

# **Release Notes for MATLAB® Builder™ EX**

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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.

*Release Notes for MATLAB® Builder™ EX*

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## **R2012b**

Plane organized structure array (struct) mapping across Microsoft Excel spreadsheet cells using the Function Wizard .....	2
---	---

## **R2012a**

MATLAB Compiler Runtime (MCR) Now Available for Web Download .....	4
Structure Array Support Added .....	5
Changes in MCR User Data Interface Arguments for Compiling Parallel Computing Toolbox Applications ...	6
Support Updates for Microsoft Visual Studio Versions ...	7

## **R2011b**

Autodetection of Log-in Privileges When Registering COM Components .....	10
Faster Installation of MATLAB Compiler Runtime (MCR) with Improved MCR Installer .....	11
Support for Graphics Processing Unit (GPU) in Parallel Computing Toolbox Applications .....	12
Support for MCR Options -nojvm and -logfile .....	13

## **R2011a**

One-Click Macro Generation with Redesigned Function Wizard .....	16
Automatic Generation of XLA Add-in .....	17
Prototyping and Source Code Debugging of MATLAB functions .....	18

Empty Cell Value Control .....	19
Administrative Rights No Longer Needed to Deploy Add-ins .....	20
New Video Demos Available .....	21
Local Worker Support for Parallel Computing Toolbox Applications .....	22

## **R2010bSP1**

### **R2010b**

Microsoft Office 2010 Excel Support .....	26
Support for Microsoft® Visual Studio 2010 Added .....	27
Include the MCR Installer from a Link on Your Local Network .....	28

### **R2010a**

Deployment Tool Now Available from Command Line .....	30
---	----

### **R2009bSP1**

MCR Version Number Change .....	32
---------------------------------	----

### **R2009b**

Redesigned Deployment Tool GUI .....	34
New Format for Deployment Tool Projects .....	35

## **R2009a**

Reduced MCR Size Saves on Transfer Time .....	38
Customized readme.txt Produced with Each Compilation .....	39

## **R2008b**

Applications Created with Parallel Computing Toolbox Can Be Compiled .....	42
Warning Results When Running Figure-Generating Applications or Printing with -nojvm Flag .....	43
Same Name Class Objects Shared Between MCR Instances Will Not Work Correctly .....	44

## **R2008a**

## **R2007b**

Functions Being Removed .....	48
-------------------------------	----

## **R2007a**

Qualified Against Excel 2007 Beta .....	50
Issues with the Microsoft Windows Vista Operating System .....	51

## **R2006b**

New User Interface .....	54
--------------------------	----

**R2006a**

**R14SP3**

**R14SP2**

Fixed Bugs ..... 60

# R2012b

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Version: 2.3  
New Features: Yes  
Bug Fixes: Yes

## **Plane organized structure array (struct) mapping across Microsoft Excel spreadsheet cells using the Function Wizard**

The Function Wizard now supports structure array (struct) mapping across Microsoft® Excel® spreadsheet cells using plane organization.

Support for element-by-element organization was introduced in R2012a.

See “Working with Struct Arrays” for more information.



# R2012a

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Version: 2.2  
New Features: Yes  
Bug Fixes: Yes

## **MATLAB Compiler Runtime (MCR) Now Available for Web Download**

The MATLAB Compiler Runtime (MCR) is now available for downloading from the Web to simplify the distribution of your applications or components created with the MATLAB® Compiler.

Direct your end users to the MATLAB® Compiler™ product page to download the MCR, as opposed to redistributing or packaging it with your applications or components.

## **Structure Array Support Added**

You can now map structure arrays (type `struct`) across Microsoft Excel spreadsheet cells, using the Function Wizard. See “Working with Struct Arrays” for more information.

## **Changes in MCR User Data Interface Arguments for Compiling Parallel Computing Toolbox Applications**

**Compatibility Considerations: Yes**

Parallel Computing Toolbox™ configurations are now referred to as *parallel profiles*, as of R2012a.

See the Parallel Computing Toolbox documentation for complete information.

### **Compatibility Considerations**

#### Compatibility Considerations

The older MCR User Data Interface argument `ParallelConfigurationFile` and MAT files will still be supported until Parallel Computing Toolbox documentation states otherwise, but note that if you use the `ParallelConfigurationFile` argument, you must supply a configuration `.mat` file, rather than a profile `.settings` file. If the `ParallelProfile` argument is used, a configuration `.mat` file or a profile `.settings` file can be used.

## Support Updates for Microsoft Visual Studio Versions

The following changes to Microsoft Visual Studio® support apply for R2012a and R2012b.

<b>Microsoft Visual Studio Version</b>	<b>What Happens When You Attempt to Use This Version in R2012a</b>	<b>What Happens When You Attempt to Use This Version in R2012b</b>
Microsoft Visual Studio 2010 Express, for 32-bit or 64-bit architectures	Not Available	Not Available
Microsoft Visual C++® 2008 for 32-bit or 64-bit architectures	Warns	Not Available



# R2011b

---

Version: 2.1  
New Features: Yes  
Bug Fixes: Yes

## **Autodetection of Log-in Privileges When Registering COM Components**

MATLAB Builder™ EX now detects user privileges when registering your add-in's associated COM component, simplifying the process in many cases.

See “Add-in and COM Component Registration” in the User's Guide for details.



## **Faster Installation of MATLAB Compiler Runtime (MCR) with Improved MCR Installer**

The Application Deployment products now feature faster installation of the MATLAB Compiler Runtime (MCR) through improved MCR Installer technology. In addition to improved performance, the new installer provides a common interface for all platforms.

## **Support for Graphics Processing Unit (GPU) in Parallel Computing Toolbox Applications**

MATLAB Compiler generated executables and components now benefit from better performance when used with Parallel Computing Toolbox applications. The improvement is due to support of the Graphics Processing Unit (GPU) feature.

For more information, see the Parallel Computing Toolbox examples in the deployment user's guides for additional information about compiling your deployable application with GPU.

## **Support for MCR Options -nojvm and -logfile**

The MCR options `-nojvm` (which can substantially improve performance of deployed applications) and `-logfile` (which allows specification of a user-chosen logfile name) are now available for MATLAB Builder EX.

See “Specifying MCR Options” for more information.



# R2011a

---

Version: 2.0  
New Features: Yes  
Bug Fixes: Yes

## **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 the Parallel Computing Toolbox documentation for information about working with compilable PCT applications.

# R2010bSP1

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Version: 1.3.1  
New Features: No  
Bug Fixes: Yes



# R2010b

---

Version: 1.3  
New Features: Yes  
Bug Fixes: Yes

## **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 (Optional)” in the *MATLAB Compiler User’s Guide*, or in your respective Builder product User’s Guide, for more details.

# R2010a

---

Version: 1.2.15  
New Features: Yes  
Bug Fixes: Yes

## **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.

# R2009bSP1

---

Version: 1.2.14  
New Features: No  
Bug Fixes: Yes

## **MCR Version Number Change**

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.

# R2009b

---

Version: 1.2.13  
New Features: Yes  
Bug Fixes: Yes

## **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**

### **Compatibility Considerations: Yes**

As of this release, deployment projects are being created in a new file format.

### **Compatibility Considerations**

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). Recreate old projects with Deployment Tool to ensure they function properly.



# R2009a

---

Version: 1.2.12  
New Features: Yes  
Bug Fixes: Yes

## **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.



# R2008b

---

Version: 1.2.11  
New Features: Yes  
Bug Fixes: Yes

## **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 “Supplying Run-Time Profile Information for Parallel Computing Toolbox Applications” for more information.



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

**Compatibility Considerations: Yes**

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.

### **Compatibility Considerations**

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.

# R2008a

---

Version: 1.2.10  
New Features: No  
Bug Fixes: Yes



# R2007b

---

Version: 1.2.9  
New Features: No  
Bug Fixes: Yes

## Functions Being Removed

**Compatibility Considerations: Yes**

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 “Distributing MATLAB Code Using 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.
opennb1	Undefined Function Error	deploytool	Migrate to deploytool.
openmx1	Undefined Function Error	deploytool	Migrate to deploytool.
opencb1	Undefined Function Error	deploytool	Migrate to deploytool.

# R2007a

---

Version: 1.2.8  
New Features: Yes  
Bug Fixes: Yes

## **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\msvc80comp.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.

# R2006b

---

Version: 1.2.7  
New Features: Yes  
Bug Fixes: Yes

## **New User Interface**

**Compatibility Considerations: Yes**

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 `mx1tool` command to access projects from a previous release.

# R2006a

---

Version: 1.2.6  
New Features: No  
Bug Fixes: Yes



# R14SP3

---

Version: 1.2.5  
New Features: No  
Bug Fixes: Yes





# R14SP2

---

Version: 1.2.4  
New Features: Yes  
Bug Fixes: No

## 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.