

Supported and Compatible Compilers – Release 2018a

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' websites for further information.

Please see [Polyspace documentation](#) for the list of compilers that Polyspace supports in the current release.

View compiler support for [previous releases](#).

Windows (64-bit)

MinGW is a supported compiler which is available free of charge. [Download MinGW now](#).

Note:

- Microsoft Visual Studio 2013 Professional will not be supported in a future release.
- MinGW will be updated to version 6.3 in a future release.

MATLAB Product Family – Release 2018a

Compiler	MATLAB	MATLAB Coder	GPU Coder	SimBiology	Fixed Point Designer	HDL Coder	HDL Verifier	Audio System Toolbox
	For MEX-file compilation, <code>loadlibrary</code> , and external usage of MATLAB Engine and MAT-file APIs	For all features	For all features	For accelerated computation	For accelerated computation	For accelerated testbench simulation	For DPI and TLM component generation	For validating and generating audio plugins
MinGW 5.3 C/C++ (Distributor: mingw-w64) Available at no charge	✓	✓ ⁶		✓	✓	✓	✓	
Microsoft Visual C++ 2017 Family ²	✓	✓	✓	✓	✓	✓	✓	✓
Microsoft Visual C++ 2015 Professional ¹¹	✓	✓	✓	✓	✓	✓	✓	✓ ¹
Microsoft Visual C++ 2013 Professional	✓	✓	✓	✓	✓	✓	✓	✓ ¹
Intel Parallel Studio XE 2017 for C/C++ ³	✓							
Intel Parallel Studio XE 2016 for C/C++ ³	✓							
Intel Parallel Studio XE 2015 for C/C++ ³	✓							
Intel C++ Composer XE 2013 ³	✓							
Intel Parallel Studio XE 2017 for Fortran ³	✓							
Intel Parallel Studio XE 2016 for Fortran ³	✓							
Intel Parallel Studio XE 2015 for Fortran ³	✓							
Intel Visual Fortran Composer XE 2013 ³	✓							
Microsoft .NET Framework SDK 4.0, 4.5, 4.6 Available at no charge	✓							
lcc-win64 Included with products that support it		✓ ⁶		✓	✓	✓	✓	

Simulink Product Family – Release 2018a

Compiler	Simulink	Simulink	Stateflow	Simulink Coder	Embedded Coder	Simulink Real-Time
	For S-Function compilation	For Model Referencing, Accelerator mode, Rapid Accelerator mode, and MATLAB Function blocks	For all features	For all features	When targeting the host OS	For all features
<i>MinGW 5.3</i> C/C++ (Distributor: <i>mingw-w64</i>) Available at no charge	✓	✓	✓	✓	✓	
Microsoft Visual C++ 2017 Family ¹²	✓	✓	✓	✓	✓	✓ ¹²
Microsoft Visual C++ 2015 Professional ¹¹	✓	✓	✓	✓	✓	✓ ¹
Microsoft Visual C++ 2013 Professional	✓	✓	✓	✓	✓	✓ ¹
Intel Parallel Studio XE 2017 for C/C++ ³	✓					
Intel Parallel Studio XE 2016 for C/C++ ³	✓					
Intel Parallel Studio XE 2015 for C/C++ ³	✓					
Intel C++ Composer XE 2013 ³	✓					
Intel Parallel Studio XE 2017 for Fortran ³	✓					
Intel Parallel Studio XE 2016 for Fortran ³	✓ ⁷					
Intel Parallel Studio XE 2015 for Fortran ³	✓ ⁷					
Intel Visual Fortran Composer XE 2013 ³	✓ ⁷					✓ ⁸
icc-win64 Included with products that support it		✓	✓	✓	✓	

MATLAB Compiler – Release 2018a

Compiler	MATLAB Compiler	MATLAB Compiler SDK				
	Excel add-in for desktop	C/C++	COM	.NET	Java	Excel add-in for MPS
<i>MinGW 5.3</i> C/C++ (Distributor: <i>mingw-w64</i>) Available at no charge	✓ ²	✓	✓ ²			
Microsoft Visual C++ 2017 Family ¹²	✓	✓	✓	✓		
Microsoft Visual C++ 2015 Professional ¹¹	✓	✓	✓	✓ ⁴		
Microsoft Visual C++ 2013 Professional	✓	✓	✓	✓ ⁴		
Microsoft .NET Framework SDK 4.0, 4.5, 4.6 Available at no charge				✓ ^{4, 5}		✓ ⁹
Java Development Kit (JDK) 1.8 Available at no charge					✓	

Notes for the Windows (64-bit) Platform

1. The corresponding version of Visual Studio Community is reported to work. Full support for Visual Studio Community has not been qualified by MathWorks.
2. Microsoft Windows SDK 10 is required to use MinGW with this product. See [Answer 355476](#) for more details.
3. Intel compilers depend on tools provided by Microsoft. The following combinations are supported:

	Microsoft Visual Studio 2013 Professional	Microsoft Visual Studio 2015 Professional	Microsoft Visual Studio 2017 Family
Intel Parallel Studio XE 2017 For C/C++	✓	✓	✓
Intel Parallel Studio XE 2016 For C/C++	✓	✓	✓
Intel Parallel Studio XE 2015 For C/C++	✓	✓	✓
Intel Parallel Studio XE 2017 For Fortran	✓	✓	✓
Intel Parallel Studio XE 2016 For Fortran	✓	✓	✓
Intel Parallel Studio XE 2015 For Fortran	✓	✓	✓
Intel C++ Composer XE 2013	✓		✓
Intel Visual Fortran Composer XE 2013	✓		

4. 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.
5. MATLAB Compiler SDK supports building .NET assemblies but not COM objects when using the Microsoft .NET Framework SDK without Microsoft Visual Studio.
6. This compiler does not support OpenMP. Code generation will treat parfor-loops as for-loops.
7. 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.
8. Simulink Real-Time supports Fortran code in Simulink models using C-MEX wrapper S-Functions.
9. When building Excel add-ins for MPS, MATLAB Compiler SDK requires .NET framework 4.0 or later.
10. A compiler is not installed by default with this version of Visual Studio and must be specified while performing a custom installation. See [Answer 328432](#) for more details.
11. Community, Professional, and Enterprise editions are supported.
12. See [Answer 348269](#) for instructions on how to set up Microsoft Visual Studio 2017 for use with Simulink Real-Time.

Mac OS

Note:

On the Mac, no C compiler is supplied with MATLAB. If you use products that require one, Apple's development environment for macOS (Xcode) is *available in the Mac App Store*.

- Xcode 7.x is not supported as of R2018a.

MATLAB Product Family – Release 2018a							
Compiler	MATLAB	MATLAB Compiler SDK		MATLAB Coder	SimBiology	Fixed-Point Designer	Audio System Toolbox
	For MEX-file compilation, <code>loadlibrary</code> , and external usage of MATLAB Engine and MAT-file APIs	C/C++	Java	For all features	For accelerated computation	For accelerated computation	For validating and generating audio plugins
Xcode 9.x Available at no charge	✓	✓		✓	✓	✓	✓
Xcode 8.x Available at no charge	✓	✓		✓ ¹	✓	✓	✓
Intel Parallel Studio XE 2017 for Fortran	✓						
Intel Parallel Studio XE 2016 for Fortran	✓						
Intel Parallel Studio XE 2015 for Fortran	✓						
Java Development Kit (JDK) 1.8 Available at no charge			✓				

Simulink Product Family – Release 2018a

Compiler	Simulink	Simulink	Stateflow	Simulink Coder	Embedded Coder
	For S-Function compilation	For model referencing, Accelerator mode, Rapid Accelerator mode, and MATLAB Function blocks	For all features	For all features	When targeting the host OS
Xcode 9.x Available at no charge	✓	✓	✓	✓	✓
Xcode 8.x Available at no charge	✓	✓	✓	✓	✓
Intel Parallel Studio XE 2017 for Fortran	✓ ²				
Intel Parallel Studio XE 2016 for Fortran	✓ ²				
Intel Parallel Studio XE 2015 for Fortran	✓ ²				

To determine the version of Xcode installed, start Xcode and then select Xcode->About Xcode.

Notes for the Mac Platform

1. This compiler does not support OpenMP. Code generation will treat parfor-loops as for-loops.
2. 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 (64-bit)

Note:

On Linux, no C compiler is supplied with MATLAB. The GNU compiler (GCC) is included with many Linux distributions.

- GCC C/C++ 4.9 has been updated to 6.3 as of R2018a
- GNU gfortran 4.9 has been updated to 6.3 as of R2018a

MATLAB Product Family – Release 2018a									
Compiler	MATLAB	MATLAB Compiler SDK		MATLAB Coder	GPU Coder	SimBiology	Fixed-Point Designer	HDL Coder	HDL Verifier
	For MEX-file compilation, loadlibrary , and external usage of MATLAB Engine and MAT-file APIs	C/C++	Java	For all features	For all features	For accelerated computation	For accelerated computation	For accelerated testbench simulation	For DPI and TLM component generation
GCC C/C++ 6.3.x Available at no charge	✓	✓		✓	✓	✓	✓	✓	✓
GNU gfortran 6.3.x Available at no charge	✓								
Java Development Kit (JDK) 1.8 Available at no charge			✓						

Simulink Product Family – Release 2018a

	Simulink	Simulink	Stateflow	Simulink Coder	Embedded Coder
Compiler	For S-Function compilation	For model referencing, Accelerator mode, Rapid Accelerator mode, and MATLAB Function blocks	For all features	For all features	When targeting the host OS
GCC C/C++ 6.3.x Available at no charge	✓	✓	✓	✓	✓
GNU gfortran 6.3.x Available at no charge	✓ ₁				

To determine the version of your compiler, see [Answer 99897](#).

Notes for the Linux Platform

1. 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.