Working with PKStudio and the Porting Kit for the .NET Micro Framework

PKStudio Manual

Abstract

This document will show you how to launch PKStudio from the Porting Kit for the .NET Micro Framework. This document is a supplement to the PK documentation and assumes that you read the PK documentation already.

1 Abstract

The .NET Micro Framework Porting Kit (PK from here on) is a command line based development environment based on *msbuild*. The PK is designed to work with both the C++ and C# Visual Studio compilers and a set of native embedded compilers for ARM, SH and Blackfin processors.

The PK is a snapshot of the .NET MF internal build environment and can be used to do almost anything that is possible with the .NET MF, such as recompile the .NET MF assemblies, and add a library for a driver, customize an existing device image or create a new one.

In order to simplify the task of customizing or creating a new device image a developer could use SolutionWizard (see RCLPort.chm) or PKStudio. PKStudio is a powerful tool created by Alexandr Surkov and Igor Kiselev as an open source tool to replace SolutionWizard more limited functionality.

2 PKStudio Features

PKStudio allows browsing the library inventory of the MF code base to include/exclude libraries from the msbuild projects that build the runtime, the booters/loaders and the utilities (such as NativeSample).

PKStudio features an elegant UI and allows creating MDK compatible makefiles as well as building using any installed compiler.

3 Launching PKStudio

Here is how to launch PKStudio

1. Setup NETMF PK, which does not contain PKStudio
2. Download PKStudio from the community branch of the NETMF CodePlex distribution (`%SPOCLIENT%\tools\bin\PKStudiodirectory`) or from the download section of the same CodePlex project. You can also compile it from the distribution itself. Output will be at `%SPOCLIENT%\BuildOutput\public\[Release|Debug]\Server\dll\`
3. PKStudioLauncher.exe uses the information in *options.dat* to setup the environment. The file *options.dat* can be edited from PKStudio.exe (Tools -> Options menu). PKStudioLauncher.exe can be used from anywhere on your machine of *options.dat* contains the correct information.
4. PKStudio.exe can be launched directly from the build command line after the envuironment has been propertly initialized with *setenv_[your compiler].cmd.*

4 Using PKStudio

PKStudio can create new solutions or edit existing solutions. Browse the code base with the processor and library explorers (View menu). Open an existing solution and modify its associated executable images (e.g. TinyBooter, NativeSample or TinyCLR).

After you open a solution you will be able to build it (Build menu) and also generate µVision compatible makefiles for the ARM-Keil MDK tool chain (Tools menu).