

MRS MODULE HOST REVISION 1

David Zaitlik

Multi-Robot Systems Group, FEE CTU in Prague



**FACULTY
OF ELECTRICAL
ENGINEERING
CTU IN PRAGUE**



**MULTI-ROBOT
SYSTEMS
GROUP**

December 15, 2020

Contents

1	Introduction	1
2	Dimensions	2
3	Connectors	3
3.1	Connector Placement Drawing	3
4	Bill Of Materials and Assembly Drawings	4
5	Schematic	6

List of Figures

1	MRS MODULE HOST: Thumbnail	1
2	MRS MODULE HOST: Dimensions	2
3	MRS MODULE HOST: Connectors Placement, Top Layer	3

List of Tables

1	MRS MODULE HOST: Bill Of Materials	4
---	--	---

Figure 1: MRS MODULE HOST: Thumbnail

2 Dimensions

The board is 60mm wide and 60mm long with mounting holes for an MRS module.

The mechanical drawing can be seen in Figure 2 below.

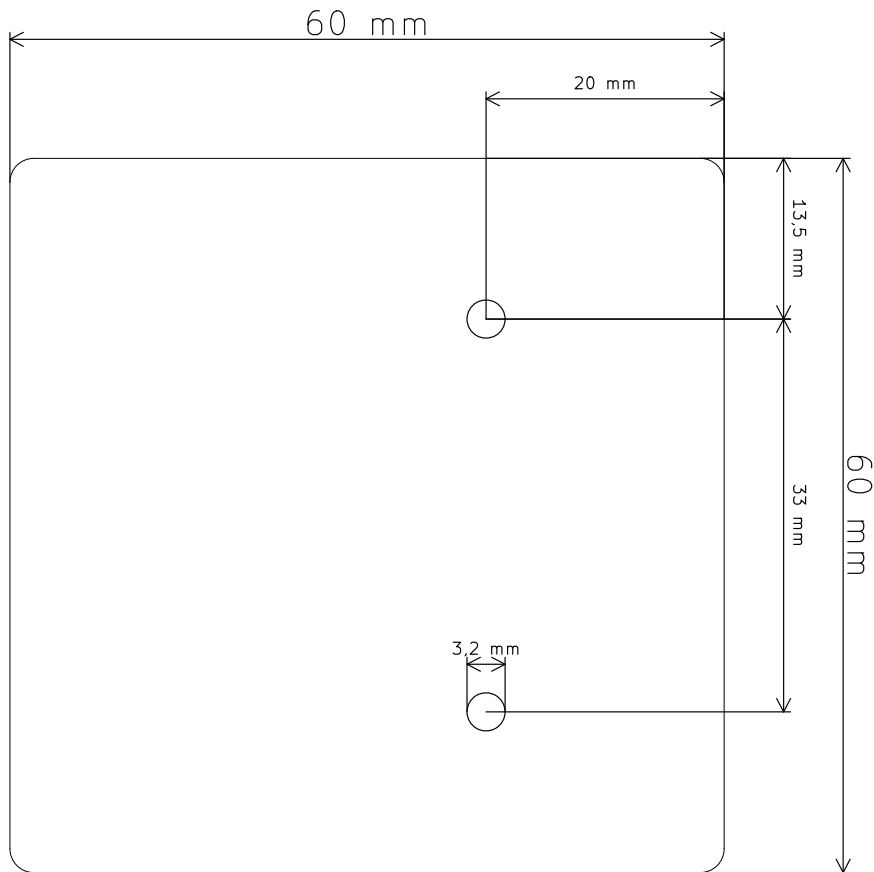


Figure 2: MRS MODULE HOST: Dimensions

3 Connectors

The Module Host Board has connectors only on the top layer. The connector marked as **USB B MINI** is a standard USB B Mini connector. It provides connectivity between the user's computer and an MRS Module's MCU using an FTDI IC and 5V for the module.

The connector marked as **POWER (VBAT)** provides power for the rest of the module (if needed). This power source should be in a similar voltage range as a 4S or 6S battery used on drones.

The connector marked as **MRS MODULE** is a standard connector for MRS Modules, and its pinout is as follows:

MRS MODULE	
1	GND
2	VBAT
3	VBAT
4	GND
5	UART_TX
6	UART_RX
7	GND
8	5V
9	5V
10	GND

3.1 Connector Placement Drawing

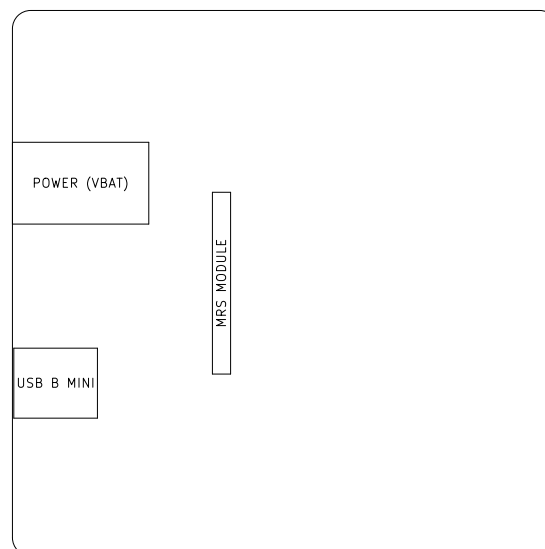


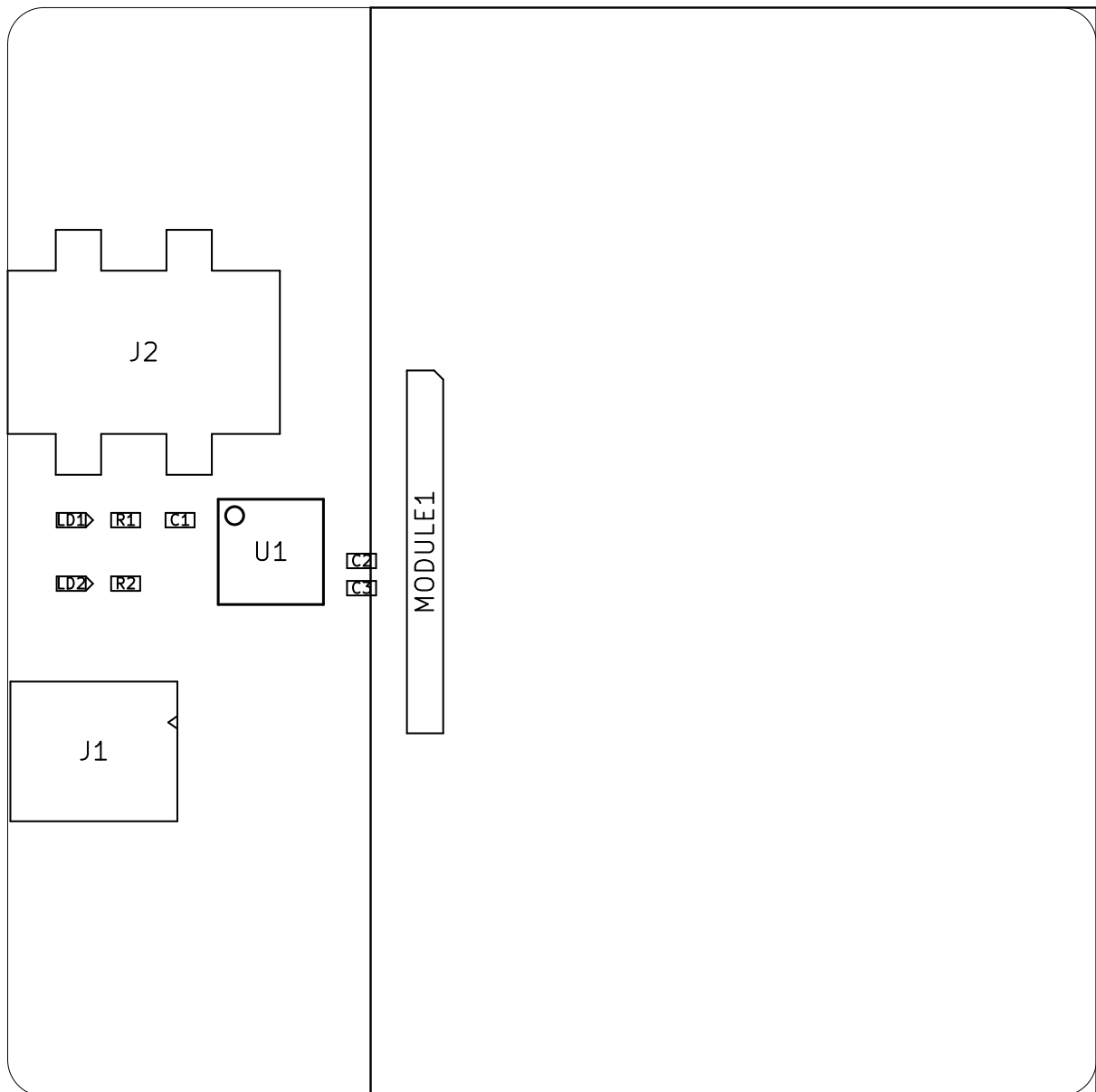
Figure 3: MRS MODULE HOST: Connectors Placement, Top Layer

4 Bill Of Materials and Assembly Drawings

#	References	Value	Footprint	Quantity
1	C1	10uF	0603	1
2	C2, C3	0.1uF	0603	2
3	J1	USB2.0B_mini	USB_Mini-B	1
4	J2	Barrel_Jack	ADC-028-2-TR	1
5	LD1, LD2	D_LED_0603_BLUE	0603	2
6	MODULE1	MRS_Module	Header 1x10 2mm pitch	1
7	R1, R2	1k	R0603	2
8	U1	FT232RQ	QFN_32-5x5mm	1

Table 1: MRS MODULE HOST: Bill Of Materials

MRS MODULE HOST rev. 1 ASSEMBLY DRAWING – TOP



5 Schematic

