smxSim™

PRODUCT BRIEF

Compile, debug, and run your SMX® application under Windows.

smxSim makes it possible to develop and run an SMX application on Windows (Win32), using Microsoft Visual Studio or the Borland IDE. This allows:

- reducing the number of seats of expensive embedded compilers and tools
- reducing the number of target boards needed, and the ability to begin development while the hardware is being designed
- developers with mostly Windows development experience to develop parts of the application (especially the GUI) without needing to work with the target hardware
- developing the framework of your application
- using code checking and debugging tools that have been created for Windows developers, such as NuMega BoundsChecker and SoftICE (neither tested)

The following SMX modules can run in a Windows environment:

- smx multitasking kernel
- smx++ C++ kernel API
- smxFS FAT filesystem
- PEG GUI

smxNS will be supported soon. Also, smxAware works with Visual Studio.

smxSim consists of three parts:

- Special versions of SMX libraries that run in Windows.
- Project file that builds the Proto-system/application under Visual Studio or Borland IDE.
- Interface using Win32 API that gets timer ticks, keyboard presses, etc. since a Windows application cannot get these directly. (Windows does not allow direct I/O nor hooking of interrupts from an application.)

The ability to run in Windows is primarily intended for development, but it is also possible to use *smxSim* for the target system, for a soft real-time application. *smxSim* operates as a typical Windows process with a single thread. It relies on frequent polling to receive updates on time and keyboard presses. Thus, an application that is not too demanding and which does not require rapid response to interrupts can operate quite nicely under *smxSim*.

Supported development environments:

- Microsoft Visual Studio in Visual C++ v6 or .net. smxAware supports only Visual Studio .net.
- Borland IDE in C/C++ v5

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