Product: STRIKE ONE IoT Module
Model: SC01

Get Started with Galapad StrikeOne

2016/1/28 V1.0

Follow these steps to get started with Galapad StrikeOne:

First, make sure you have the following ready or available:

1) Windows 7 Professional Edition or Ultimate Edition
2) RVCT3.1 [Build 569]
3) Microsoft Visual Studio 2008

Second, please register at www.galapad.net/strikeone. Note that you will need to input the Serial Number which can be found on the back of the giftbox label.

Third, go to the "SDK Download" section of the site to download the documents. Unzip this file. Below are the files contained within and a brief introduction of each.

Galapad-IOT-Module-Development-Kit-V1.6 .zip

1)Galapad-Package:

GalapadDemo：
Source code of a demo linkit app on how to use GTXLib

Galapad-Test-App-and-VXP:
Includes the android app for testing hardware, and the test linkit app (vxp file)

GTXLib-and-HeaderFiles:
Includes the binary file of GTXLib and header files related with it

StrikeOne Datasheet-v1.32-0126.pdf:
Spec of the Strike One hardware

Galapad_Linkit_GTXLib_API_Doc1.2.pdf:
Documentation for all GTXLib APIs

MAUI.11C.W14.18.SP4.V16.F10.zip:
Firmware files for the StrikeOne hardware

2)MTK-Package:

Android_SmartDevice_Sample_Source_Code:
The sample source code of the android app for communication between android devices and MTK wearable devices, released by MTK. Includes an introduction to the architecture.

Catcher_v3.1512.00(Official):
Tool for catching system and linkit app logs of StrikeOne. You can use this tool to debug.

FlashTool_v5.1516.00(Official):
Tool for downloading firmware into StrikeOne

Linkit-SDK-v1.0.00.21:
Linkit SDK for developing linkit apps

MauiMETA_exe_3G_v7.1432.0:
Tool for reading files or folders from the Strike One file system or writing files or folders into Strike One file system.

MS_USB_ComPort_Driver_v1.1032.1(Official):
Driver for the USB comport

Finally, set up StrikeOne module according to the following steps:

- **1 Test hardware**
  - 1.1 Read spec of hardware
    See Galapad-Package\Datasheet - SC01(20151013v1.31).pdf for Galapad StrikeOne Hardware Spec
  - 1.2 Install Galapad Test App into an Android smart phone
    The apk file path is Galapad-Package\Galapad-Test-App-and-VXP\AndroidSmartDevice.apk. The Android version on the installed hardware must be 4.4 or higher.
  - 1.3 Connect tracker with Galapad Test App
    Power on the tracker, start Galapad Test App on the smart phone, power on the smart phone's bluetooth if it is powered off, click he scan button to scan bluetooth devices, find the device named "StrikeOne" and click it to connect
  - 1.4 Begin to test
    After connecting, click Hardware Test. You will see all of the test commands for the hardware to begin to test what you want to test. Check all the hardware functions to make sure they work.
  - 1.5 About test VXP(VXP is suffix of the linkit executable file)
    We have embeded a test vxp file in the tracker, to test hardware without any programming. But you will need to replace it with your own linkit vxp when you do development. You can use the Meta tool to do this replacement, located in folder MTK-Package\MauiMETA_exe_3G_v7.1432.0. See step 6 for how to use it. The embedded vxp file's path is "Z:\@BTMre\installed\default.vxp"
- **2 Build development environment**
  PC Operating System must be Windows 7 Professional Edition or Ultimate Edition
  - 2.1 Install RVCT(RealView Compilation Tools)
    RVCT is an arm compilation tool for RVDS, a toolchain produced by the ARM company used to develop software based on the ARM architecture. You can get to know more about this tool from ARM's official website. RVDS is a licensed toolchain, so you may need to buy it from ARM. The version of RVCT should be "RVCT3.1 [Build 569]" exactly.

- 2.2 Install Microsoft Visual Studio 2008

  You must install Microsoft Visual Studio 2008 as the precondition of Linkit SDK. Both Express Edition and Professional Edition are acceptable. If you do not want to buy Visual Studio, see Step 5 for help.
- 2.3 Install MTK official Release Linkit SDK 1.0

  There are two versions, Chinese and English, see MTK-Package\Linkit-SDK-v1.0.00.21, follow the Getting Started With LinkIt_XXX.pdf for assistance. (The file ending Chi is Chinese version, ending with Eng is English version) to install Linkit SDK.

  After installation, go to Start Menu -> All Programs -> LinkIt SDK 1.0 -> Document for more information about how to use the Linkit IDE to develop.

  We use RVCT as the ARM compilation tool for our software, so be sure to change the ARM Compiler to RVCT3.1 after you create a new project. See Start Menu -> All Programs -> LinkIt SDK 1.0 -> Document -> Linkit SDK IDE User Guide.pdf -> 3.1.5

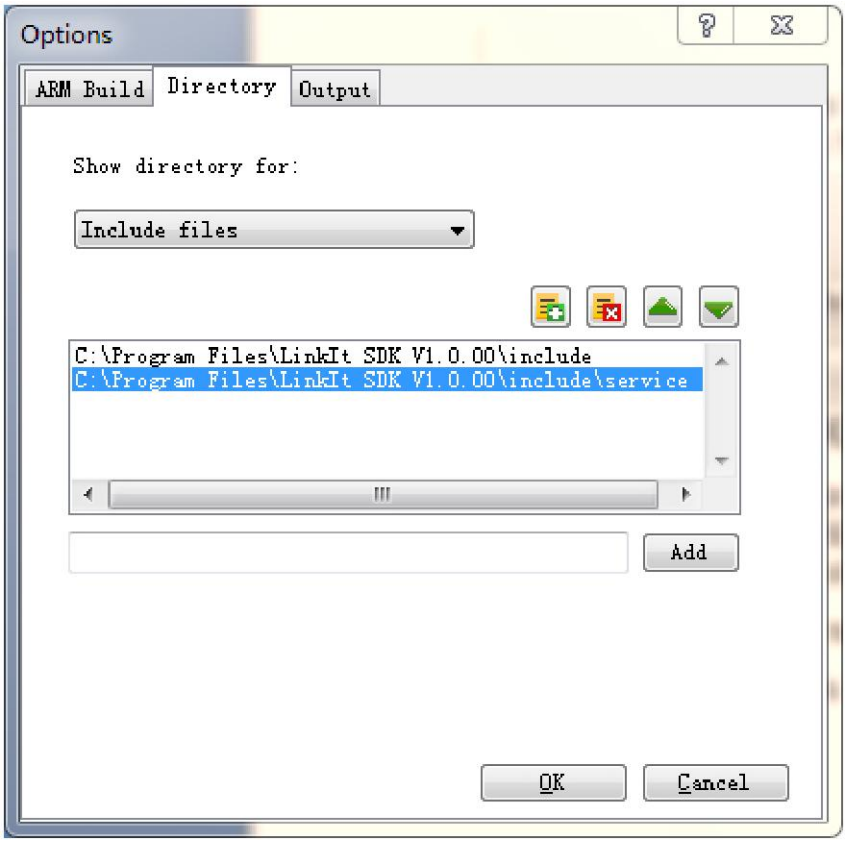
- **3 Read Galapad Linkit GTXLib API document**

  See Galapad-Package\Galapad_Linkit_GTXLib_API_Doc1.0.pdf

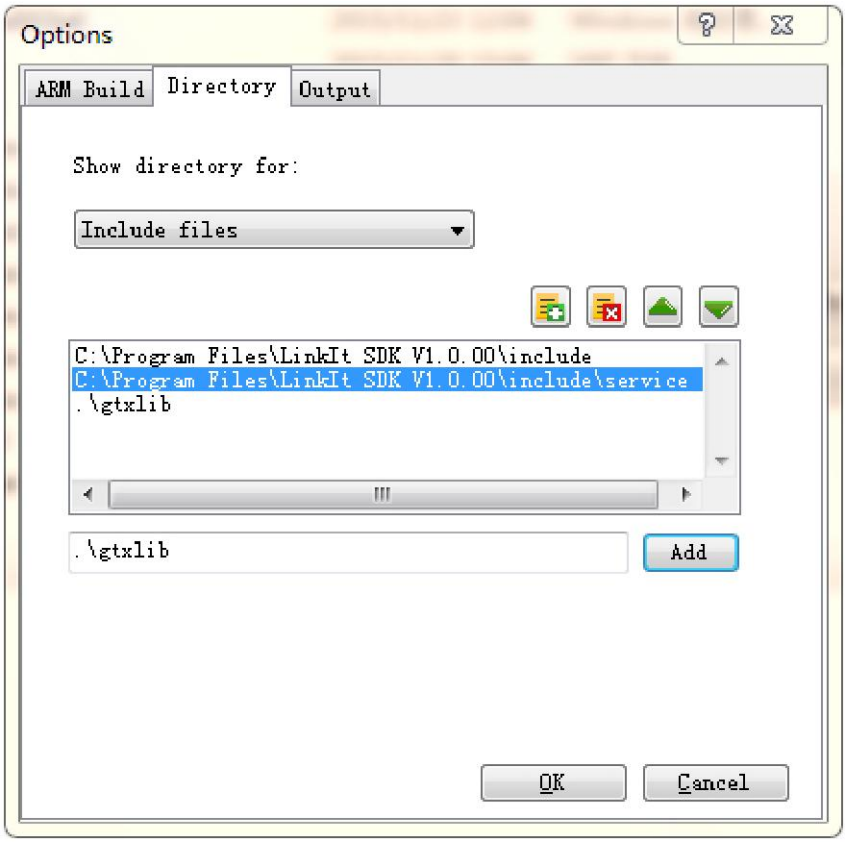
- **4 How to use GTXLib in your Linkit project**

  GTXLib is a static library, so go to Start Menu -> All Programs -> LinkIt SDK 1.0 -> Document -> Linkit SDK IDE User Guide.pdf -> 3.1.5.2 for instructions on how to add Include files and Library files, and follow the steps below:

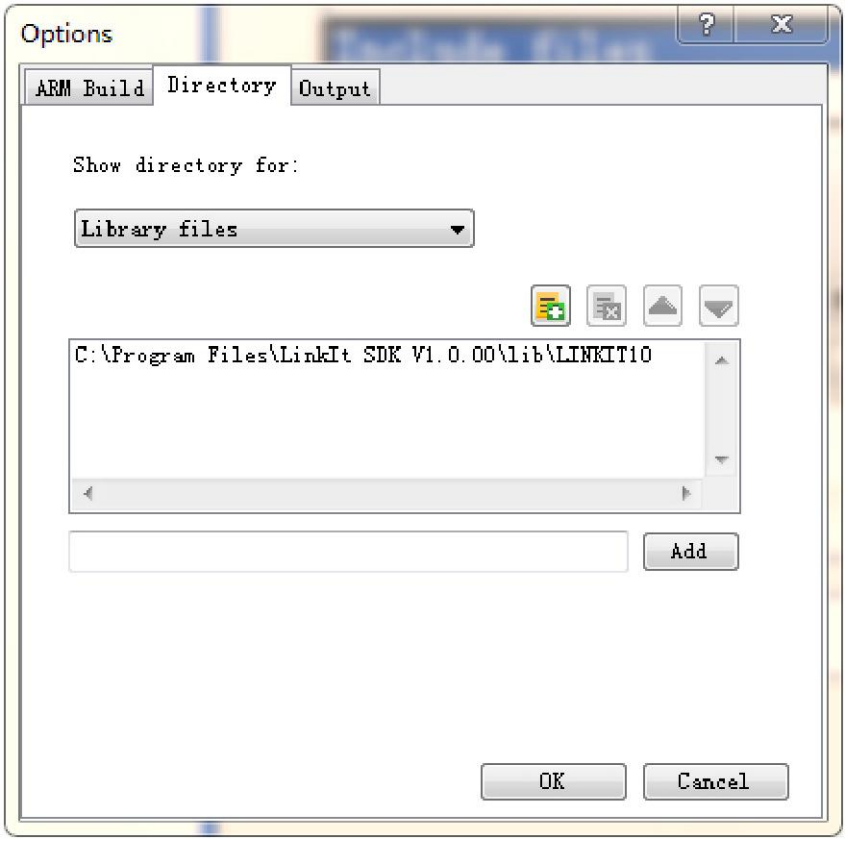
- 4.1 Create a folder named “gtxlib” under your project root path
- 4.2 Copy all the files under Galapad-Package\GTXLib-and-HeaderFiles into “gtxlib”
- 4.3 Choose “Include files” in the drop-down box of the following interface:



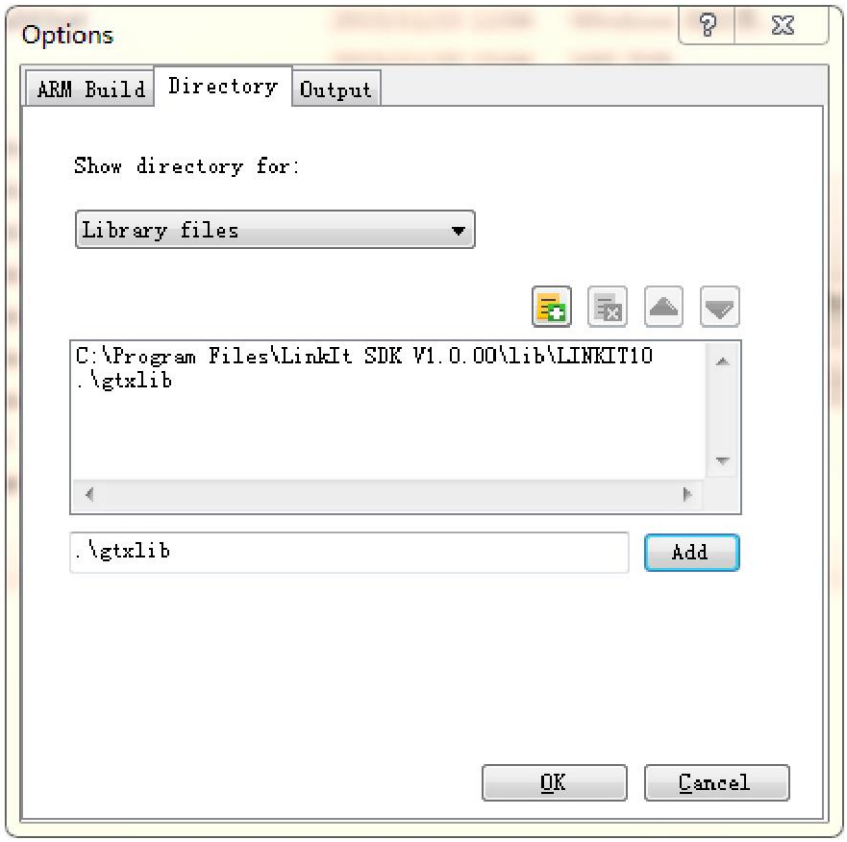
- 4.4 Type ".\gtxlib" in the textbox, and Click Add to add the path into the list:



- 4.5 Choose "Library files" in the drop-down box:



- 4.6 Type ".\gtxlib" in the textbox, and Click Add to add the path into the list:



- 4.7 Click OK to complete the setup, then you can compile your project with GTXLib APIs.
- 4.8 A demo project is in Galapad-Package\GalapadDemo

- **5 An Eclipse Plugin for Linkit**

  If you do not have Visual Studio installed in your PC, we recommend an open-source eclipse plugin for development.

- 5.1 You can get the source code from https://github.com/henols/LinkItToolChain
- 5.2 Compile the source code by yourself, and install it into eclipse. You need to use the latest Eclipse IDE for C/C++ Developers, version is Mars Release(4.5.0)
- 5.3 For more information about how to use it, contact the author.

- **6 How to use the tools in MTK-Package**

  There are several tools in folder MTK-Package , including a USB comport driver, tools used for catching program logs, downloading firmware and so on. You need to contact MTK to get to know how to use it. The firmware for our tracker is in Galapad-Package\MAUI.11C.W14.18.SP4.V16.F09.zip

FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1)this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

SAR: The device complies with RF specifications when the device used at 20cm from your body.