MAMWLE DevKit User Manual Move S.r.l

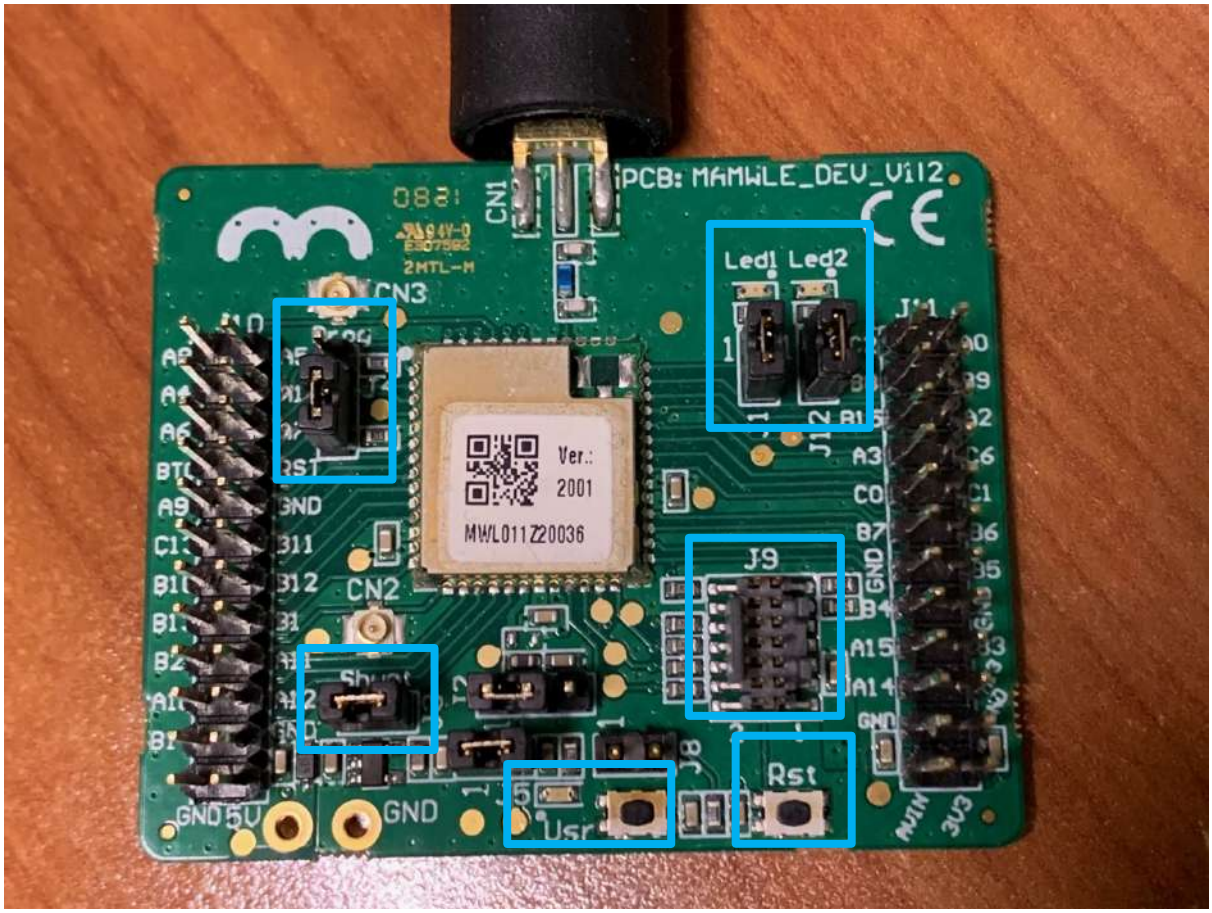
INDICE

1. MAMWLE DevKit

DevKit is the easiest way to start prototyping your MAMWLE based applications.
It integrates all the basic components you need, such:

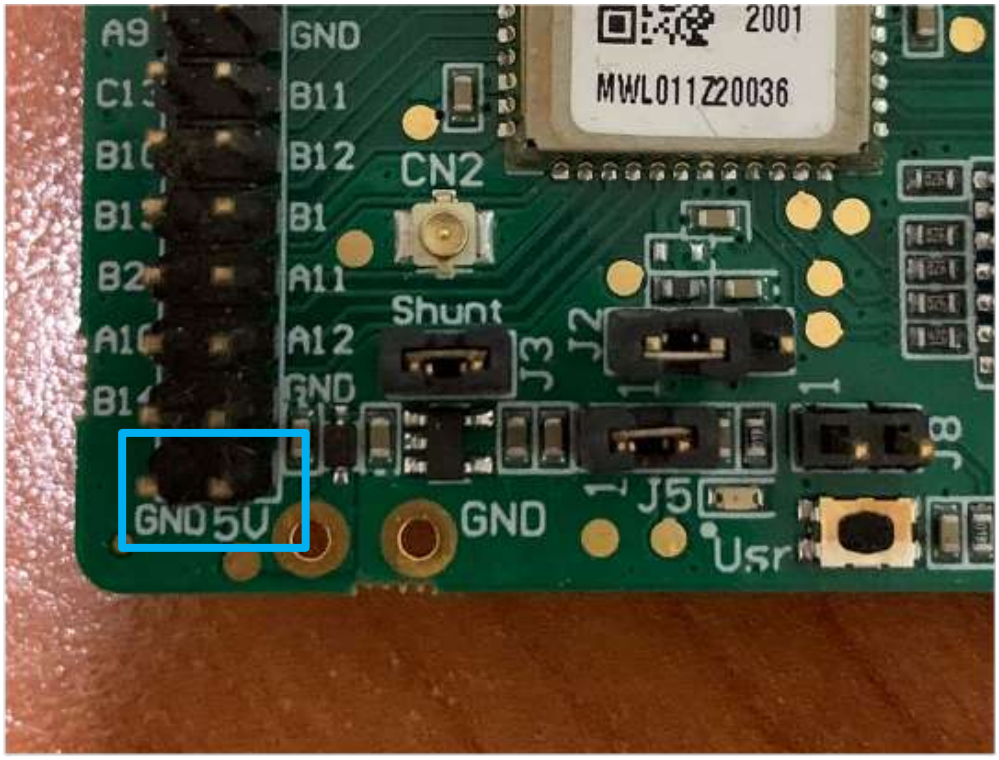
- Power regulator (5V -> 3.3V)
- SWD Programming connector (STDC14)
- 1 reset button
- 2 user LEDs
- 1 user button
- 1 programming jumper (only for serial programming)
- 1 current measuring jumper
- 1 VREF selection jumper

All MAMWLE GPIOs are routed out on strip connectors.



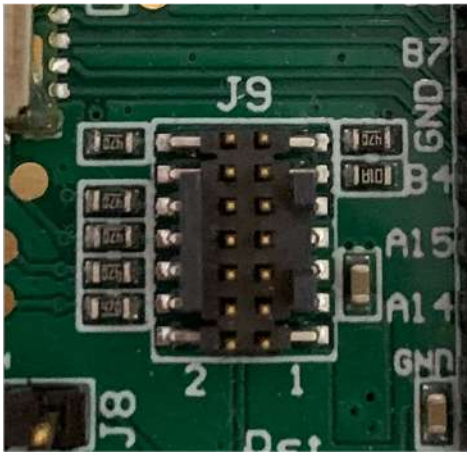
2. Powering

A 5V supply has to be provided by the two connectors marked in red*.
A possible way is to pick the supply voltage from the STLINK used for programming.



3. Programming

Programming of the device can be done using a SWD Debugger like the STLINK-V3SET with the proper STDC14 pin cable.
This approach is the easiest one and allow to use the debugger features of STM32 devices during testing.
Remember that the STDC14 connector doesn't carry power, so you still need to power the board from 5V connector.

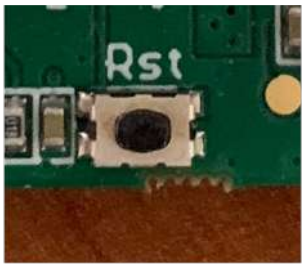


3.1 User LEDs

On the board there are two LEDs (Led1 -> J1 -> PB8, Led2 -> J12 -> PB9) that can be used. In order to use them you have to assure that J1 and J12 jumpers are fitted.

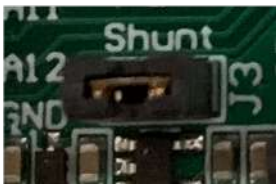
3.2 User Button

On the board there is a button (Usr -> J8 -> PC2) wich can be used. In order to use it you have to assure that J8 jumper is fitted.



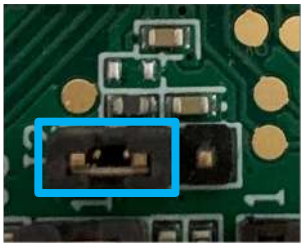
3.3 Current Measuring

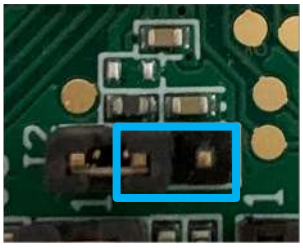
If you want to measure the exact current drawn by MAMWLE module, you can put a coulomb counter in series with J3 connector.
The measured current is relative to the module only, taking apart the one drawn by the supply regulator.
Notice that, If you are using LEDs or some load attached to GPIO pins, the measured current will account also the power drawn by them.

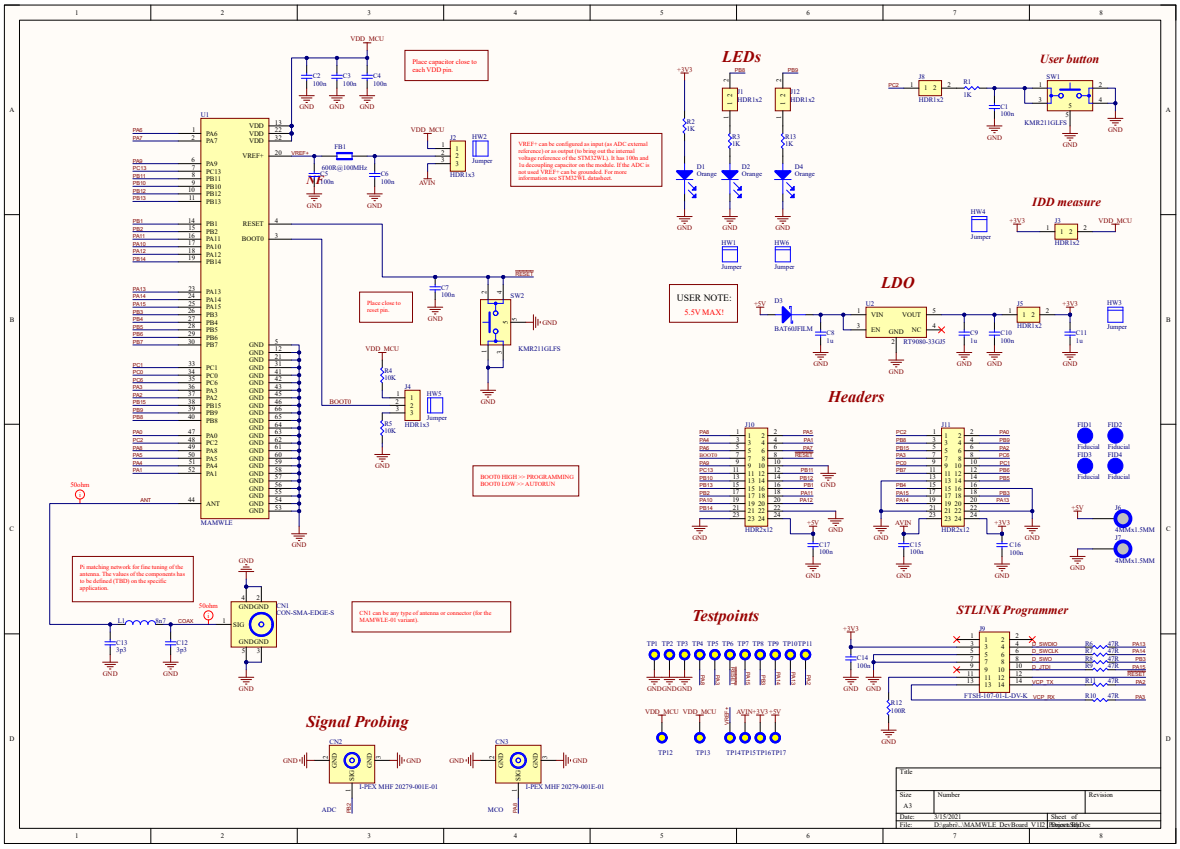


3.4 Vref ADC selection

Through jumper J2 you can choose the VREF voltage to provide to module ADCs.
You can choose to provide 3.3V from the power regulator (Pos1) or to provide an external voltage through the AVIN connector (Pos2).


(Pos1)


(Pos2)



**A proper 5V supply has to be provided to the device ("SELV - safety extra-low voltage" certified power supply).*

The use of this product is limited to expert persons who know how to handle electrical devices and has to be kept away from children.