MATLAB® Builder™ EX Release Notes

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www.mathworks.com	Web
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service@mathworks.com	Order status, license renewals, passcodes
info@mathworks.com	Sales, pricing, and general information

508-647-7000 (Phone)

508-647-7001 (Fax)

The MathWorks, Inc.
3 Apple Hill Drive
Natick, MA 01760-2098

For contact information about worldwide offices, see the MathWorks Web site.

MATLAB® Builder™ EX Release Notes

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Summary by Version

This table provides quick access to what's new in each version. For clarification, see "Using Release Notes" on page 2.

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Latest Version V2.0 (R2011a)	Yes Details	No	Bug Reports Includes fixes
V1.3.1 (R2010bSP1)	No	No	Bug Reports Includes fixes
V1.3 (R2010b)	Yes Details	No	Bug Reports Includes fixes
V1.2.15 (R2010a)	Yes Details	No	Bug Reports Includes fixes
V1.2.14 (R2009bSP1)	No	No	Bug Reports Includes fixes
V1.2.13 (R2009b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V1.2.12 (R2009a)	Yes Details	No	Bug Reports Includes fixes
V1.2.11 (R2008b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V1.2.10 (R2008a)	No	No	Bug Reports Includes fixes
V1.2.9 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V1.2.8 (R2007a)	Yes Details	No	Bug Reports Includes fixes
V1.2.7 (R2006b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V1.2.6 (R2006a)	No	No	Bug Reports Includes fixes

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
V1.2.5 (R14SP3)	No	No	Bug Reports Includes fixes
V1.2.4 (R14SP2)	No	No	Fixed bugs
V1.2.2 (R14SP1)	No	No	Fixed bugs
V1.2.1 (R14+)	No	No	Fixed bugs
V1.2 (R14)	Yes Details	Yes Summary	No
V1.1 (R13)	Yes Details	No	No

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 2.0 (R2011a) MATLAB Builder EX Software

This table summarizes what's new in Version 2.0 (R2011a):

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

New features and changes introduced in this version are:

One-Click Macro Generation with Redesigned Function Wizard

Create macros with a single mouse click using the newly redesigned MATLAB® Builder™ EX Function Wizard.

In previous versions of the product, creating macros from MATLAB functions using Microsoft® Excel® was a multistep, often cumbersome process. Often, this process involved assistance from an Excel® developer. The new workflow can be easily performed by an end user.

See "Executing Functions and Creating Macros Using the Function Wizard" for a description of the streamlined macro creation workflow in the *MATLAB Builder EX User's Guide*.

Automatic Generation of XLA Add-In

Deployable functions now come packaged with the `.xla` (add-in) file in the `distrib` folder, ready for immediate adding to your Excel sheet.

In previous releases of MATLAB Builder EX, you had to perform several steps to create an Microsoft Excel-compatible add-in from your MATLAB function.

See "Getting Started" in the *MATLAB Builder EX User's Guide* for the newly designed workflow and tutorial.

Prototyping and Source Code Debugging of MATLAB functions

R2011a introduces a new prototyping and debugging feature in the newly redesigned Function Wizard. You can now develop, test, and debug your MATLAB code before you integrate it with your enterprise application.

This feature allows you to more easily detect and diagnose problems and potential issues with your code before it is deployed, saving both development and end-user cost.

For information about this newly designed workflow, see Function Prototyping and Debugging in "Microsoft Excel Add-In Creation, Function Execution, and Deployment" in the *MATLAB Builder EX User's Guide*.

Empty Cell Value Control

In previous releases, when ranges of empty cells in Excel sheets were passed to MATLAB Builder EX components, they were automatically converted to zeros.

Beginning in this release, you can specify how MATLAB Builder EX processes empty cells. This approach makes assigning undefined or unrepresented (NaN, for example) data values to such cells more convenient.

Administrative Rights No Longer Needed to Deploy Add-Ins

When you deploy a Microsoft Excel add-in, you have the option of specifying that the component be registered to the current user of the computer, rather than administrator (the previous default). See "Add-In and COM Component Registration" in the *MATLAB Builder EX User's Guide* for details.

New Video Demos Available

Watch new videos to learn more about tasks you perform with the redesigned Function Wizard using MATLAB Builder EX.

Local Worker Support for Parallel Computing Toolbox Applications

MATLAB® Compiler™ and the builders now support local workers in Parallel Computing Toolbox™ applications.

For information about this feature, see "Using a Local Scheduler" for general information on Local Workers. Also, see "Exporting and Importing Configurations" for information on working with compilable PCT applications, in the *Parallel Computing Toolbox User's Guide*.

Version 1.3.1 (R2010bSP1) MATLAB Builder EX Software

This table summarizes what's new in Version 1.3.1 (R2010bSP1):

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

Version 1.3 (R2010b) MATLAB Builder EX Software

This table summarizes what's new in Version 1.3 (R2010b):

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

New features and changes introduced in this version are:

Microsoft Office 2010 Excel Support

MATLAB Builder EX supports the Microsoft® Office 2010 version (both 32 and 64-bit versions) of Microsoft Excel.

Support for Microsoft Visual Studio 2010 Added

This release adds support for Microsoft® Visual Studio® software on both 32-bit and 64-bit systems. See the "Installation and Configuration" chapter in the *MATLAB Compiler User's Guide* for more information.

Include the MCR Installer from a Link on Your Local Network

This feature lets you add a link to an MCR Installer residing on a local area network. Adding this link allows you to invoke the installer over the network, as opposed to copying the installer physically into each deployable package.

See "Packaging Your Deployment Application (Optional)" in the *MATLAB Compiler User's Guide*, or in your respective Builder product User's Guide, for more details.

Version 1.2.15 (R2010a) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.15 (R2010a):

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

New features and changes introduced in this version are:

Deployment Tool Now Available from Command Line

You can now invoke the Deployment Tool GUI from the command line. See "Using the Deployment Tool from the Command Line" in the *MATLAB Compiler User's Guide* for more information.

Version 1.2.14 (R2009bSP1) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.14 (R2009bSP1):

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

As described in the MATLAB Release Notes, the version number of the MATLAB® Compiler Runtime (MCR) in release R2009bSP1 is different from the MCR version number in release R2009b.

For details about MCR version numbers and corresponding MATLAB releases, see http://www.mathworks.com/support/solutions/en/data/1-4GSNCF/?solution=1-4GSNCF.

Version 1.2.13 (R2009b) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.13 (R2009b):

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

New features and changes introduced in this version are:

Redesigned Deployment Tool GUI

The new Deployment Tool (`deploytool`) interface features intuitive task-based navigation, a cancellable progress dialog, fast loading of previously-created projects, and ability to add supporting files as folders. The GUI also features new context sensitive help.

New Format for Deployment Tool Projects

If you have projects that were created with the Deployment Tool prior to R2009b, those projects will continue to work. However, projects created or changed in R2009b cannot be opened in previous versions of Deployment Tool (`deploytool`).

Version 1.2.12 (R2009a) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.12 (R2009a):

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

New features and changes introduced in this version are:

Reduced MCR Size Saves on Transfer Time

MCR copying and transfer time has been improved by 50% following a reduction in the file's contents. The change will not reduce processor time or memory consumption since the deleted files were not loaded into RAM.

Customized readme.txt Produced with Each Compilation

An enhanced version of the readme.txt file, which is generated with each successful compilation, is now customized to include specific instructions about MATLAB Builder EX deployment requirements.

Version 1.2.11 (R2008b) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.11 (R2008b):

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

New features and changes introduced in this version are:

Applications Created with Parallel Computing Toolbox Can Be Compiled

You can now compile MATLAB applications that use the Parallel Computing Toolbox. Resulting executables and components can scale to multicore and multiprocessing environments using MATLAB Distributed Computing Server. See "Improving Data Access Using the MCR User Data Interface, COM Components, and MATLAB Builder EX" for more information.

Warning Results When Running Figure-Generating Applications or Printing with -nojvm Flag

As of R2008b, running a figure-generating application or printing with the -nojvm option results in a warning message. In some cases, figure rendering may succeed, and in other cases it may not. Similarly, various MATLAB graphics functions dependent on Java, such as graphics passed with -R -nojvm, will not result in displayable graphics. In a future release, the -nojvm option will no longer support figure-generating or printing and will be removed.

Same Name Class Objects Shared Between MCR Instances Will Not Work Correctly

If the same class name is used in two or more separate MCR instances within the same process, the object will not work correctly. This bug impacts all component based targets: C/C++ shared libraries, COM/.Net targets, and

Java targets. This bug does not affect standalone executables. This is due to a bug in the MATLAB Object System and is being addressed.

Version 1.2.10 (R2008a) MATLAB Builder EX Software

This table summarizes what's new in Version 1.2.10 (R2008a):

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

Version 1.2.9 (R2007b) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.9 (R2007b):

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

Functions Being Removed

The following functions were removed in R2007b:

Function Being Removed	What Happens When You Run the Function?	Use This Instead	Compatibility Considerations
buildmcr	Errors	MCRInstaller.exe (Windows), MCRInstaller.bin (UNIX), MCRInstaller.dmg (Mac)	See "What Is The MATLAB Compiler Runtime (MCR)?" in the MATLAB Compiler User's Guide documentation.
comtool	Undefined Function Error	deploytool	Migrate to deploytool.
dotnettool	Undefined Function Error	deploytool	Migrate to deploytool.
mxltool	Undefined Function Error	deploytool	Migrate to deploytool.
opennbl	Undefined Function Error	deploytool	Migrate to deploytool.

Function Being Removed	What Happens When You Run the Function?	Use This Instead	Compatibility Considerations
openmxl	Undefined Function Error	deploytool	Migrate to deploytool.
opencbl	Undefined Function Error	deploytool	Migrate to deploytool.

Version 1.2.8 (R2007a) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.8 (R2007a):

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

New features and changes introduced in this version are:

- "Qualified Against Excel 2007 Beta" on page 18
- "Issues with the Microsoft Windows Vista Operating System" on page 18

Qualified Against Excel 2007 Beta

MATLAB® Builder for Excel® has been qualified against the Excel 2007 Beta version.

Issues with the Microsoft Windows Vista Operating System

The following are known issues with Windows Vista™ as of this release. To resolve these issues, ensure you are logged in as Administrator.

- With User Account Control (UAC) enabled, a standard user is not able to write to a folder in the c:\Program Files folder. See the *MATLAB Release Notes* for more details regarding this issue.

- With User Account Control (UAC) enabled, a standard user is not able to register DLLs. When mbuild -setup attempts to register mwcomutil.dll, the following errors are displayed:

```
Trying to update options file:
  C:\Users\qe\AppData\Roaming\MathWorks\MATLAB\R2007a\compopts.bat
From template:
  C:\PROGRA~1\MATLAB\R2007a\bin\win64\mbuildopts\msvc80compp.bat
```

```
Done . . .

--> "C:\PROGRA~1\MATLAB\R2007a\bin\win64\mwregsvr C:\PROGRA~1\MATLAB\R2007a\bin\
win64\mwcomutil.dll"

Error: DllRegisterServer in C:\PROGRA~1\MATLAB\R2007a\bin\win64\mwcomutil.dll
failed
Undefined subroutine &mexsetup::expire called at C:\PROGRA~1\MATLAB\R2007a\bin\/
mexsetup.pm line 839.
```

This is also the case when MATLAB Builder for Excel invokes `mbuild` in an attempt to register DLLs after a compilation completes.

- The following message is displayed when MATLAB Builder for .NET, attempts to install a DLL into the Global Assembly Cache from a network location:

```
Unhandled Exception: System.IO.FileLoadException: could not load file or assembly
'GACInstaller, Version=1.0.2568.30711, Culture=neutral, PublicKeyToken=null' or
one of its dependencies. Failed to grant permission to execute. (Exception from
HRESULT: 0x80131418)
File name: 'GACInstaller, Version=1.0.2568.30711, Culture=neutral,
PublicKeyToken=null' ---> System.Security.Policy.PolicyException: Execution
permission cannot be acquired.
   at System.Security.SecurityManager.ResolvePolicy(Evidence evidence,
PermissionSet reqdPset, PermissionSet optPset, PermissionSet denyPset,
PermissionSet& denied, Boolean checkExecutionPermission)
   at System.Security.SecurityManager.ResolvePolicy(Evidence evidence,
PermissionSet reqdPset, PermissionSet optPset, PermissionSet denyPset,
PermissionSet& denied, Int32& securitySpecialFlags, Boolean
checkExecutionPermission)
```

- Printing from a compiled application is not currently available with Microsoft Windows Vista. The following message is displayed if you attempt to print on systems with the Microsoft Windows Vista 32-bit operating system installed:

```
PrintImage Error
StartPage failed with error 6: The handle is invalid.
```

Printing with Vista 64-bit installed results in an error message that lists a manifest as missing. Please check `http://www.mathworks.com/support/` for updates on these issues.

Version 1.2.7 (R2006b) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.7 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes—Details labeled as **Compatibility Considerations**, below. See also Summary.	Bug Reports Includes fixes

New features and changes introduced in this version are

New User Interface

This release of MATLAB Builder for Excel provides a new graphical user interface (GUI) called the Deployment Tool. You can use this tool to create and build projects. To launch the Deployment Tool, enter the `deploytool` command in MATLAB.

Compatibility Considerations

Projects built with the previous user interface cannot be used with the new interface. For R2006b, you can still issue the `mxltool` command to access projects from a previous release.

Version 1.2.6 (R2006a) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.6 (R2006a):

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

Version 1.2.5 (R14SP3) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.5 (R14SP3):

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

Version 1.2.4 (R14SP2) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.4 (R14SP2):

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

Fixed Bugs

This release includes the following bug fixes:

- Components generated by MATLAB Builder for Excel now pass an output variable containing a structure within a structure to the client code correctly.

- Components generated by MATLAB Builder for Excel no longer return a complex output variable as an empty variant to the client application.

Version 1.2.2 (R14SP1) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.2 (R14SP1):

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

Fixed Bugs

This release includes the following bug fix:

- MATLAB figure windows no longer hang when opened through a component created with MATLAB Builder for Excel. In Version 1.2.1, you had to use the task manager to dismiss the window. To fix this bug, the **Create a singleton MCR** option in New Project Settings tells MATLAB Compiler to generate code such that it creates only one instance of the MCR per application.

Version 1.2.1 (R14+) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2.1 (R14+):

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

Fixed Bugs

This release includes the following bug fix:

- When a packaged component that is generated by MATLAB Builder for Excel is deployed to a machine that does not have MATLAB installed, users receive the following error message when MCRInstaller is installed with the package:

  ```
  LoadLibrary (component_name failed -
  The specified module could not be found)
  ```

  As a workaround, register the component manually using the regsvr32 utility. To do this, enter

  ```
  regsvr32 component_name.dll
  ```

  at the Windows command prompt.

  Verify that the current working folder is the one that contains the component generated by MATLAB Builder for Excel.

Version 1.2 (R14) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.2 (R14):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes—Details labeled as **Compatibility Considerations**, below. See also Summary.	No

This version includes the following new feature:

New Product Name

The name of this product has been changed from MATLAB® Builder for Excel® to MATLAB Builder EX.

Compatibility Consideration

Various screens within this product have been changed for consistency with similar products. Note, however, that the functionality is unchanged from previous releases.

Version 1.1 (R13) MATLAB® Builder™ EX Software

This table summarizes what's new in Version 1.1 (R13):

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

Note MATLAB Builder for Excel 1.0 was initially released in Web-downloadable form after Release 12.1 was released, but before Release 13.

MATLAB Builder for Excel provides the capability to incorporate seamlessly and quickly MATLAB models and functions into Excel worksheets. A graphical user interface enables you to build and deploy Excel Add-Ins containing functionality designed in MATLAB but accessed from the Excel environment.

Using MATLAB Builder for Excel to create a deployable application is a simple process requiring a sequence of six steps:

1 Creating a project

2 Managing MATLAB and MEX-files

3 Building a project

4 Testing the model

5 Creating an Excel Add-In

6 Packaging and distributing the component

The new feature introduced in Version 1.1 is the Function Wizard.

Function Wizard

The Function Wizard lets you pass Microsoft Excel worksheet values to a compiled MATLAB model and to return model output to a cell or range of cells in the worksheet. The Function Wizard provides an intuitive interface to Excel worksheets. Knowledge of Visual Basic for Applications (VBA) programming is not required.

The Function Wizard reflects any changes that you make in the worksheets, such as range selections. Going in the opposite direction, you can use the Function Wizard to control the placement and output of data from MATLAB functions to the worksheets. For complete documentation of this new feature, see the User's Guide.

Note At this release the Function Wizard is not able to process the sparse, struct, or complex data types.

Compatibility Summary for MATLAB® Builder™ EX 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)	New Features and Changes with Version Compatibility Impact
Latest Version V2.0 (R2011a)	None
V1.3.1 (R2010bSP1)	None
V1.3 (R2010b)	None
V1.2.15 (R2010a)	None
V1.2.14 (R2009bSP1)	None
V1.2.13 (R2009b)	See "New Format for Deployment Tool Projects" on page 11.
V1.2.12 (R2009a)	None
V1.2.11 (R2008b)	See "Warning Results When Running Figure-Generating Applications or Printing with -nojvm Flag" on page 13.
V1.2.10 (R2008a)	None
V1.2.9 (R2007b)	See "Functions Being Removed" on page 16.
V1.2.8 (R2007a)	None
V1.2.7 (R2006b)	See the **Compatibility Considerations** subheading for "New User Interface" on page 21.
V1.2.6 (R2006a)	None
V1.2.5 (R14SP3)	None

Version (Release)	New Features and Changes with Version Compatibility Impact
V1.2.4 (R14SP2)	None
V1.2.2 (R14SP1)	None
V1.2.1 (R14+)	None
V1.2 (R14)	See the **Compatibility Considerations** subheading for "New Product Name" on page 27.
V1.1 (R13)	None