MAIN PANEL PROGRAMMING

In addition to the mobile application for programming the board, the Uart port of the processor can also be used. Which is configured as follows: Baud Rate 9600, Data 8-bits, No Parity, 1 Stop Bit. The pins of the Uart of the processor are indicated on the PCB board in the connector where the Bluetooth Module is placed. And the correct correspondence is as follows:

MCU Uart Pins	**Bluetooth Module Pins labeled on PCB**
RX →	TX → external Serial Device
TX →	RX → external Serial Device
GND →	-
3.3V →	+

Thus it can be programmed via PC → USB to → Serial Converter or with any other external serial device. The logic of data exchange from and to the processor is as follows: The external serial device sends the programming data to the processor and the processor must respond for the correct or incorrect reception of the programming data.
The sequence of programming data sent from the PC (the other serial device) to the processor and vice versa is as follows.

Request from external serial device to write new data:
The external serial device sends a total of 20-Bytes, including the new data we want to program and some others that define a communication protocol..

Processor response.
On the other hand, the processor will check the data it has received and respond accordingly by sending a total of 11-Bytes, The format of the response is defined by a communication protocol.

NOTE
You can contact me to give you the full Format of the communication protocol.

PROGRAMMING FOR MOBILE DEVICES WITH IOS

Based on the protocol I mentioned before and using an application like Uart Terminal software (such as Bluetooth Terminal → IOS app) we are able to program the board.

IMPORTANT NOTE

For the correct operation of the processor, we must program the User Configuration Option Byte and specifically the VDDA_MONITOR so that it is unchecked.