

Application Note ArduiTouch MKR Simple Codelock



Rev.	Date	Description
A	2019-10-21	First release

1. Introduction

A lot of customers asked us for a very simple code example for ArduiTouch to test their work and also as starting point for own developments. This very simple codelock will demonstrate the basic functions of ArduiTouch without any bells and whistles.

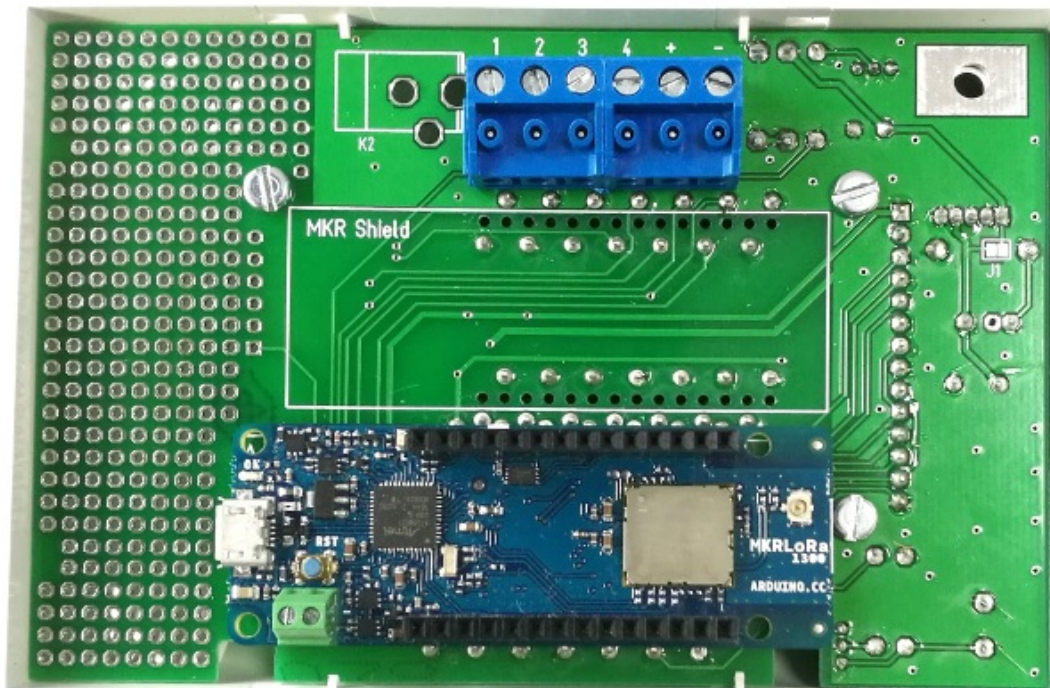
2. Bill of Material

- MKR board of your choice
- ArduiTouch MKR kit

3. Assembly

Please follow for the assembly of the ArduiTouch MKR our construction manual for ArduiTouch MKR.

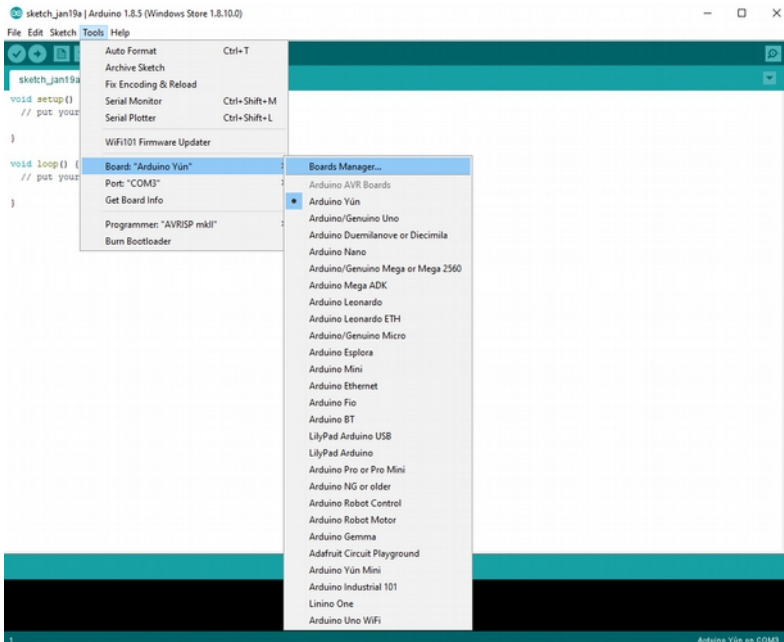
You have to plug the Arduino MKR board into the marked slot on the backside of the ArduiTouch pcb:



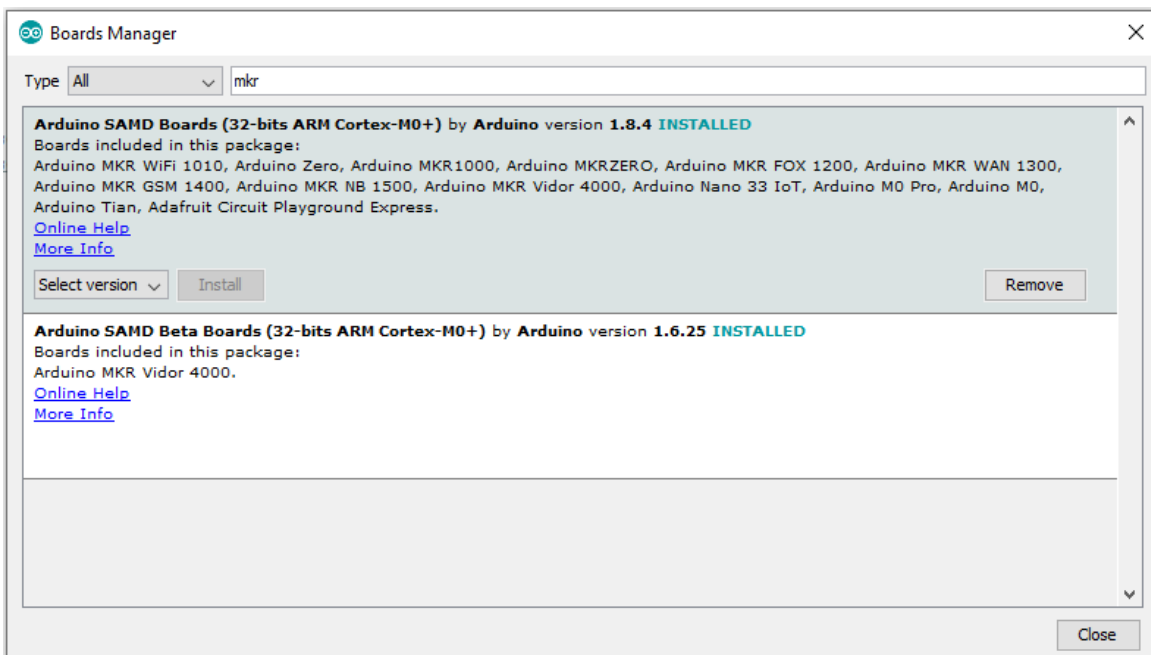
4. Preparation of Arduino IDE

We have to install the support for ArduiTouch MKR series in the Arduino-IDE first.

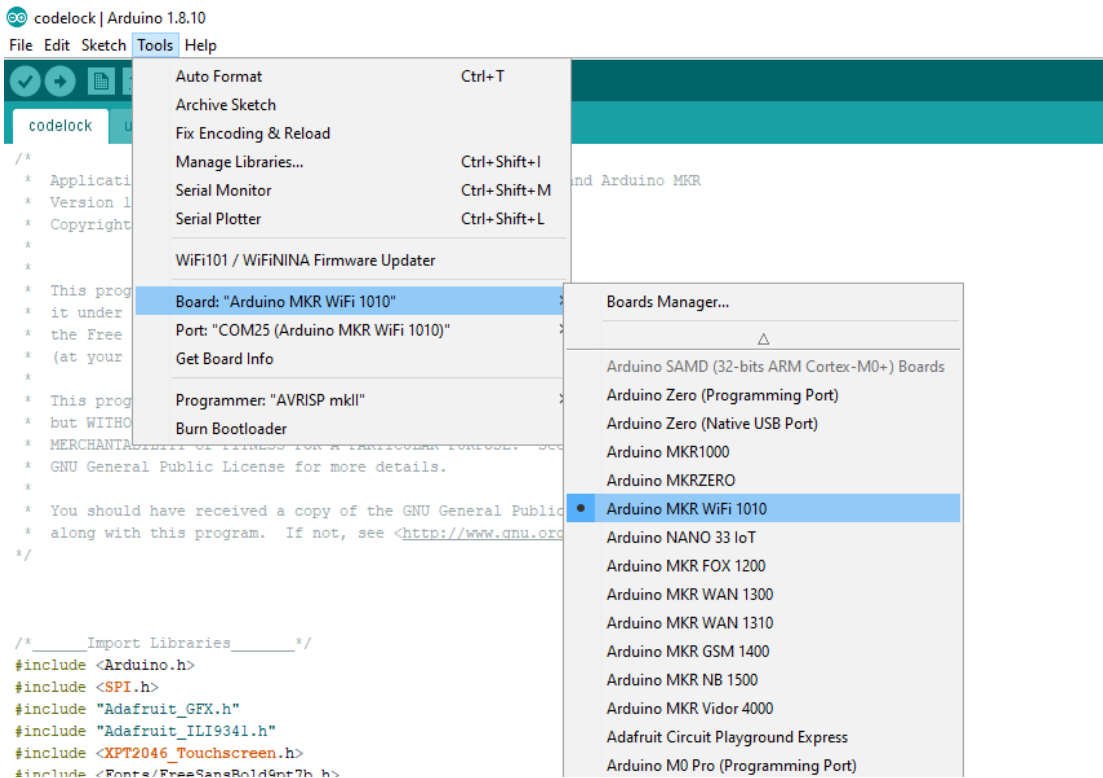
Open the board manager: **Tools / Board / Board Manager**



Enter „MKR“ and go to the **Arduino SAMD Boards (32-bits ARM Cortex-M0+)** entry and install it:



Now you can choose the Arduino MKR board of your choice. Don't forget to set the COM port too.



3. Programming

3.1 Installation of additional libraries

Install the following libraries through Arduino Library Manager

Adafruit GFX Library

<https://github.com/adafruit/Adafruit-GFX-Library/archive/master.zip>

Adafruit ILI9341 Library

https://github.com/adafruit/Adafruit_ILI9341

XPT2046_Touchscreen by Paul Stoffregen

https://github.com/PaulStoffregen/XPT2046_Touchscreen/blob/master/XPT2046_Touchscreen.h

You can download the library also directly as ZIP file and uncompress the folder under yourarduinofolder/libraries/

After installing the Adafruit libraries, please restart the Arduino IDE.

3.2 Source Code

You will find the source code on our website.

<https://www.hwhardsoft.de/english/projects/arduitouch-mkr/>

3.3 Custom settings in settings.h

In the source code you can set the code number :

```
#define codenum 42
```

42 is the answer for everything, but you can change this to any number between 0 and 999999.

Furthermore you can set the switching time of the optional relay there:

```
#relay_on_time 40
```

3.4 Run the demo

Please open this sample in the Arduino IDE. After compilation and upload you will see the keypad. Now you can enter a code number and confirm with „OK“ button.