

How to: Get the Nucleo-F103RB board working with Arduino IDE (based on leaflabs maple)

Hardware modifications:

There are a few things we need to change to get the board working properly:

OSC clock: (necessary step!)

Currently there are two working possibilities: MCO from ST-LINK or HSE on-board oscillator.

Solution 1 MCO from ST-LINK: Check your serial number on the backside of your board (see photo):

If your number is “MB1136 C-02” or higher, than you are ready to go to the next step.

If your serial number is “MB1136 C-02” you need following changes:

Desolder the 0-Ohm-resistors on SB55 and SB54 (bottom right) to cut the trace.

Solder a little bridge on: SB16(MCO) (top left) and SB50 (bottom middle)

Solution 2 HSE oscillator on-board from X3 crystal: Please consider the reference manual for further steps.

Free pins D0(PA3) and D1(PA2) and route Serial2 Debug (optional!)

If you need the two pins and/or you wanna route the debug serial signal (the serial signal you get into Arduino IDE) follow this steps:

Desolder the 0-Ohm-resistors on SB13 and SB14 (top middle) to cut the trace.

Solder a little bridge on: SB62 and SB63 (bottom left)

Now you are free to use the STLINK TX/RX connector (upside top left) for every serial signal you want! UART3 (Serial2) is remapped per software, so the pins PC10(TX) and PC11(RX) can easily jumpered to the ST-Link.

T1	T2	T3	T4	QA
✓	✓	✓	✓	

○ =solder bridge
 □ = desolder

SB4	SB3
RESERVED	DEFAULT
SB6	SB5
SB8	SB7
SB10	SB9

RST SB11



SB12
SB13
SB14
SB15
NRST
TX
RX
SWO

SB17
B1-USER



Nucleo

LD2-LED

SB21
SB20
SB25
SB24
SB28
SB29
SB35
SB36
SB40
SB39
SB41
SB42
SB44

SB18
SB19
SB22
SB23
SB26
SB27
SB37
SB34
SB38
SB65
SB64

SB31
SB30
SB29
SB28
SB27
SB26
SB25
SB24
SB23
SB22
SB21

SB43
SB47

SB53
SB58
SB59
SB62
SB61
SB63

SB46
SB52
SB51
SB56
SB57
SB60

SB45
SB49
SB48
SB55
SB54

MB1136 rev C

Serial Number

MB1136 C-01
214140479

SDA
SCL