

## Hardware and software used in MCU1 course

Note: The links given in this document are NOT purchase links. They are given just as reference links to explore the components.

## HARDWARE

No	Item	Nos	Note	Reference link
1	STM32F407 DISCOVERY board	1	This is the main development board for which drivers are developed.	<a href="#">check here</a>
2	Arduino Uno	1	The arduino Uno board is used to test SPI, I2C, UART code examples. This board acts as a slave device and communicates With the main STM32 board. You can use low cost clone Arduino Uno board instead of using original ones.	<a href="#">check here</a>
3	LEDs	1	5mm LED	<a href="#">check here</a>
4	Push button	1	Mini Pushbutton	<a href="#">check here</a>
5	Resistors	2	22K $\Omega$ , 4.7K $\Omega$ , 470 $\Omega$ ;	

6	USB logic analyzer	1	In this course saleae logic 8 device is used. Please check <a href="http://www.saleae.com">www.saleae.com</a> for more information about the different products available from saleae	<a href="#">check here</a>
7	jumper wires		M-M, M-F,F-F;	<a href="#">check here</a>
8	breadboard	1	full or medium size	<a href="#">check here</a>
9	Logic Level convertor	1	Bidirectional convertor which shifts 3.3 V to 5V and 5V to 3.3V	<a href="#">check here</a>
10	DS1307 Tiny RTC module	1	For interfacing project	<a href="#">check here</a>
11	16x2 Character LCD	1	For interfacing project	<a href="#">check here</a>

## SOFTWARE

No	Item	Nos	Note	Reference link
1	STM32CUBEIDE		Eclipse based IDE. Provided by ST. Multi OS support	FREE

			(windows/linux/mac)	
2	saleae logic analyzer software		<p>This software used only if you have saleae logic analyzer hardware you can download this software from here</p> <p><a href="https://www.saleae.com/downloads/">https://www.saleae.com/downloads/</a></p> <p>This software is used for protocol tracing and decoding</p>	FREE

## Hardware and software used in MCU2 course

Note: The links given in this document are NOT purchase links. They are given just as reference links to explore the components.

### HARDWARE

No	Item	Nos	Note	Reference link
1	STM32F446RE NUCLEO board	2	This is the main development board for which drivers are developed. Use either one. These boards are explained in this course.	<a href="#">check here</a>
2	CAN Transceivers	2	For interfacing project	<a href="#">check here</a>
3	USB logic analyzer	1	In this course saleae logic 8 device is used. Please check <a href="http://www.saleae.com">www.saleae.com</a> for more information about the different products available from saleae	<a href="#">check here</a>
4	LEDs	1	5mm LED	<a href="#">check here</a>
5	Resistors	2	22K $\Omega$ , 4.7K $\Omega$ , 470 $\Omega$ ;	

6	jumper wires		M-M, M-F,F-F;	<a href="#">check here</a>
7	Multimeter	1	It should support current measurement.	<a href="#">check here</a>
8	Push button	1	Mini Pushbutton	<a href="#">check here</a>
9	breadboard	1	full or medium size	<a href="#">check here</a>

## SOFTWARE

No	Item	Nos	Note	Reference link
1	KEIL MDK v5		Student free and code limited version. Full installation procedure is covered in this course	FREE
2	OpenSTM32 System workbench		This IDE can be used by non-WINDOWS users to develop and Program the board. Windows users can also use this software. Full installation procedure is covered in this course	FREE
3	saleae logic analyzer software		This software used only if you have saleae logic analyzer hardware you can download this software from here <a href="https://www.saleae.com/downloads/">https://www.saleae.com/downloads/</a> This software is used for protocol tracing and decoding	FREE