

Add Shiled Board of IKS01A2

Step 1: Access <https://os.mbed.com/platforms/TT-M3HQ/>

The screenshot shows the mbed.com website interface. At the top, there is a navigation bar with 'arm MBED' logo and menu items: Overview, Hardware, Docs, Code, Support, Built with Mbed. There are also buttons for 'Portal', 'Compiler', and a user profile icon. Below the navigation, the breadcrumb 'Boards » ThunderSoft TT_M3HQ' is visible. The main heading is 'ThunderSoft TT_M3HQ' with a sub-heading 'Arm Cortex-M3 MCU Starter Kit TT-M3HQ development board for Toshiba TMPM3HQDFDG MCU.' A central image shows the physical development board. To the right, there is a 'Board Partner' section featuring the 'ThunderSoft' logo. A 'Table of Contents' button is located at the bottom right of the board image area. A 'Compile' button is highlighted in yellow in the original image.

Step 2: Click on [Add to your Mbed Compiler] Button

- Flexible power supply
 - USB, VBUS or external source 5V
- 2.54mm pitch 3-pin jumper connector for power supply 3.3V or 5V select
- 4 extension – Arduino™ Uno connectivity, Extension headers, Motor connection header, SeeedGrove connection header, Compatible with a wide range of commercially available shields
- Power LED, 2 LEDs for DAP and 4 LEDs for user
- 2 Push-Switches: Reset and User
- 2 DIP-Switches for User
- DAP-LINK debugger and programmer with SWD connector
- USB Interfaces supported
- Built-in USB drag 'n' drop FLASH programmer
- Arm® Mbed™-Enabled

TT M3HQ Spec

This screenshot shows the 'Add to your Mbed Compiler' button highlighted with a red rectangular box. Below it is a yellow 'Buy Now' button. A 'Following' button is also visible. At the bottom, there is an 'arm Mbed Enabled' badge. A large red arrow points downwards from the 'Add to your Mbed Compiler' button towards the next screenshot.

This screenshot shows a green confirmation message: 'Platform 'ThunderSoft TT_M3HQ' is now added to your account!'. Below the message, the 'ThunderSoft TT_M3HQ' board page is visible, including the board image and the 'Edit board' button.

Step 3: Click on [IKS01A2] Link

Target Application

Thundersoft has finished 10 kinds of shield board and sensor's test program, please refer to.

- [Download](#) Test Program
- [Download](#) Manual

Shield board and sensor list:

No.1	FRDM_FXS_MULTI Shield Board	No.2	FRDMSTBC-A8491 Shield Board
No.3	X_NUCLEO_VL6180XA1 Shield Board	No.4	X-NUCLEO-IKS01A2 Shield Board
No.5	6-axis Sensor GY-521 MPU6050	No.6	Rohm Heart Rate Sensor BH1790GLC
No.7	PIR Sensor	No.8	Reed Switch Sensor CK021
No.9	Temperature and Humidity Sensor	No.10	LCD HX8347D
No.11	Blink		

Step 4: Then click on [import into Compiler] to compile

Thundersoft / OS 5  [IKS01A2_for_TT_Mxx](#)

Creating a project about IKS10A2 for TT_Mxx

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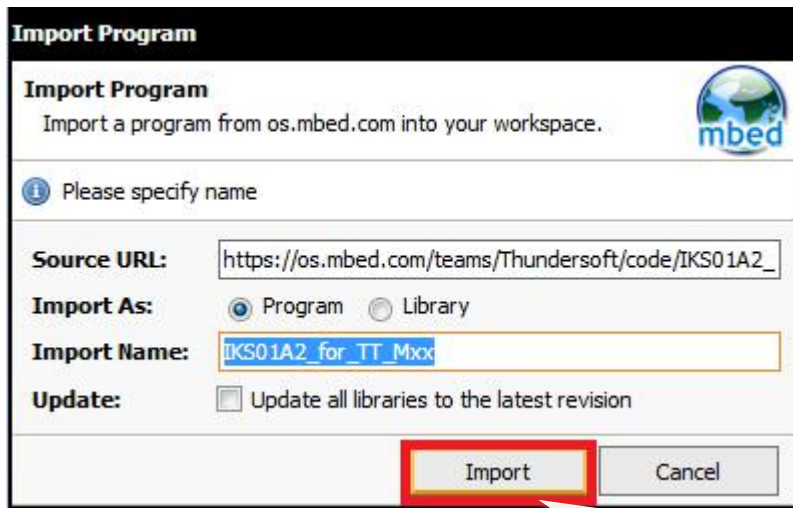
Files at revision 1:28de8dff2317 Download repository: [zip](#) [gz](#)

[/ default](#) [tip](#)

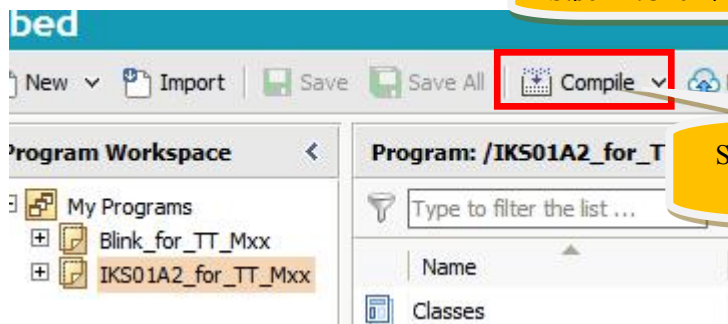
Name	Size	Actions
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Repository toolbox

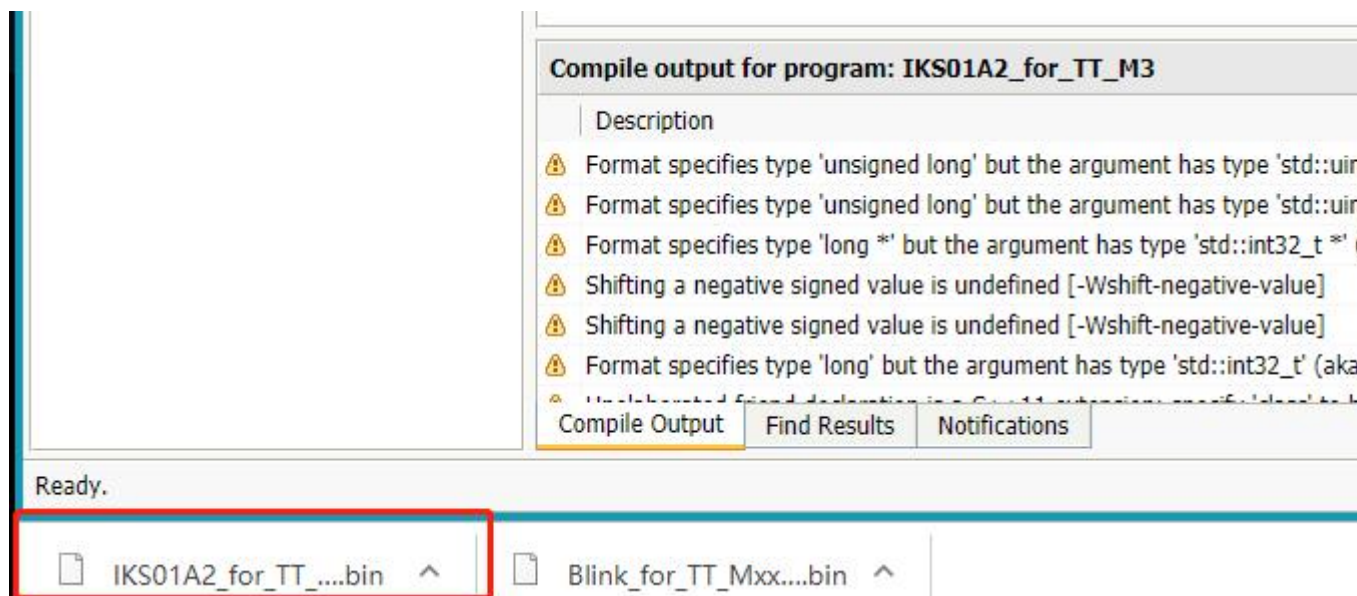
- [Import into Compiler](#)
- [Export to desktop IDE](#)
- [Build repository](#)
- [Send Pull Request from here](#)
- [Following](#)
- [Set as example](#)



Step4-1:Click [Import]



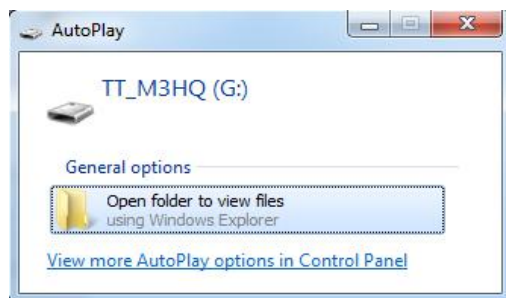
Step4-2:Click [Compile] to generate .bin File



Step 5: Connect TT_M3HQ with shield board IKS01A2



Step 6: Connect TT_M3HQ Board to PC with USB Cable



Step 7:

Copy IKS01A2_for_TT_Mxx.TT_M3HQ.bin to TT_M3HQ

Step 8:Pressing SW1



Open serial port to display log.(If you know nothing about serial port, you can ignore the below content and then continue to add LCD Mouldle)

```
Welcome to Thundersoft TT_M3HQ
LSM6DSL Sensor ID = 0x6a
LSM303AGR_ACC_Sensor ID = 0x33
LSM303AGR_MAG_Sensor ID = 0x40
HTS221Sensor ID = 0xbc
LPS22HBSensor ID = 0xb1
LSM6DSL X Axes = -12 , -28 , 1019
LSM6DSL G Axes = -1890 , 2450 , 140
LSM303AGR [acc/mg] = 16 , 8 , 948
LSM303MAG [mag/mgauss] = 250 , -229 , -940
HTS221Sensor humidity = 39.200001,temperature = 28.799999
LPS22HBSensor pressure = 0.000000, temperature = 30.200001
LSM6DSL X Axes = -11 , -28 , 1017
LSM6DSL G Axes = -1890 , 2450 , 140
LSM303AGR [acc/mg] = 4 , 12 , 971
LSM303MAG [mag/mgauss] = 255 , -229 , -937
HTS221Sensor humidity = 38.299999,temperature = 28.600000
LPS22HBSensor pressure = 0.000000, temperature = 30.100000
LSM6DSL X Axes = -13 , -28 , 1015
LSM6DSL G Axes = -1890 , 2450 , 140
LSM303AGR [acc/mg] = 12 , -3 , 963
LSM303MAG [mag/mgauss] = 253 , -235 , -937
HTS221Sensor humidity = 38.000000,temperature = 28.400000
LPS22HBSensor pressure = 0.000000, temperature = 30.000000
LSM6DSL X Axes = -11 , -28 , 1019
LSM6DSL G Axes = -1890 , 2380 , 140
LSM303AGR [acc/mg] = 16 , 0 , 971
LSM303MAG [mag/mgauss] = 255 , -240 , -942
HTS221Sensor humidity = 37.799999,temperature = 28.299999
```

Add LCD module of HX8937D

Points for attention when using LCD:

Because of the hardware design, this LCD Module of HX8937D cannot be used directly on the development board, nor can it be combined with other Shield Board. The hardware of this LCD needs to be modified.

Please refer to the document which is located in [LCD Usage](#) in Wiki, if you need to add LCD module HX8937D

Reference example

[Example for TT M3HQ Board](#)



Wiki pages

Sort by: [Score](#), [Alphabetical](#), [Date](#)

[IKS01A2 Tutorial](#)

Last updated: [44 minutes ago](#)

[LCD Usage](#)

Last updated: [about an hour ago](#)

[LED Blink](#)

Last updated: [about an hour ago](#)

Step 1: Import code

Target Application

Thundersoft has finished 10 kinds of shield board and sensor's test program, please refer to.

- [Download Test Program](#)
- [Download Manual](#)

Shield board and sensor list:

No.1	FRDM_FXS_MULTI Shield Board	No.2	FRDMSTBC-A8491 Shield Board
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No.7	PIR Sensor	No.8	Reed Switch Sensor CK021
No.9	Temperature and Humidity Sensor	No.10	LCD HX8347D
No.11	Blink		

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[Import into Compiler](#)

[Export to desktop IDE](#)

[Send Pull Request from here](#)

[Following](#)

Import Library

Import a library from os.mbed.com into a program in your workspace.

Please specify name

Source URL:

Import As: Program Library

Import Name:

Target Path:

New Program:

Update: Update all sub-libraries to the latest revision

Import Library

Import a library from os.mbed.com into a program in your workspace.

Please specify name

Source URL:

Import As: Program Library

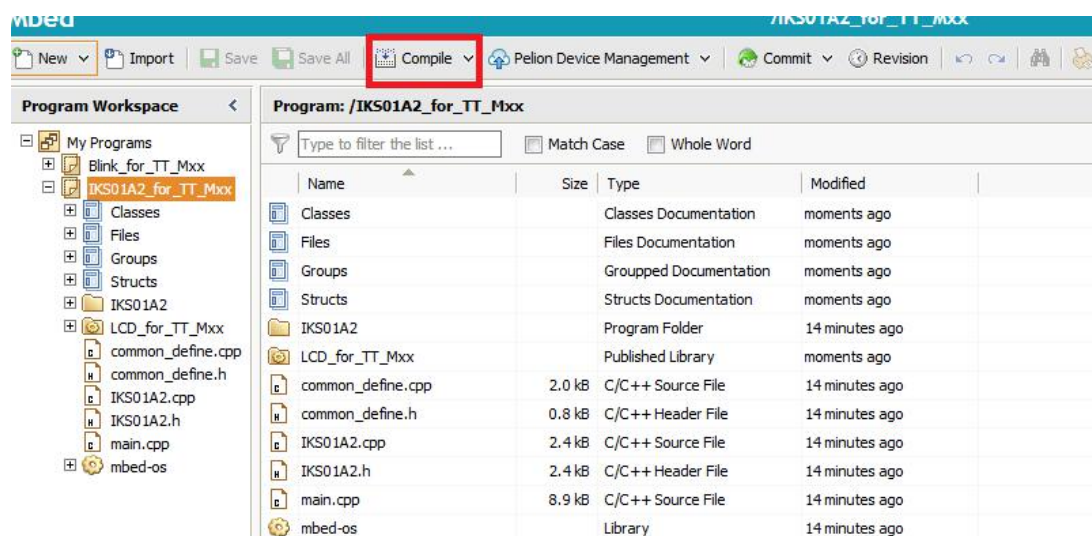
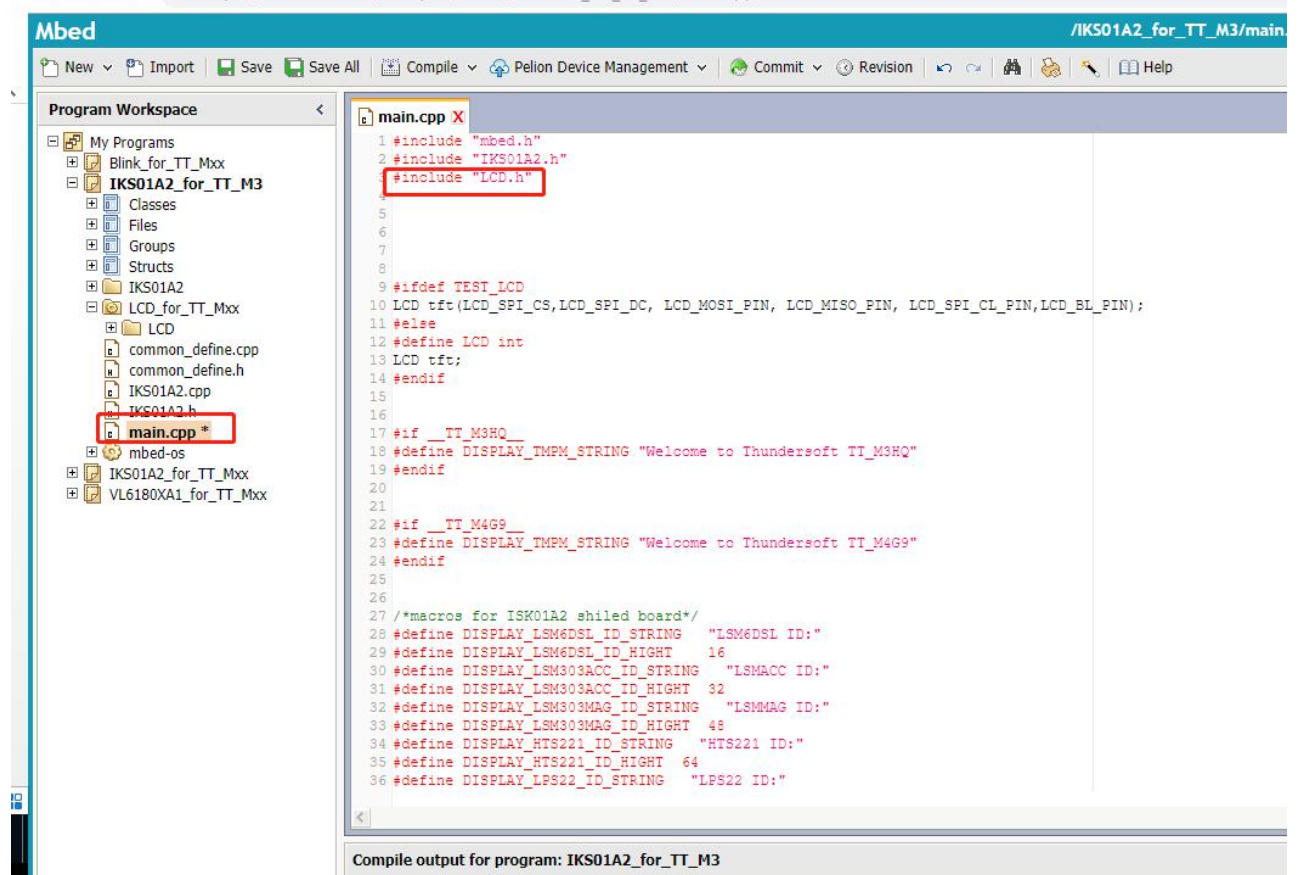
Import Name:

Target Path:

New Program:

Update: Update all sub-libraries to the latest revision

Step 2: Add code [#include "LCD.h"] into main.cpp and then save and compile



Points of Compile:

If your compile failed and can not generate the .bin file ,please refer to the [Note] which is at the end of this document and then compile again.

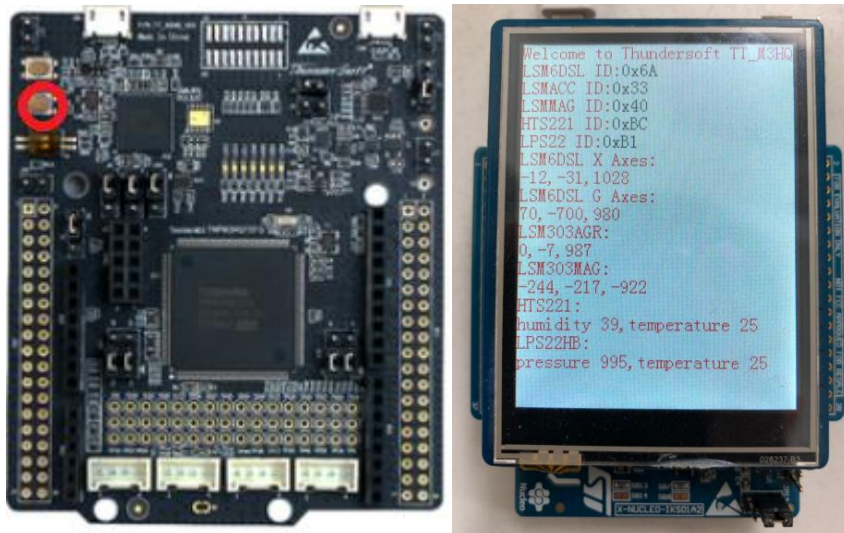
Compile fail reason: the newest mbed os of 5.12 has some issues which are not fixed at present (They are expected to be resolved in the next version of mbed os)

Step 3:Connect LCD with shield board and TT_M3HQ

Step 4:Copy the new IKS01A2_for_TT_Mxx.TT_M3HQ.bin to TT_M3HQ

Step 5:Pressing SW1

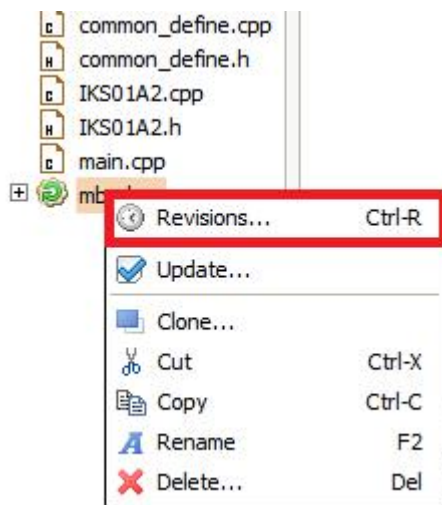
If the LCD is not lighted on, please refer to the [Note] which is at the end of this document and then compile again.



Note:

At present (2019/5/22), because the current mbed-os of 5.12 has not resolved SPI NC bug ,the LCD can not be lighted on after copy .bin file TT_M3HQ and reset ,at this case, you need to switch mbed-os version to [tag:mbed-os 5.114 Merge pull request #9646 from ...] as below and then compile again.

Select mbed-os in project IKS01A2_for_TT_Mxx.



Switch mbed-os 5.11.4 branch to [tag:mbed-os 5.114 Merge pull request #9646 from ...].

