: • C++ Code Generation
V2.5.1 (R14SP1)	See **Compatibility Considerations** for this new feature or change: • Techniques for Pausing Simulation
V2.5 (R14)	See **Compatibility Considerations** for this new feature or change: • System Target File Name
V2.2 (R13)	None
V2.0 (R12)	See **Compatibility Considerations** for each of these new features or changes: • Reinstall the Real-Time Windows Kernel • Enter New External Mode Interface Filename • Remove I/O Adapter Blocks from Your Simulink Model • Replace I/O Driver Blocks in Your Simulink Model