

Supported and Compatible Compilers – Release 2009a

Technical Note 1601

Windows (32-bit)

MATLAB® 7.8 and Related Products

Compiler	Version	MATLAB 7.8 (MEX, Engine, MAT-file Access)	MATLAB Compiler 4.10	MATLAB Builder NE 3.0.1	MATLAB Builder EX 1.2.12	MATLAB Builder JA 2.0.3
Intel C++ ¹	9.1 ²	√				
Intel Visual Fortran ¹	10.1 ²	√				
	9.1 ²	√				
Lcc - win32	2.4.1	√	√			
Microsoft .NET Framework SDK	2.0			√ ^{3,4}		
Microsoft Visual C++ 2008 SP1	9.0 Prof. Edition	√	√	√ ³	√	
Microsoft Visual C++ 2008	9.0 Express Edition	√	√	√ ³	√	
Microsoft Visual C++ 2005 SP1	8.0 Prof. Edition	√	√	√ ³	√	
Microsoft Visual C++ .NET 2003 ⁵	7.1 ² Prof. Edition	√	√	√ ³	√	
Microsoft Visual C/C++ ⁶	6.0 Prof. Edition	√	√	√ ³	√	
Open Watcom ^{6,7}	1.7	√				
Sun Java Development Kit (JDK)	1.5					√

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Simulink®7.3 and Related Products

Compiler	Version	Simulink 7.3 (S-functions)	Simulink 7.3 (Model Reference)	Simulink 7.3 (Accelerator Mode)	Simulink 7.3 (Rapid Accelerator Mode)	Simulink 7.3 (Embedded MATLAB)	Stateflow 7.3	Real-Time Workshop 7.3 8	xPC Target 4.1
Intel C++ ¹	9.1 ²	√							
Intel Visual Fortran ¹	10.1 ²	√ ⁹							
	9.1 ²	√ ⁹							√ ¹⁰
Lcc - win32	2.4.1	√	√	√	√	√	√	√	
Microsoft Visual C++ 2008 SP1	9.0 Prof. Edition	√	√	√	√	√	√	√	√
Microsoft Visual C++ 2008	9.0 Express Edition	√	√ ¹¹	√ ¹¹	√ ¹¹	√ ¹¹	√ ¹¹	√ ¹¹	√ ¹¹
Microsoft Visual C++ 2005 SP1	8.0 Prof. Edition	√	√	√	√	√	√	√	√
Microsoft Visual C++ .NET 2003 ⁵	7.1 ² Prof. Edition	√	√	√	√	√	√	√	√
Microsoft Visual C/C++ ⁶	6.0 Prof. Edition	√	√	√	√	√	√	√	√
Open Watcom ^{6,7}	1.7	√	√	√		√	√	√	√

Notes for the Windows (32-bit) Platform

- Intel compilers depend on tools provided by Microsoft development products. Support for Intel compilers requires Microsoft Visual Studio 2005 SP1 Professional Edition. Access to the 2005 SP1 edition is available from Microsoft as part of their *Visual Studio with MSDN* subscriptions.
- Support for these versions of these compilers will be discontinued in a future release, at which time new versions will be supported.
- To build .NET components, Microsoft .NET Framework 2.0 must be installed. This product is automatically installed by Visual Studio 2005 or 2008. It can also be downloaded from the *Microsoft Web site*. To execute applications that use the resulting .NET components, the target machine must have the matching .NET Framework installed.
- MATLAB Builder NE supports building .NET Assemblies but not COM objects when using the Microsoft .NET Framework SDK without Microsoft Visual Studio.
- These compilers are not supported on Windows Vista.

6. When using C++, MATLAB and related products rely on the availability of exception handling in the C++ language. Because these compilers do not properly support C++ exception handling, our support for exception handling is limited. You can find more information in [Solution 1-4OKNSV](#).

7. Open Watcom is supported for use in C/C++ only; Open Watcom Fortran is not supported.

8. Includes Real-Time Workshop Embedded Coder and Stateflow Coder compiler support.

9. Fortran compilers are supported with Simulink only for creating Simulink S-functions using the MATLAB MEX command. The S-functions can be used with normal and accelerated simulations.

10. xPC Target supports Fortran code in Simulink models using C-MEX wrapper S-functions.

11. Microsoft Visual Studio Express Edition, when used with these products, also requires the Microsoft Windows Software Development Kit (SDK). For more information on installing Express Edition, see [Solution 1-BYZCYZ](#).

Windows (64-bit)

MATLAB 7.8 and Related Products

Compiler	Version	MATLAB 7.8 (MEX, Engine, MAT- file Access)	MATLAB 7.8 (Shared Library Interface) 1	MATLAB Compiler 4.10	MATLAB Builder NE 3.0.1	MATLAB Builder JA 2.0.3
Intel C++ 2	9.1 3	√				
Intel Visual Fortran 2	10.1 3	√				
	9.1 3	√				
Microsoft .NET Framework SDK	2.0				√ 4,5	
Microsoft Visual C++ 2008 SP1 6	9.0 Prof. Edition	√	√	√	√ 4	
Microsoft Visual C++ 2008 6	9.0 Express Edition	√		√	√ 4	
Microsoft Visual C++ 2005 SP1 6	8.0 Prof. Edition	√	√	√	√ 3	
Sun Java Development Kit (JDK)	1.5					√

Simulink 7.3 and Related Products

Compiler	Version	Simulink 7.3 (S-functions)	Simulink 7.3 (Model Reference)	Simulink 7.3 (Accelerator Mode)	Simulink 7.3 (Rapid Accelerator Mode)	Simulink 7.3 (Embedded MATLAB)	Stateflow 7.3	Real-Time Workshop 7.3 7
Intel C++ ²	9.1 ³	√						
Intel Visual Fortran ²	10.1 ³	√ ⁸						
	9.1 ³	√ ⁸						
Microsoft Visual C++ 2008 SP1 ⁵	9.0 Prof. Edition	√	√	√	√	√	√	√
Microsoft Visual C++ 2008 ⁵	9.0 Express Edition	√	√	√	√	√	√	√
Microsoft Visual C++ 2005 SP1 ⁵	8.0 Prof. Edition	√	√	√	√	√	√	√

Notes for the Windows (64-bit) Platform

1. You must install a C compiler to use LOADLIBRARY on a 64-bit platform.
2. Intel compilers depend on tools provided by Microsoft development products. Support for Intel compilers requires Microsoft Visual Studio 2005 SP1 Professional Edition. Access to the 2005 SP1 edition is available from Microsoft as part of their [Visual Studio with MSDN](#) subscriptions.
3. Support for these versions of these compilers will be discontinued in a future release, at which time new versions will be supported.
4. To build .NET components, Microsoft .NET Framework 2.0 must be installed. This product is automatically installed by Visual Studio 2005 or 2008. It can also be downloaded from the [Microsoft Web site](#). To execute applications that use the resulting .NET components, the target machine must have the matching .NET Framework installed.
5. MATLAB Builder NE supports building .NET Assemblies but not COM objects when using the Microsoft .NET Framework SDK without Microsoft Visual Studio.
6. To use Microsoft Visual Studio with MATLAB on a 64-bit platform, you must select “X64 Compilers and Tools” when installing Microsoft Visual Studio. This is not selected by default. Microsoft Visual Studio 2008 Express and Professional Editions also require that the Microsoft Windows Software Development Kit (SDK) is installed properly. For more information, see [Solution 1-6IJJ3L](#).
7. Includes Real-Time Workshop Embedded Coder and Stateflow Coder compiler support.
8. Fortran compilers are supported with Simulink only for creating Simulink S-functions using the MATLAB MEX command. The S-functions can be used with normal and accelerated simulations.

Linux (32-bit and 64-bit)

MATLAB 7.8, Simulink 7.3, and Related Products

Compiler	Version	MATLAB 7.8 (MEX, Engine, MAT-file Access)	MATLAB 7.8 (Shared Library Interface) ¹	MATLAB Compiler 4.10	MATLAB Builder JA 2.0.3	Simulink 7.3	Simulink 7.3 (Embedded MATLAB)	Stateflow 7.3	Real-Time Workshop 7.3 ²
GNU g95	0.90	√				√ ³			
GNU gcc/g++	4.2.3	√	√	√		√	√	√	√
Sun Java Development Kit (JDK)	1.5				√				

To determine the version of your compiler, see [Solution 1-1880F](#).

Notes for the Linux (32-bit and 64-bit) Platform

1. You must install a C compiler to use LOADLIBRARY on a 64-bit platform. No compiler is required on a 32-bit platform.
2. Includes Real-Time Workshop Embedded Coder and Stateflow Coder compiler support.
3. Fortran compilers are supported with Simulink only for creating Simulink S-functions using the MATLAB MEX command. The S-functions can be used with normal and accelerated simulations.

Solaris (64-bit)

MATLAB 7.8, Simulink 7.3, and Related Products

Compiler	Version	MATLAB 7.8 (MEX, Engine, MAT-file Access)	MATLAB 7.8 (Shared Library Interface) ¹	MATLAB Compiler 4.10	MATLAB Builder JA 2.0.3	Simulink 7.3	Simulink 7.3 (Embedded MATLAB)	Stateflow 7.3	Real-Time Workshop 7.3 ²
GNU gcc/g++ ³	4.1.2	√				√	√	√	√
Sun Java Development Kit (JDK)	1.5				√				
Sun Studio 11 cc/CC ^{4,5}	5.8	√	√	√		√	√	√	√
Sun Studio 11 f90 ⁵	8.2	√				√ ⁶			
Sun Studio 12 cc/CC ⁷	5.9	√	√	√		√	√	√	√
Sun Studio 12 f90	8.3	√				√ ⁶			

To determine the version of your compiler, see [Solution 1-1880F](#).

Notes for the Solaris (64-bit) Platform

1. You must install a C compiler to use LOADLIBRARY on a 64-bit platform.
2. Includes Real-Time Workshop Embedded Coder and Stateflow Coder compiler support.
3. When using C++, MATLAB and related products rely on the availability of exception handling in the C++ language. Because these compilers do not properly support C++ exception handling, our support for exception handling is limited. You can find more information in [Solution 1-4OKNSV](#).
4. There is a bug in the Sun Studio 11 cc/CC 5.8 compiler that can, in some instances, cause incorrect results. Sun has released Patch 120760-12 2007/03/19 to address the issue. For more information, see [Solution 1-431HK0](#).
5. These compilers are being phased out and will not be supported in a future release.
6. Fortran compilers are supported with Simulink only for creating Simulink S-functions using the MATLAB MEX command. The S-functions can be used with normal and accelerated simulations.
7. Patch 124861-01 to the Sun Studio 12 cc/CC 5.9 compiler introduced a bug that can, in some instances, cause incorrect results. Sun has released Patch 124861-06 2008/05/06 to address the issue. For more information, see [Solution 1-6IJJ4C](#).

Mac (32-bit)

MATLAB 7.8, Simulink 7.3, and Related Products

Compiler	Version	MATLAB 7.8 (MEX, Engine, MAT-file Access)	MATLAB Compiler 4.10	MATLAB Builder JA 2.0.3	Simulink 7.3	Simulink 7.3 (Embedded MATLAB)	Stateflow 7.3	Real-Time Workshop 7.3 1
Apple Xcode with gcc/g++	3.1 ²	√	√		√	√	√	√
GNU gfortran	4.2.2	√			√ ³			
Sun Java Development Kit (JDK)	1.5			√				

To determine the version of your compiler, see [Solution 1-1880F](#).

Notes for the Mac Platform

1. Includes Real-Time Workshop Embedded Coder and Stateflow Coder compiler support.
2. The gcc/g++ version 4.0.1 (Apple Computer, Inc. build 5488) development tools are required for using Xcode 3.1 with MATLAB on all Mac systems. These are installed with Xcode.
3. Fortran compilers are supported with Simulink only for creating Simulink S-functions using the MATLAB MEX command. The S-functions can be used with normal and accelerated simulations.