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Supported and Compatible Compilers – Release 2010b

A number of MathWorks products or product features require that you have a third-party compiler installed on your system. The tables below outline the compilers that are supported by various MathWorks products. These compilers are provided by a number of vendors and are available under a variety of commercial, academic, or open source terms; visit the providers' Web sites for further information.

Choose your platform:

▶ Windows (32-bit)

   ▷ MATLAB Product Family

   ▷ Simulink Product Family

▷ Windows (64-bit)

▷ Linux

▷ Mac OS X

Windows (32-bit)

On 32-bit Windows, the lcc C compiler is installed along with MATLAB, providing out-of-the-box support for most MathWorks products. Further options are available as outlined in this table.

MATLAB Product Family – Release 2010b

Compiler	Version	MATLAB For MEX-file compilation and external usage of MATLAB Engine and MAT-file APIs	MATLAB Compiler For C and C++ shared libraries	MATLAB Builder EX For all features	MATLAB Builder NE For all features	MATLAB Builder JA For all features	SimBiology For accelerated computation	Fixed-Point Toolbox For accelerated computation
lcc - win32 *Included with MATLAB*	2.4.1	√	√				√	√
Microsoft Visual C++ 2010 Express *Available at no charge*	10.0	√	√	√	√ [2]		√	√
Microsoft Visual C++ 2010 Professional	10.0	√	√	√	√ [2]		√	√
Microsoft Visual C++ 2008 Express Edition and Windows SDK 6.1 [1] *Available at no charge*	9.0[5]	√	√	√	√ [2]		√	√
Microsoft Visual C++ 2008 Professional SP1	9.0	√	√	√	√ [2]		√	√
Microsoft Visual C++ 2005 Professional SP1	8.0 [5]	√	√	√	√ [2]		√	√
Microsoft Visual C/C++ Professional [3]	6.0 [5]	√	√	√	√ [2]		√	√
Intel C++ [4]	11.1	√						
Open Watcom [3, 6] *Available at no charge*	1.8	√					√	√
Intel Visual Fortran [4]	11.1	√						
	10.1 [5]	√						
Microsoft .NET Framework SDK *Available at no charge*	3.5				√ [2, 7]			
	3.0				√ [2, 7]			
	2.0				√ [2, 7]			

Sun Java Development Kit (JDK) *Available at no charge*	1.6						√		

Simulink Product Family – Release 2010b

Compiler	Version	Simulink For S-Function compilation [10]	Simulink For model referencing, Accelerator mode, and Embedded MATLAB	Simulink For Rapid Accelerator mode	Stateflow For all features	Stateflow Coder For all features	Real-Time Workshop When targeting the host OS	Real-Time Workshop Embedded Coder When targeting the host OS [10]	xPC Target For all features
Lcc - win32 *Included with MATLAB*	2.4.1	√	√	√	√	√	√	√	
Microsoft Visual C++ 2010 Express *Available at no charge*	10.0	√	√	√	√	√	√	√	
Microsoft Visual C++ 2010 Professional	10.0	√	√	√	√	√	√	√	
Microsoft Visual C++ 2008 Express Edition and Windows SDK 6.1 [1] *Available at no charge*	9.0 [5]	√	√	√	√	√	√	√	√
Microsoft Visual C++ 2008 Professional SP1	9.0	√	√	√	√	√	√	√	√
Microsoft Visual C++ 2005 Professional SP1	8.0 [5]	√	√	√	√	√	√	√	√
Microsoft Visual C/C++ Professional [3]	6.0 [5]	√	√	√	√	√	√	√	√
Intel C++ [4]	11.1	√							
Open Watcom [3, 6] *Available at no charge*	1.8	√	√		√	√	√	√	√
Intel Visual Fortran [4]	11.1	√ [8]							√ [9]
	10.1 [5]	√ [8]							

Notes for the Windows (32-bit) Platform

1. Both Microsoft Visual C++ 2008 Express Edition and Windows Software Development Kit (SDK) 6.1 must be installed. For more information on installing Express Edition, see Solution 1-BYZCYZ.

2. To build .NET components, a Microsoft .NET Framework must be installed. The .NET Framework v3.0 does not contain a framework-specific compiler; compatible components can be built using the v2.0 compiler. The .NET Framework is automatically installed by Visual Studio. 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.

3. Support for C++ exception handling is limited. You can find more information in Solution 1-4OKNSV.

4. Intel compilers depend on tools provided by Microsoft development products. The following combinations are supported by MATLAB and Simulink related products:

Intel Compilers on Microsoft Windows		Microsoft Visual Studio 2008 SP1 Professional Edition (32-bit)	Microsoft Visual Studio 2008 Shell (32-bit)	Microsoft Visual Studio 2005 SP1 Professional Edition (32-bit)
Compiler	Version	9.0	9.0	8.0
Intel C++	11.1	√		
Intel Visual Fortran	11.1	√	√	
	10.1			√

Access to the 2005 SP1 edition is available from Microsoft as part of their Visual Studio with MSDN subscriptions. You should use the Microsoft Visual Studio 2008 Shell that is bundled with certain Intel Visual Fortran packages.

5. Support for this version of this compiler will be discontinued in a future release, at which time a new version will be supported. Consult the platform road map for more information.

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

7. MATLAB Builder NE supports building .NET assemblies but not COM objects when using the Microsoft .NET Framework SDK without Microsoft Visual Studio.

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.

9. xPC Target supports Fortran code in Simulink models using C-MEX wrapper S-Functions.

10. On Windows 7, compiling Simulink S-Functions using the MEX build script may fail with an error that the Simulink include header file 'simstruc.h' cannot be found. See bug 661855 for further discussion.

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