



Introduction

The ANCS Profile is used to enable a device to obtain notifications from an iOS device that exposes Apple® Notification Center Service.

The ANCS Profile defines two roles:

- Notification Provider (NP):
The Notification Provider is a device that provides the iOS notifications.
- Notification Consumer (NC):
The Notification Consumer is a device that receives the iOS notifications and notification related data from Notification Provider.

The example application provided currently supports only 'Incoming Call Alert Notification'.

Features

- Device Discovery and Disconnection
- Pairing/Bonding
- Apple Notification Center Service
- Alert on incoming call

Table of Contents

1	Purpose	3
2	Demo Setup.....	4
3	Hardware Setup	4
4	Incoming Call Notification.....	4
5	Software Setup.....	5
5.1	Installation Steps	5
5.2	Build Procedure.....	5
6	Console Logging	7
7	Running the Demo	7
8	BluSDK SMART Software Architecture	9
9	ATMEL EVALUATION BOARD/KIT IMPORTANT NOTICE AND DISCLAIMER	10
10	Revision History	11

1 Purpose

This getting started guide describes the setup of an Atmel® ATSAMB11 Xplained board and bringing up an example profile supplied as part of BluSDK SMART release. The Bluetooth® Apple Notification Center Service is an example application that is embedded as part of the software release package. The device acts as an Alert Notification Client with custom UUID as per Apple's ANCS specification.

5 Software Setup

5.1 Installation Steps

1. Install the latest Atmel Studio [Atmel Studio 7.0 (build 629 or later) web installer (recommended)]
<http://www.atmel.com/tools/ATMELSTUDIO.aspx>.

2. Install the latest Atmel Software Framework.

This package will install the following examples within the Atmel Studio environment.

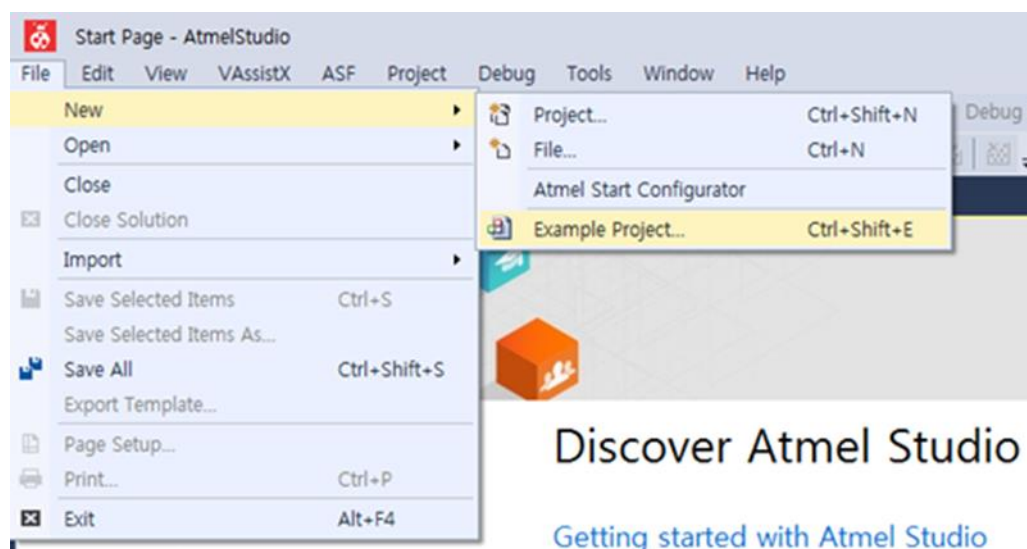
- ANCS application for ATSAMB11

5.2 Build Procedure

The following procedure is explained for ATSAMB11 application example.

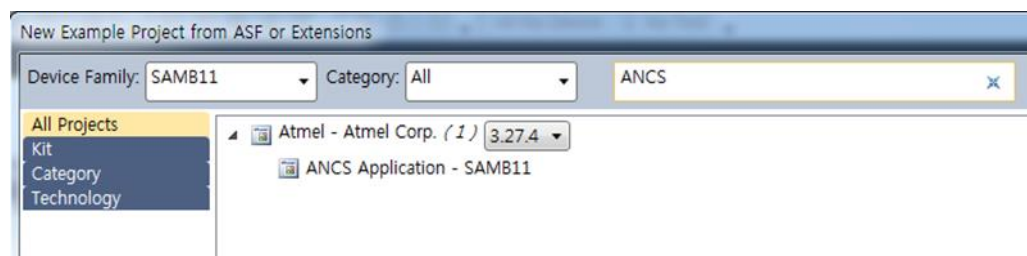
1. Select New Example Project.

Figure 5-1. Creating a New Project



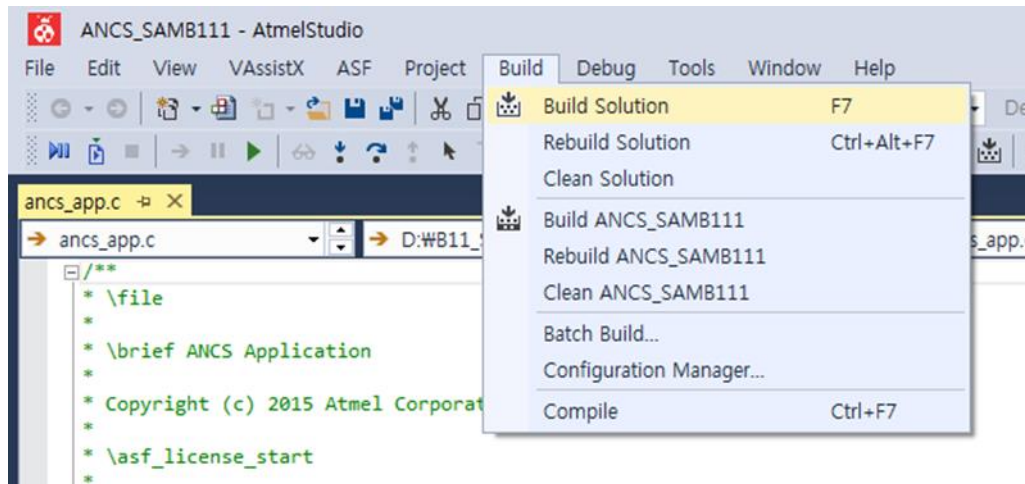
2. Select "SAMB11" in the device family, enter "ANCS" in the search window and expand Atmel Corp Projects. The location and name of the project can be selected in the respective fields. Click OK.

Figure 5-2. Selecting ANCS Profile Application from Example Projects



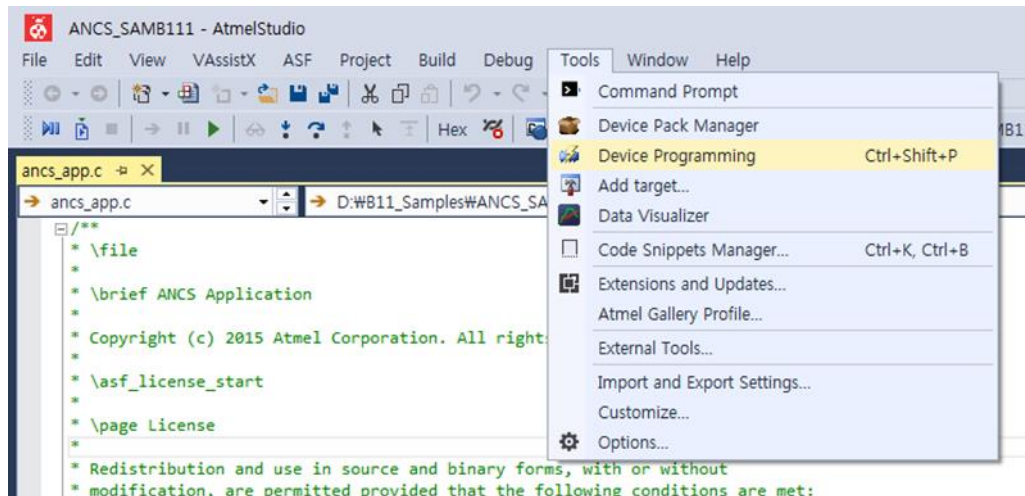
3. Accept the license Agreement. The studio will generate the ANCS Profile project for ATSAMB11.
4. Build the solution.

Figure 5-3. Building the ANCS Profile Application



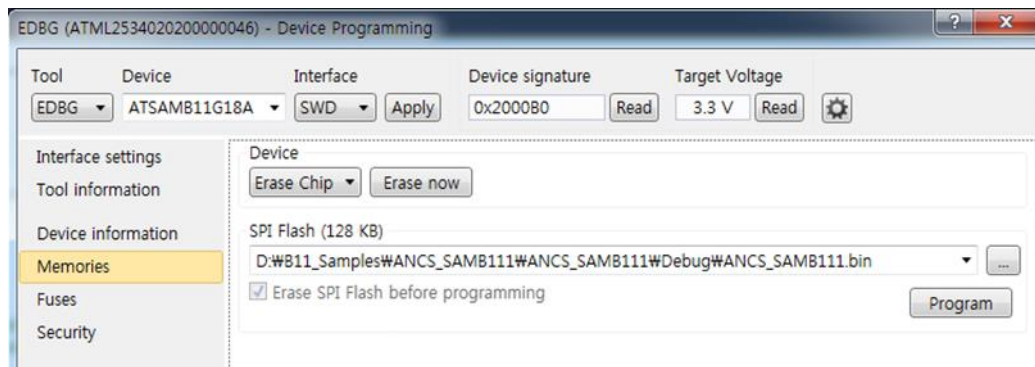
5. Download the application via the USB to the ATSAMB11 board using Device Programming option available in Tools as mentioned below.

Figure 5-4. Flashing the Application on Atmel MCU



6. Inside device programming the user has to select the correct configuration for the device and finally program the device by using the program button.

Figure 5-5. Flash Programming



7. Once the application is flashed the ANCS Application is ready for use.

6 Console Logging

For the purpose of debugging, a logging interface has been implemented in the ANCS Application.

The logging interface utilizes the same EDBG port that connects to ATSAMB11. A serial port monitor application (for example TeraTerm) shall be opened and attached to the corresponding COM port enumerated on the PC by the device.

7 Running the Demo

1. Power on the ATSAMB11 by connecting the USB Cable.
2. Open a console window by using TeraTerm or any equivalent serial port monitor application and connect to the corresponding COM port enumerated on the PC.
3. Press the Reset button on the ATSAMB11 board.
4. The device is now in advertising mode.

Figure 7-1. Display for Advertising Mode

```
ANCS Application
Initializing SAMB11
BD Address:0xF8F005F23FFF, Address Type:0
Device is in Advertising Mode
```

5. On the iPhone, enable Bluetooth in the Settings page. The phone will start to scan for devices. ATMEL-ANCS will be appear amongst the devices scanned. Click on ATMEL-ANCS to connect to the ATSAMB11 device.

Figure 7-2. Atmel ANCS Device Discovery on iPhone



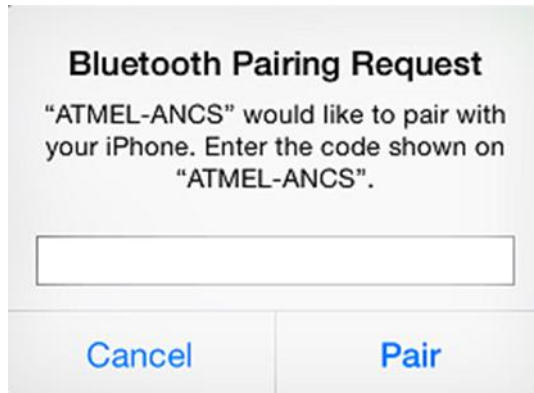
6. Once connected, the client side will request for pairing procedure with iPhone. The console log provides a guidance for the user to enter the pass-key on iPhone.

Figure 7-3. Console Log for Pairing Procedure

```
Peer device request pairing
Sending pairing response
Please Enter the following Pass-code(on other Device):123456
Pairing procedure completed successfully
```

7. On the iPhone side, a pop-up screen prompting the user to enter the pass-key will appear. Enter '123456' in the text box and click on 'Pair'.

Figure 7-4. Pairing Request Pop-up on iPhone



8. Once the device is connected, ATMEL-ANCS will appear in the MY DEVICES section on the iPhone.

Figure 7-5. Display of Connected Device



9. Initiate a Mobile Terminated Call to the iPhone. Once it is indicated on the iPhone, the incoming call alert must be indicated in the console log on ATSAMB11. When the call is terminated the device will wait for alert as mentioned below.

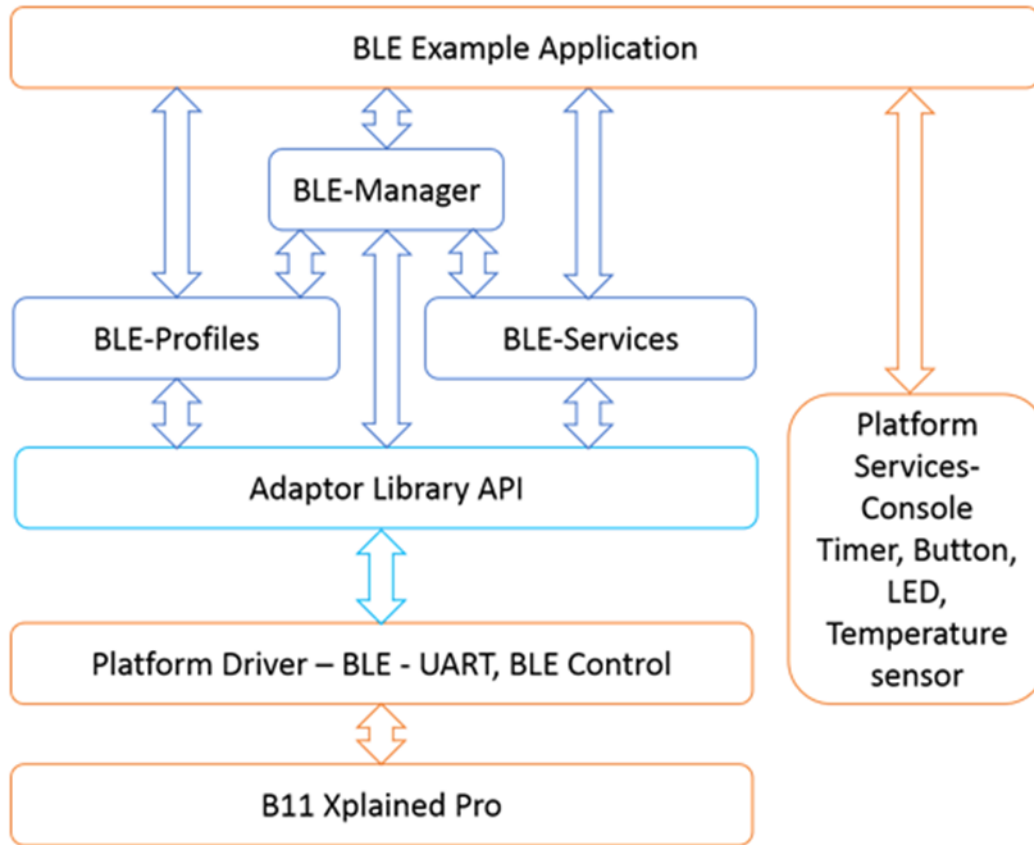
Figure 7-6. Console Log for Incoming Call Notification Update

```
Incoming Call Alert
Waiting for Alert
```


8 BluSDK SMART Software Architecture

Figure 8-1 illustrates the top level diagram for the ATSAMB11 configuration.

Figure 8-1. ATSAMB11 Software Architecture



9 **ATMEL EVALUATION BOARD/KIT IMPORTANT NOTICE AND DISCLAIMER**

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10 Revision History

Doc Rev.	Date	Comments
42595A	11/2015	Initial document release.



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