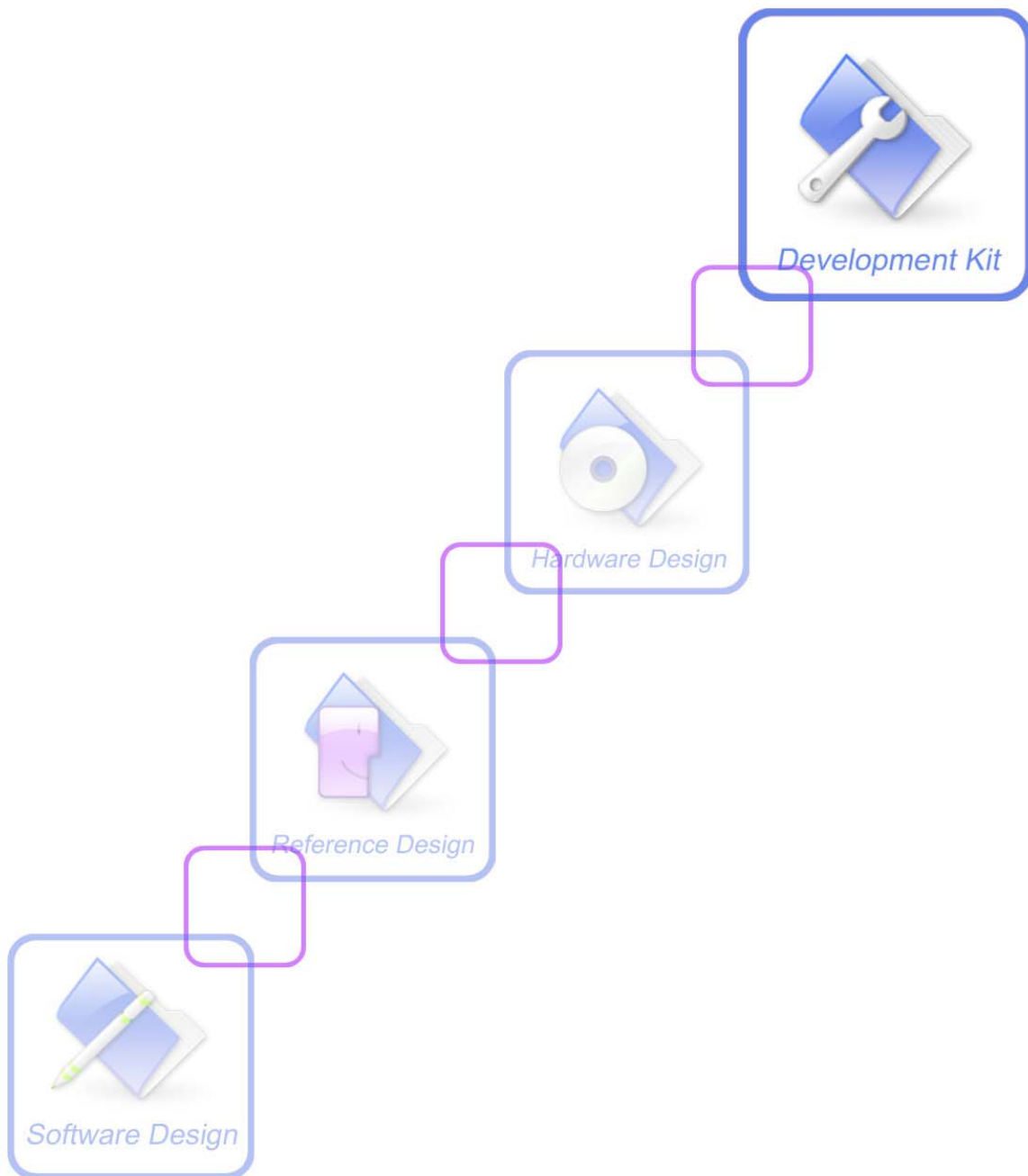




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SIM5360 BMP Demo Note V1.00



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Version history

Date	Version	Description of change	Author
2013-12-09	1.00	Origin	qiu Jianhua

SCOPE

This document describes how to install Brew MP Application developer environment and how to use SDK build a application. This document is subject to change without notice at any time.

1. INTRODUCTION

Binary Runtime Environment for Wireless Mobile Platform (Brew MP) is an application development platform created by Qualcomm, originally for code division multiple access (CDMA) mobile phones, featuring third-party applications such as mobile games. It is offered in some feature phones but not in smartphones. SIM5360 is based on BMP 1.04 and adds some external interface.

2. GETTING STARTED

2.1 Install BMP SDK and platform

Procedure for Brew MP C/C++ development environment with Microsoft Visual Studio on Microsoft Windows XP 32 bit, Windows 7 32 bit or Windows 7 64 bit.

Prerequisites:

- [Microsoft .NET Framework 4.0](#) (or newer). download and install.
- [Adobe Flash® Player 10 ActiveX](#) (or newer). download and install the Adobe Flash Player using Internet Explorer browser for ActiveX version.
- [Microsoft Visual Studio 2005, 2008 or 2010](#).

Installation Procedure - Window Administrator privileges are required. For best results, follow the steps in the order specified:

- a) Download & install [Sourcery G++ Lite Edition](#). This includes a CodeSourcery ARM compiler and GNU tools to help build and debug applications.
- b) Download & install [Brew MP SDK](#).
- c) Launch the SDK Manager tool.
- d) Install Brew MP SDK Visual Studio Plugin through the SDK Manager tool (on Setup tab, click the Visual Studio Plugin Install link located within the current toolset See Figure 1).

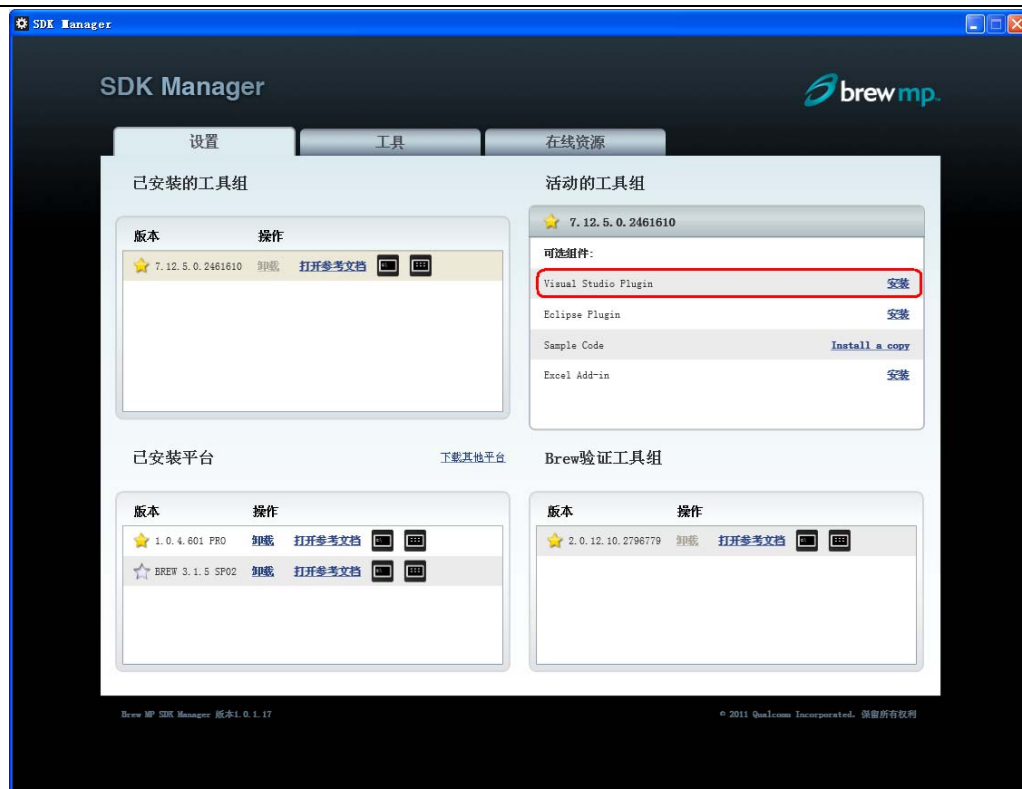


Figure 1. Install Visual Studio Plugin

2.2 Set Compiler Environment

1. Launch the Microsoft Visual Studio, and then select Tools→Options→Brew MP →General. Set ARM Compiler as "CodeSourcery"

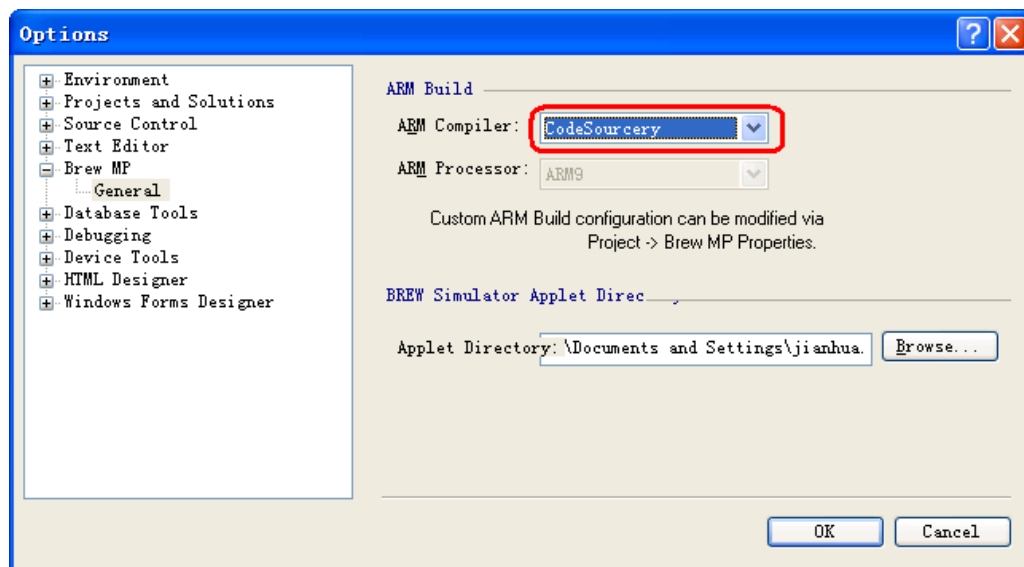


Figure 2. Set compiler

2.3 Create a new project

The Brew MP Wizard provides the option of creating source code based on a template, which generates code for basic Brew MP application functionality. The Wizard initiates the creation of the Visual Studio solution, and the application files.

1. Start Visual Studio
2. Within Visual Studio, Select File→New→Project. The New Project window opens.

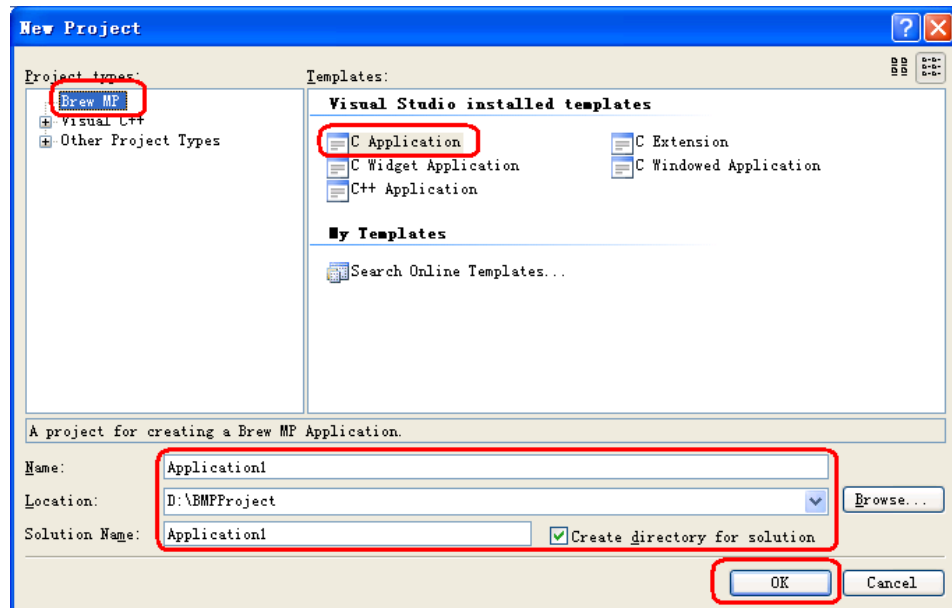


Figure 3. Your entries should match the above screen caption

3. Under Project types, select Brew MP
4. Under Templates, select C or C++ Application
5. Enter project name or use the default name provided, for example Application1.
6. Next to Location, enter a path to directory where you want to store the project files.
7. Click Ok. The Brew MP C or C++ Application dialog opens, respectively depending on which Template has been selected in Step 4. The default executable file format created is MOD/DLL.(See Figure 4)
8. Click Next. The final dialog displays options to generate the framework for a Brew MP platform version, and to select the executable file format. Select your Brew MP platform version(1.0.4) from the drop down menu. and in the Executable File Format drop-down menu, select MOD/DLL. (See Figure 5)
9. Click Finish. The new project is loaded in the Visual Studio environment.

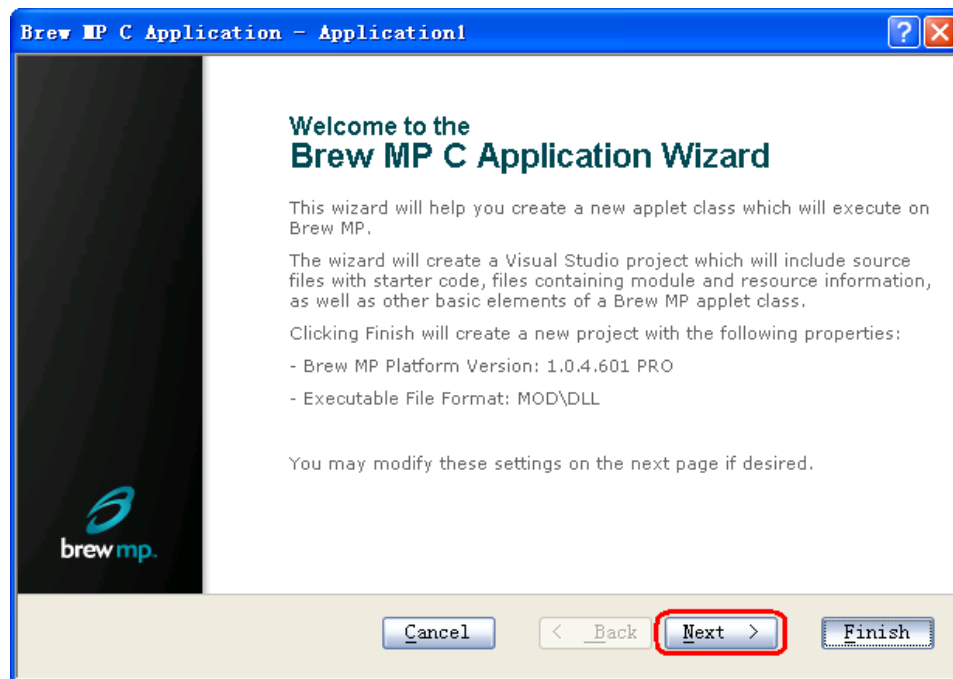


Figure 4

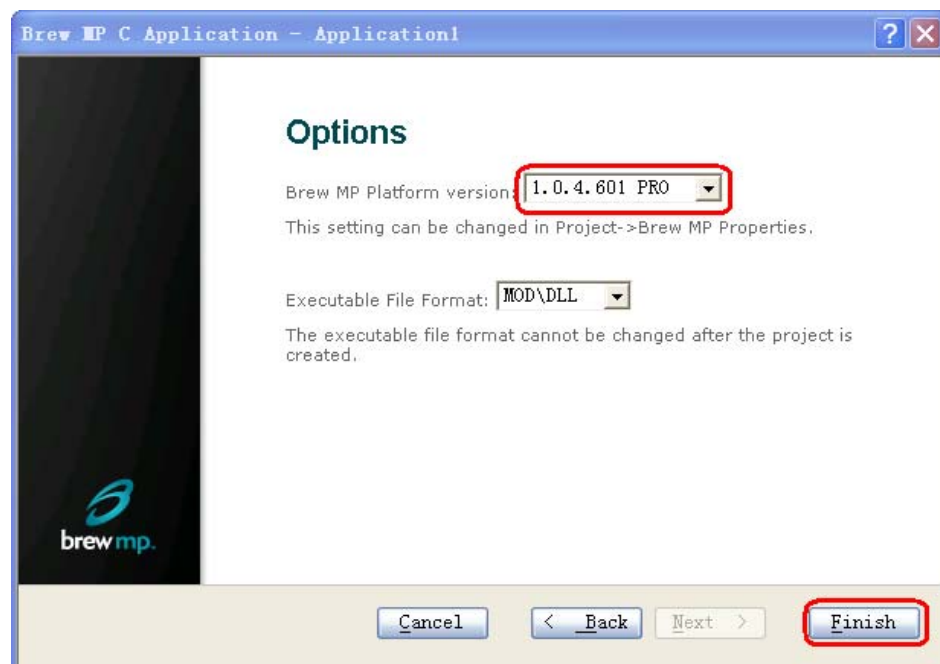


Figure 5.

2.4 Skeletal code

The skeletal code generated by the Brew MP Application Wizard as blew:

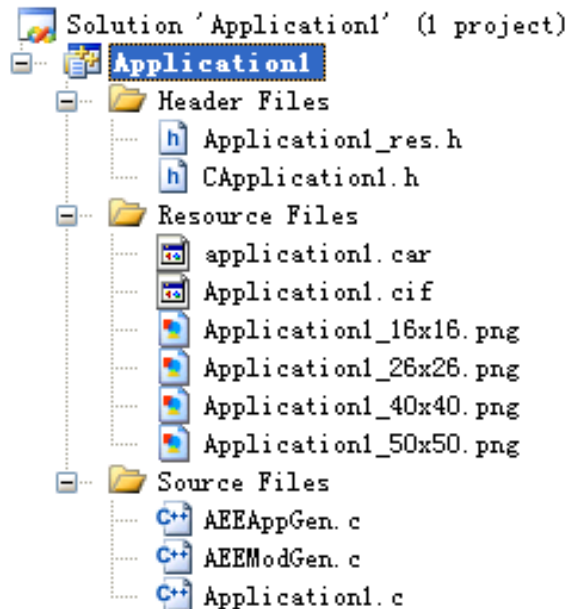


Figure 6.

Application1_res.h :	Resource
AEEModGen.c:	Module interface definitions.
AEEAppGen.c:	Applet interface definitions
Application1_res.h:	Include resource(.bar) file.
CApplication1.h:	App head file, Defined class id.
Application1.car:	Component Application Resource File
Application1_cif:	Component Information File
Application1.c:	major project source.

2.5 Build project

Within Visual Studio, Select Build→Build Solution. (See Figure 7).When build completed., it will generate three target file:

Application1.mif
Application1.mod
application1.bar

Note: The MIF file is generated from CIF by cif compiler(cifc.exe),The MIF contains information about the contents of the module, such as supported classes, supported applications, application privileges, application details (like the title and icon) and the author of the application. The MIF also specifies which classes are exported for use by other modules. All modules must contain a MIF. As the device starts up, the MIF describes the module to the device.

The BAR file contains resources such as strings and images in binary format, It's generated from CAR file.

The Brew MP module binary file (MOD) is the binary executable for a Brew MP component.

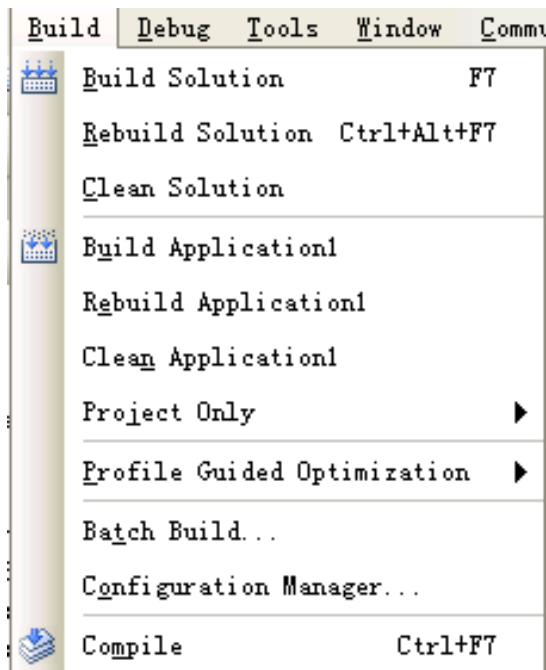


Figure 7

2.6 Logger

SDK provide logger tools for print user log. Launch SDK manager and select Logger.

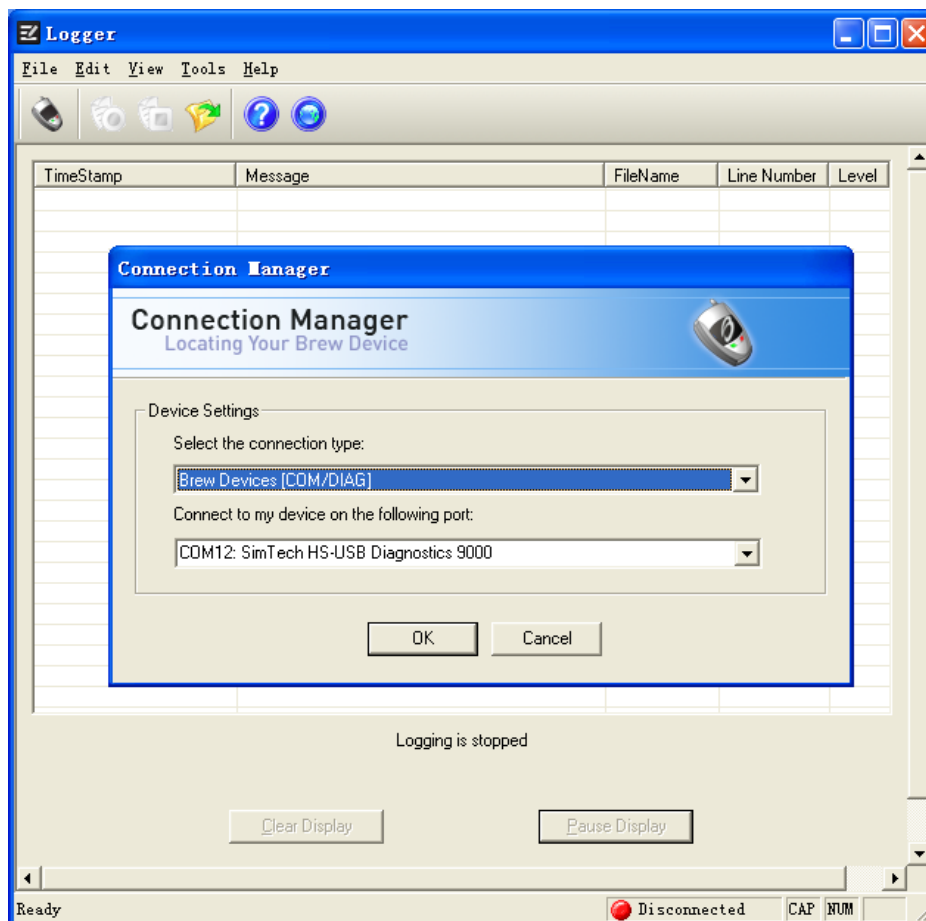


Figure 8

2.7 Loader

Launch SDK and select Loader.

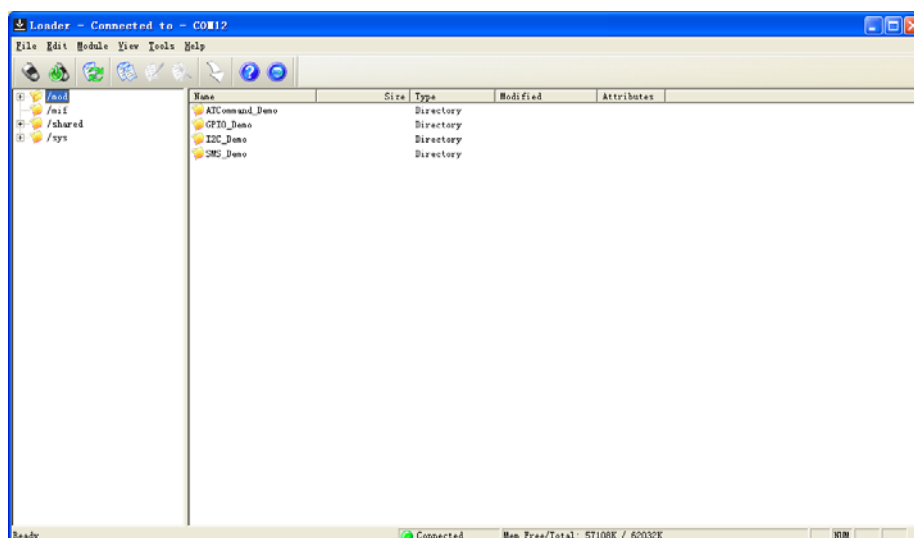


Figure 9

2.8 Download to Simcom module

Open the Loader on connect to Simcom module(See Figure 9).

1. Sign for MIF and MOD file. It will generate a sig file.
Note: Code sign see another document.
2. Copy MIF file to the directory /mif .
3. Create a directory on /mod. (ex. /mod/Application1)
Note: the directory name must same as the MIF file name.
4. Copy MOD,BAR and sig files to the directory which created by step 2.
5. Reset the module, the Application is able to loaded by system.

2.9 Click2Debug

1. Connect your device to your computer.
2. Turn on Gateway using Target Manager
Start SDK Manager and turn to tools tab, click the target manager to launch it.

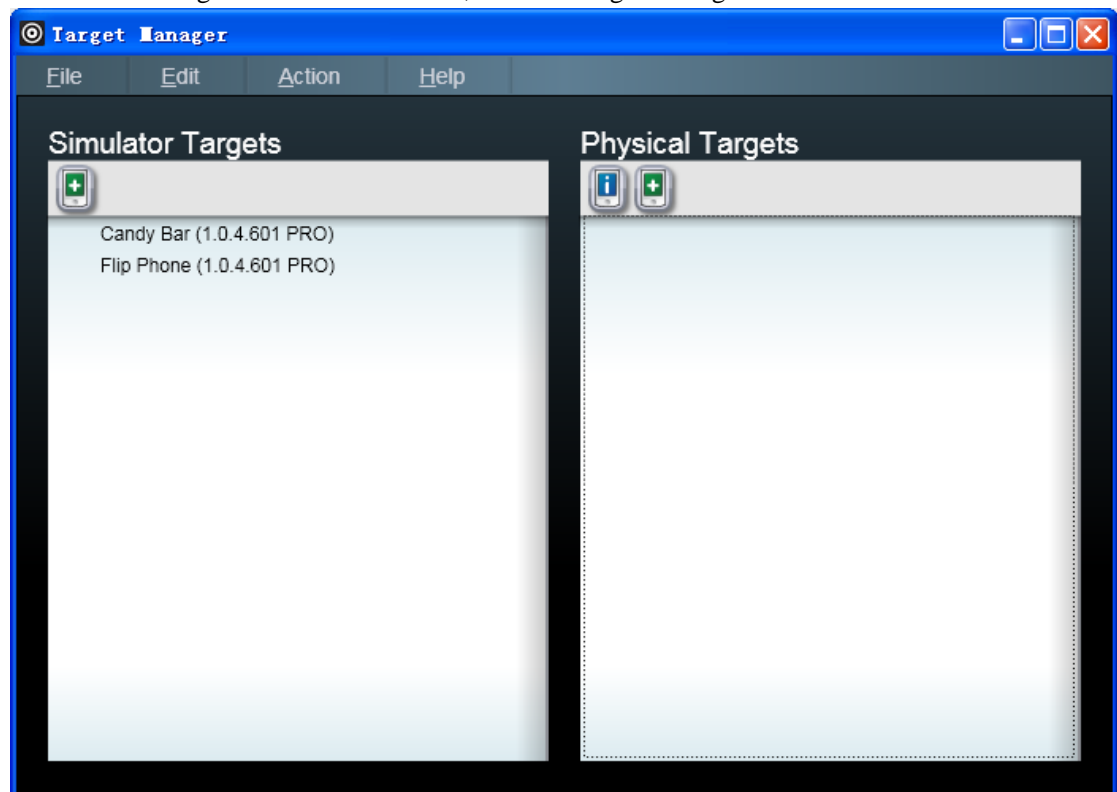


Figure 10. Target Manager

3. Click the add new device button under the Physical Targets list. The Add New Device dialog opens.
4. In the Add New Device dialog, click Next until you reach the dialog to select the diag port. Select the diag port from the drop-down list and click Enable Gateway.
(See Figure 11)

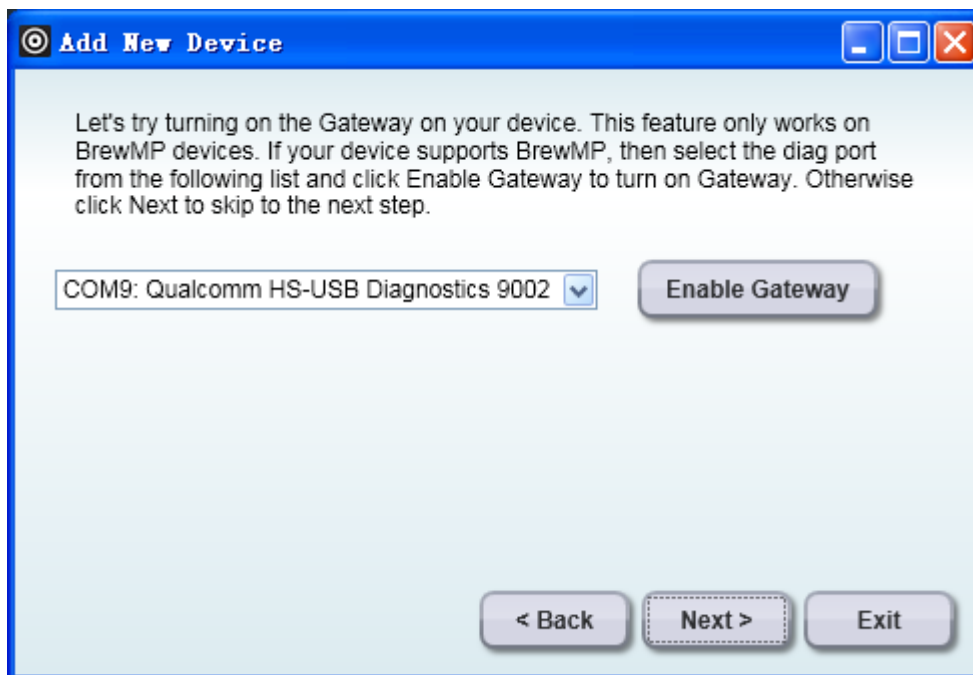


Figure 11. Enable Gateway

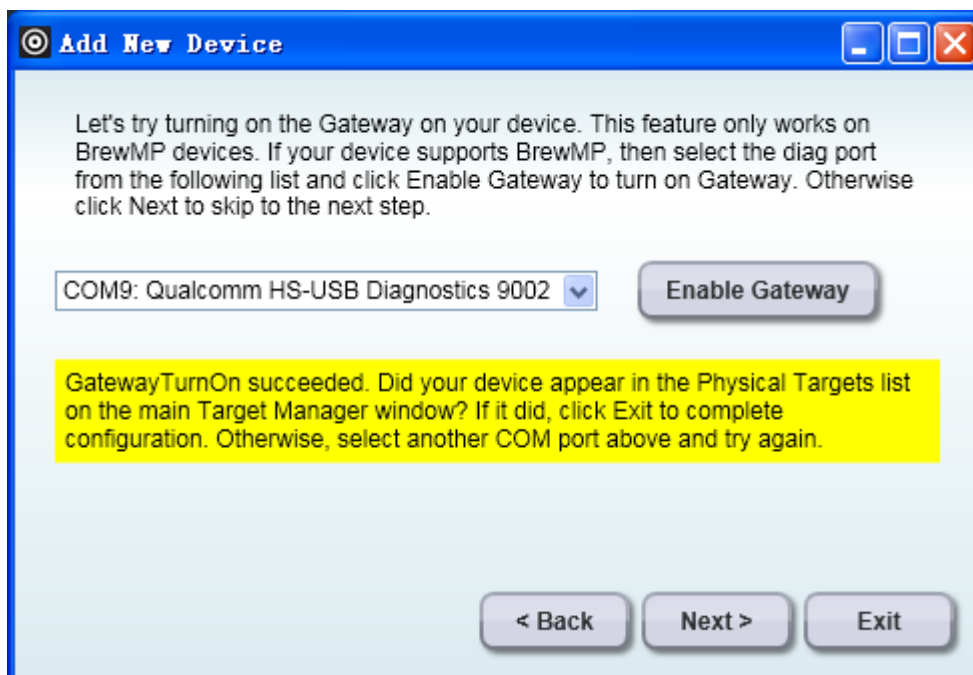


Figure 12. Enable Gateway success

5. Once Gateway is enabled, follow the prompts to exit the dialog. The device is displayed in the Physical Targets list.(See Figure 13)
Note: The first time will let you install Brew MP SDK driver.

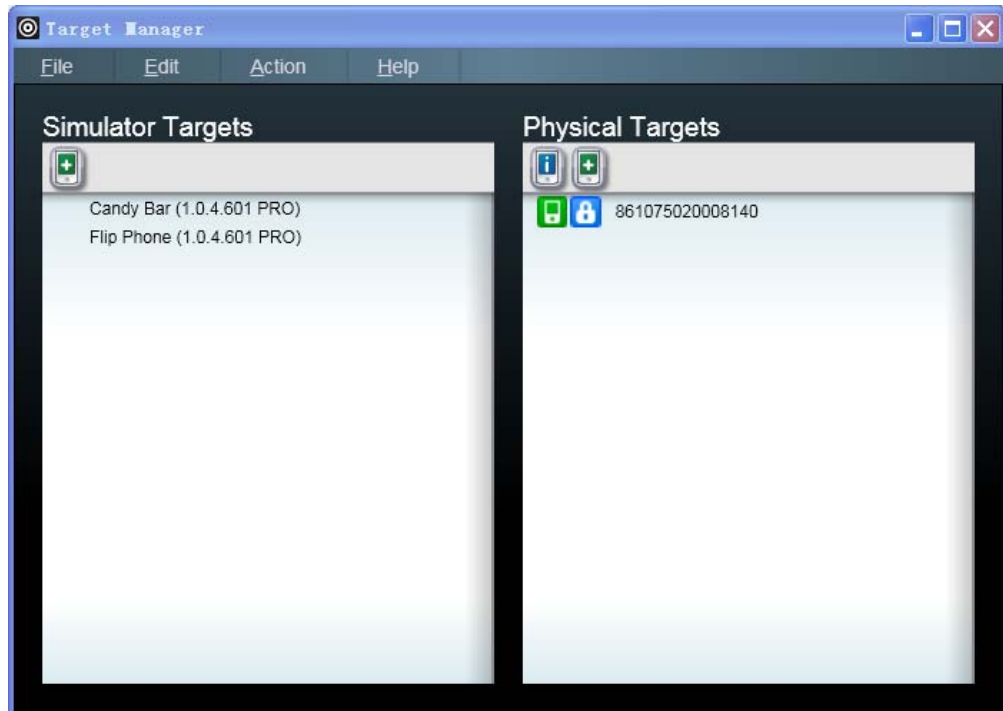


Figure 13

6. Double click the device in the Physical Targets list. The Properties dialog opens. Enter the sig file as Figure 14. And Click enable button

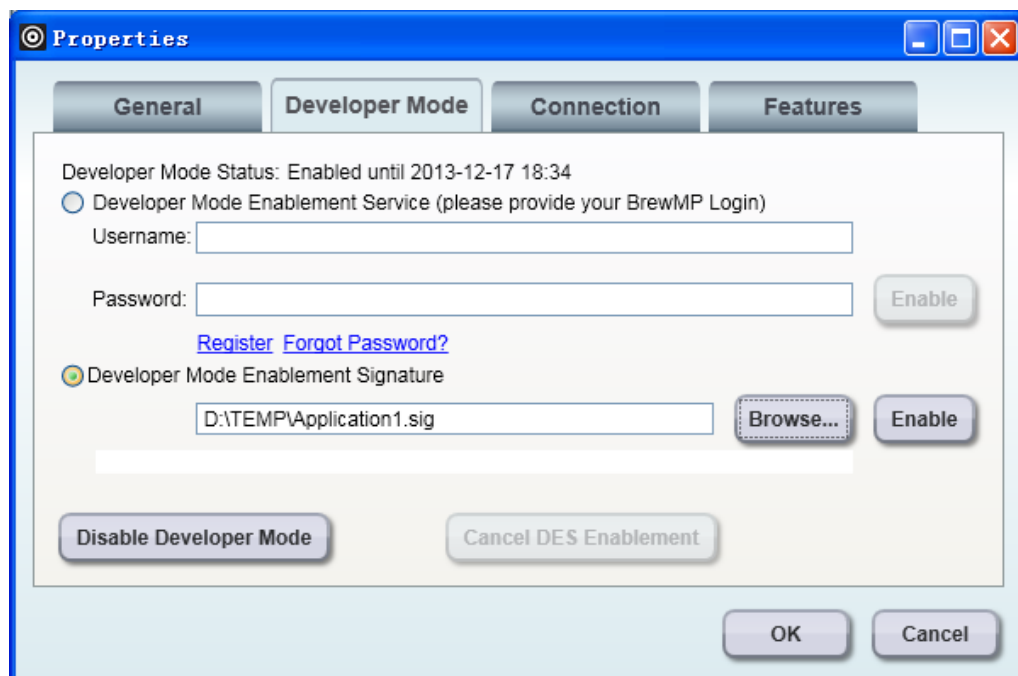


Figure 14

7. When developer mod is enabled. The devices in target Manager will be unlocked. (See Figure 15)

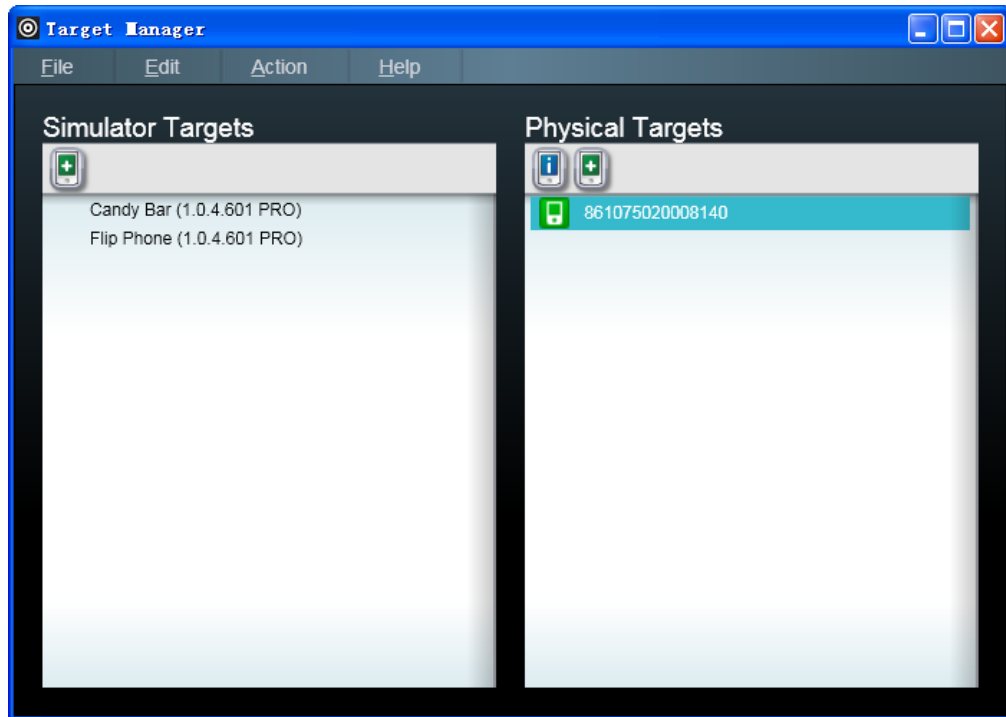


Figure 15

8. Launch Visual Studio and open the Application project.
9. From the Target Type drop-down menu in the Plugin toolbar, select Brew MP Physical Target.



Figure 16

10. If your device is connected to your PC, the device ID should be visible in the Brew MP Target drop-down menu. Select your device. (See Figure 16).
11. set breakpoints in Visual Studio, left-click in the shaded margin on the left in Visual Studio. A red dot will appear at the location you clicked at, setting a breakpoint at that location.

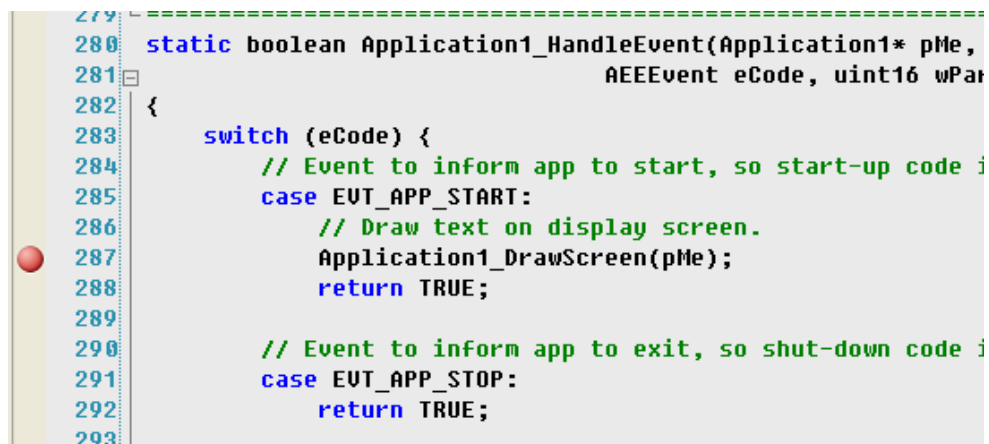


Figure 17

12. Click the debug icon. The Application will run as debug mode.


```

279  =====
280  static boolean Application1_HandleEvent(Application1* pMe,
281  AEEvent eCode, uint16 wPa
282  {
283      switch (eCode) {
284          // Event to inform app to start, so start-up code
285          case EVT_APP_START:
286              // Draw text on display screen.
287              Application1_DrawScreen(pMe);
288              return TRUE;
289
290          // Event to inform app to exit, so shut-down code
291          case EVT_APP_STOP:
292              return TRUE;
293

```

Figure 18

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