



# AN2204

## Application note

Hardware Specifications of Move-X Cicerone board

## Introduction

The purpose of this document is to guide users of **Move-X Cicerone** board in understanding and customizing the board's hardware. To do this, the document provides electrical schematics that show how components are connected, and what kind of modifications can be done to adapt the board to different use cases.

For more resources, news, and links to official distributors for Move-X products, please visit Move-X website: <https://www.move-x.it/>.

For details on the Cicerone boards, documentation and buying options please visit the official website: <https://www.move-x.it/cicerone-board/>.

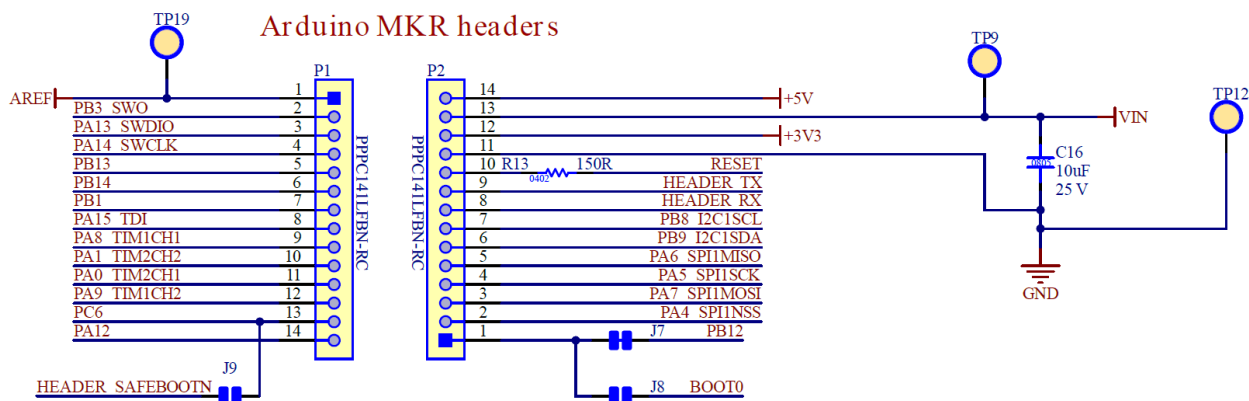
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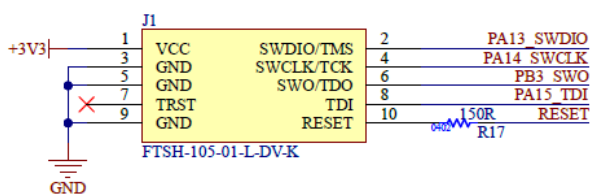
# Electrical schematics

The electrical schematics of the Move-X Cicerone board rev 1.1 are showed below for different sections of the board.

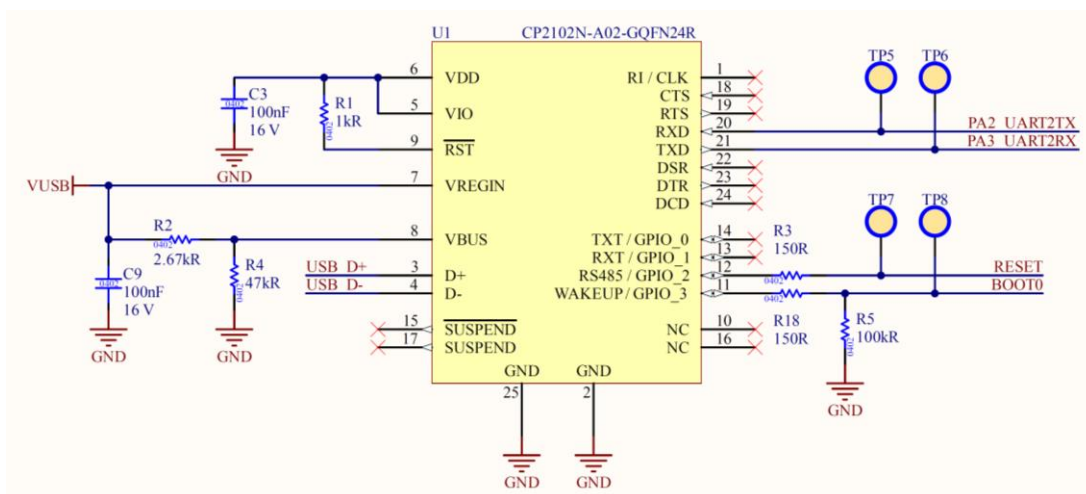
## Connectors



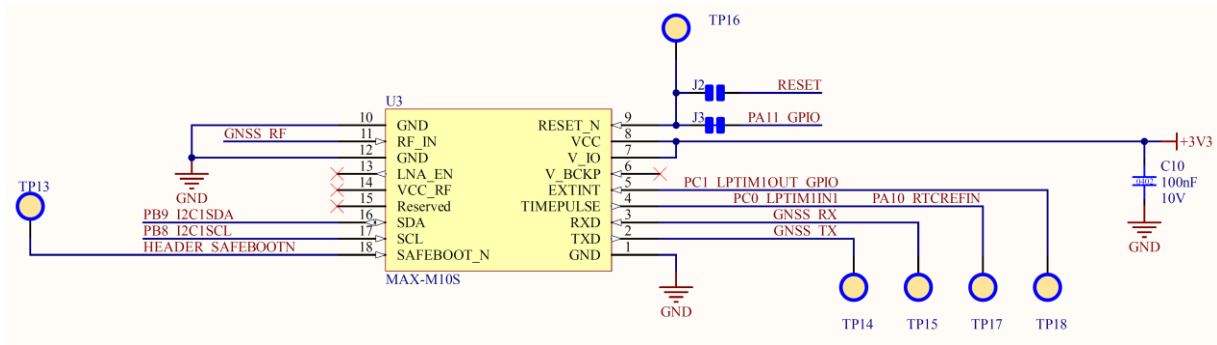
### Debug connector



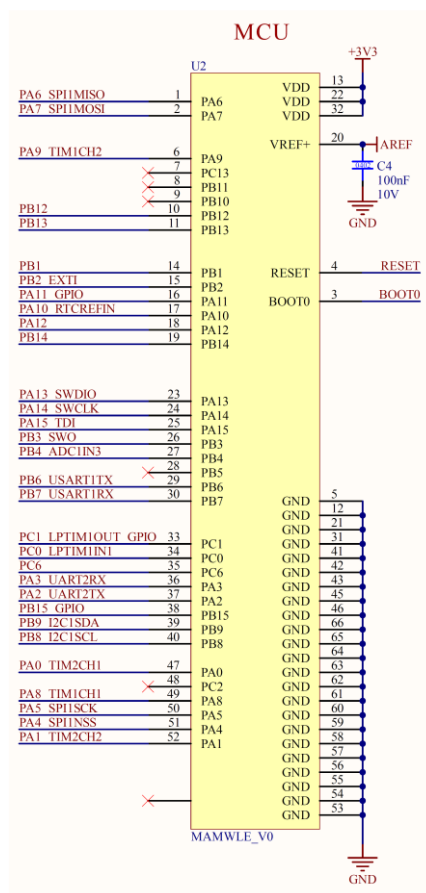
## USB-UART interface chip



# u-blox MAX-M10S module

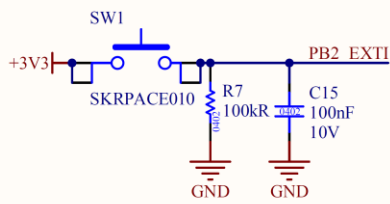


# Move-X MAMWLE module

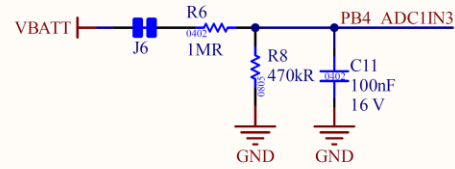


# Auxiliary circuits

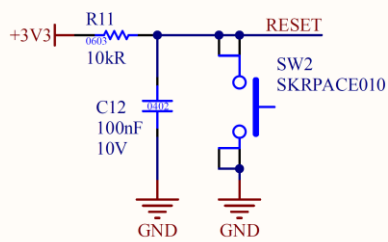
User button



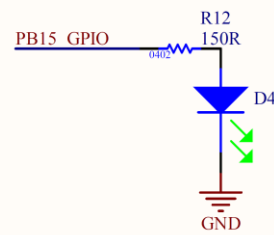
Battery voltage monitor



RESET button



User LED



# Hardware configuration

The Cicerone board is equipped with some solder jumper on the bottom. These can be of two kinds as expressed in the schematics:

- Normally closed (NC): by default, the two terminals are shorted together, but can be separated by cutting the small track that connects the two pads.



- Normally open (NO): by default, the two terminals are not shorted together, but can be shorted by soldering them together.



The table below lists all the available solder jumpers with their respective function.

Designator	Default Type	Function description
J2	NO	J2, J3 default state connects MAX-M10's RESET_N pin to PA11. It is possible to close J2 and open J3 to connect MAX-M10's RESET_N to the RESET net. J2 and J3 should not be both closed to avoid shorting RESET and PA11 nets.
J3	NC	
J6	NC	Close by default for connecting the R6-R8 voltage divider to PB4, allowing battery voltage measurement using the ADC. Can be opened to disconnect this circuit from the battery.
J7	NC	J7, J8 default state connects PB12 to the header pin #P2.1. It is possible to close J8 and open J7 to connect header pin #P2.1 to BOOT0 instead of PB12. J7 and J8 should not be both closed to avoid shorting BOOT0 and PB12 nets.
J8	NO	
J9	NO	Open by default, can be closed to connect MAX-M10's SAFEBOOT_N to header pin #P1.13 and PC6 net.
J10	NC	Close by default, connects the battery charge IC to the battery. Can be open to disconnect the charging circuit from the battery. This allows to use non-rechargeable batteries.

# Document revision

Revision 1.0 - 23/09/2022