

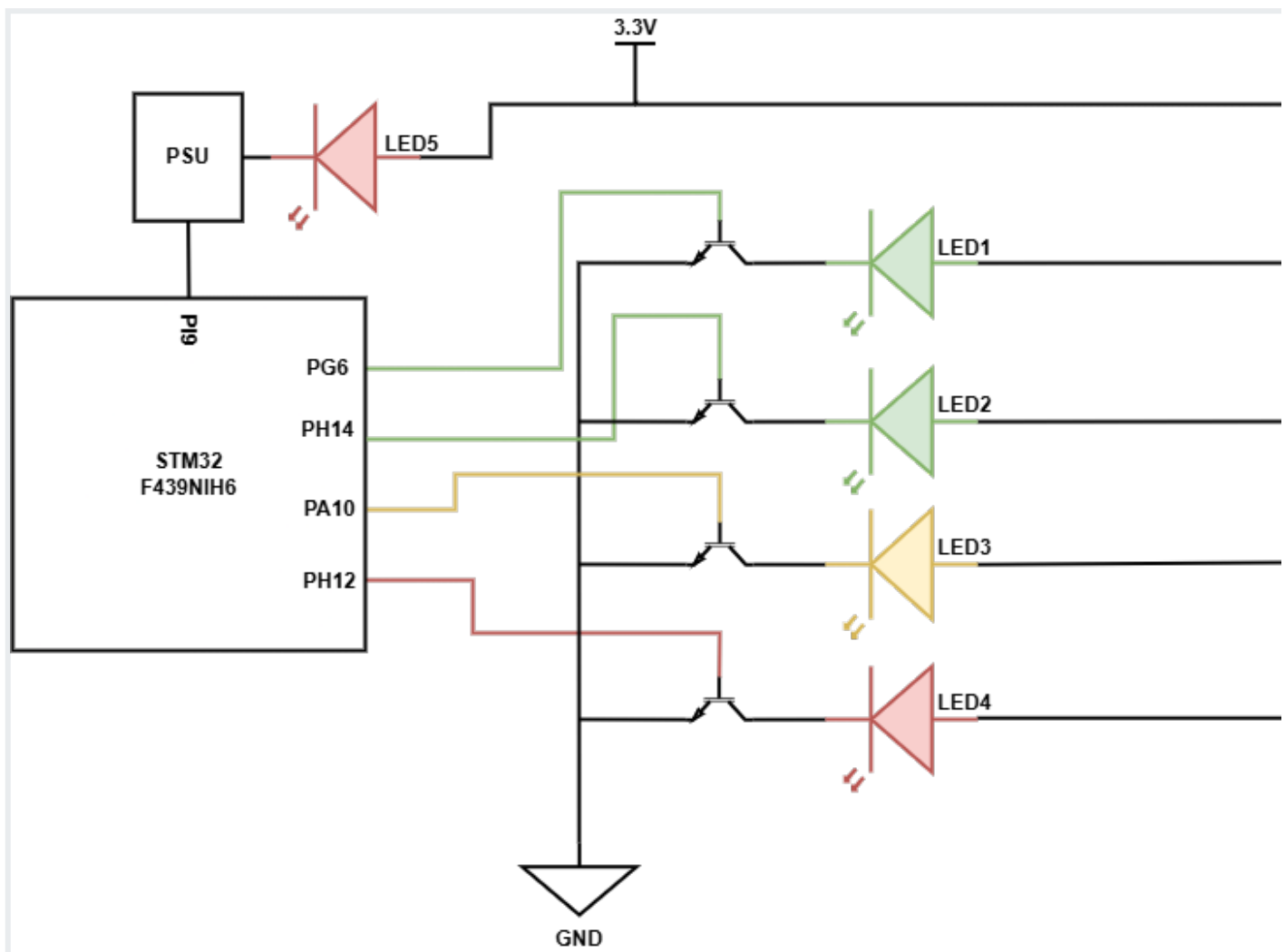
# Peripherals

- RGB LED
- Switch
- RS232 and RS485
- Ethernet PHY
- MicroUSB
- I2C EEPROM
- Serial Flash
- I2C Sensors (optional)

# RGB LED

## STM32 Open IoT and IIoT Gateways (P10 - P12)

The Gateway is equipped with 5 RGB user LEDs. 4 are mounted directly to the board, and the fifth is next to the not-programmable blue power LED on the PSU board.

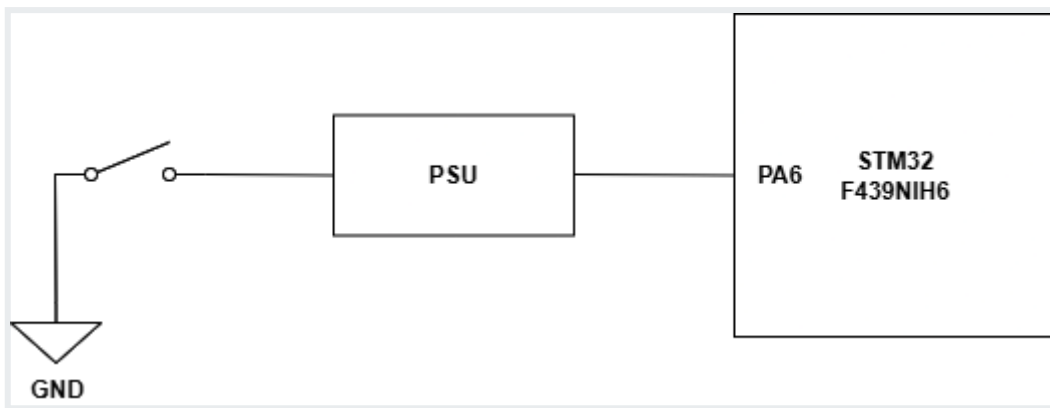




# Switch

## STM32 Open IoT and IIoT Gateways (P10 - P12)

The Open IoT Gateway contains a tactile switch mounted to the PSU board, which can be programmed directly in the MCU.



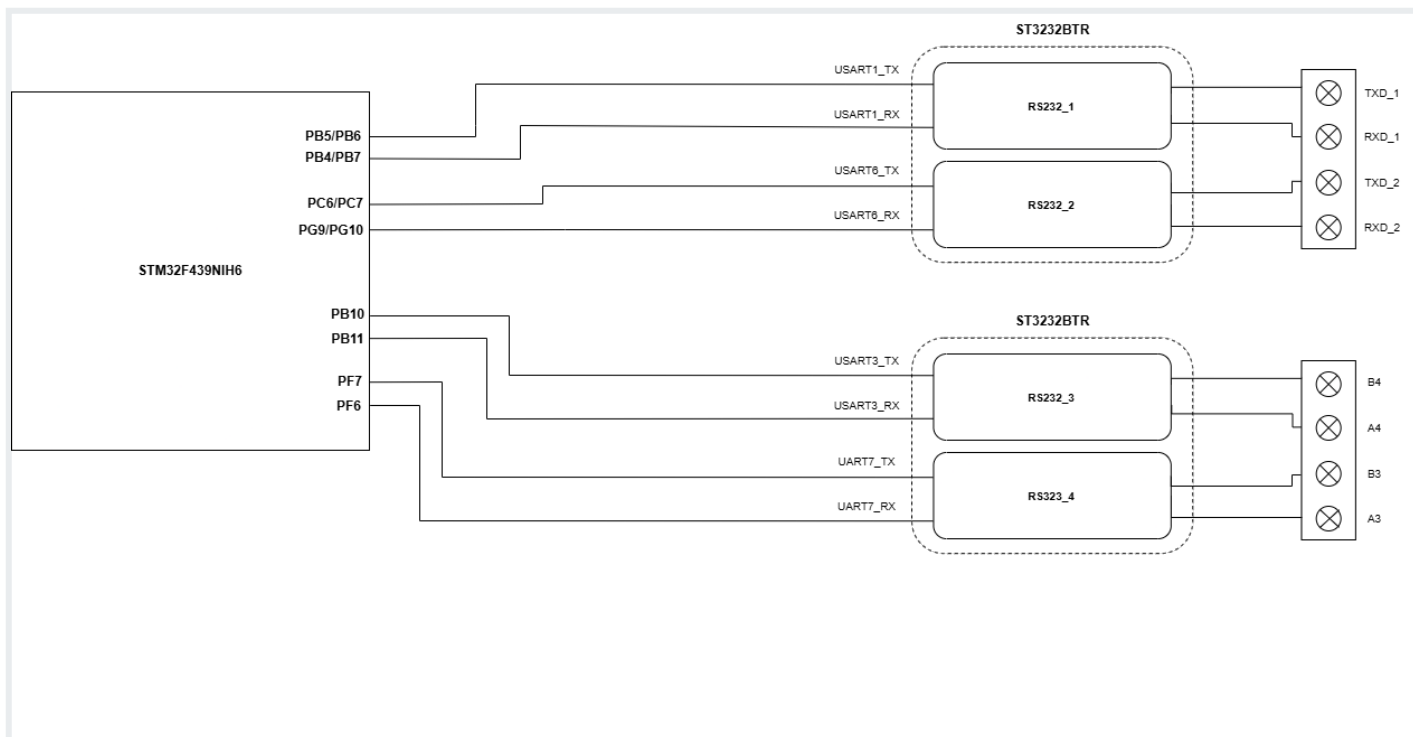
# RS232 and RS485

## STM32 Open IoT and IIoT Gateways (P10 - P12)

The Gateway has 4 RS232/RS485 sockets depending on the version.

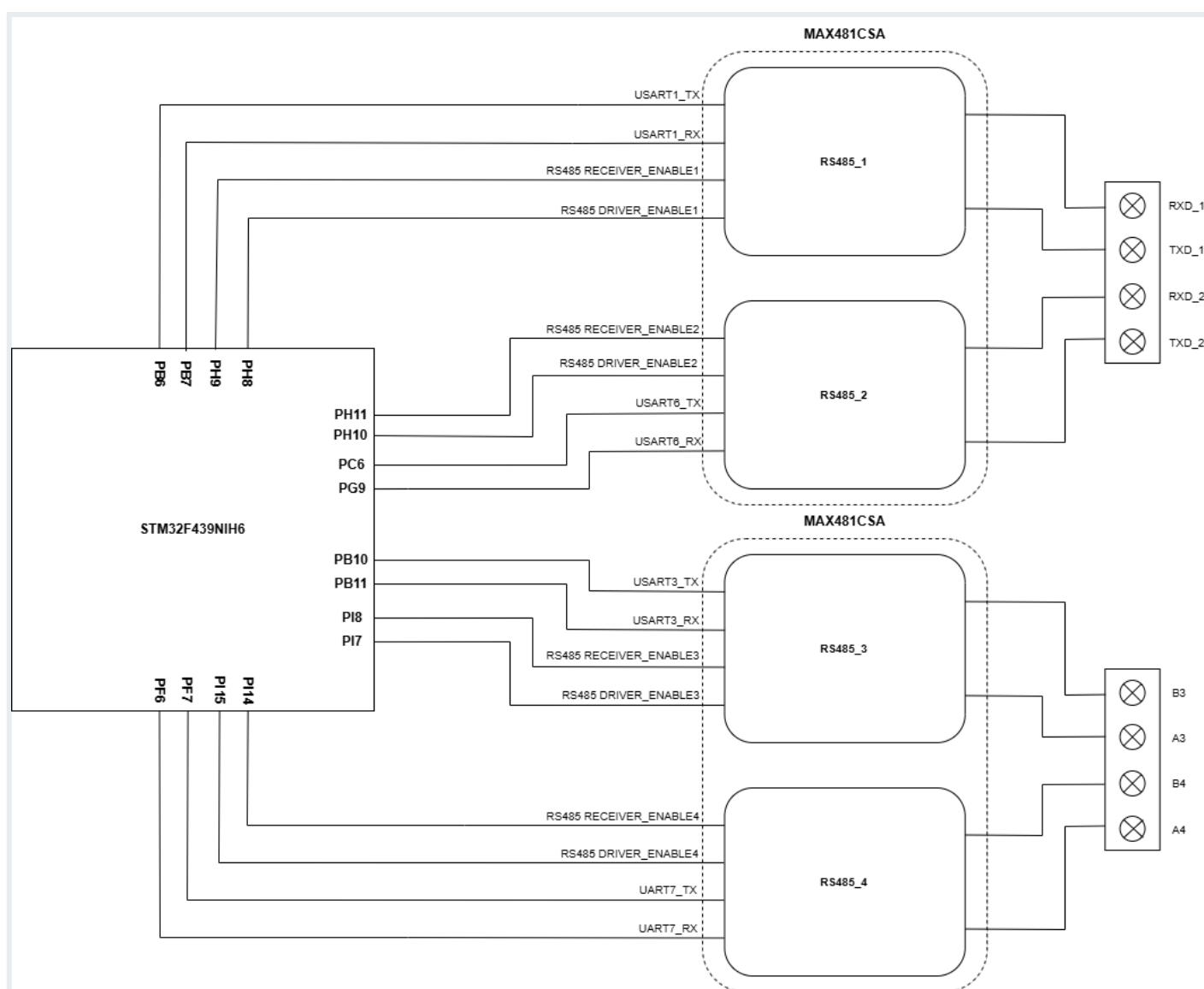
### P10 (4x RS232)

The P10 gateway is equipped with 2x ST3232BTR to ensure transmission in RS232 standard.



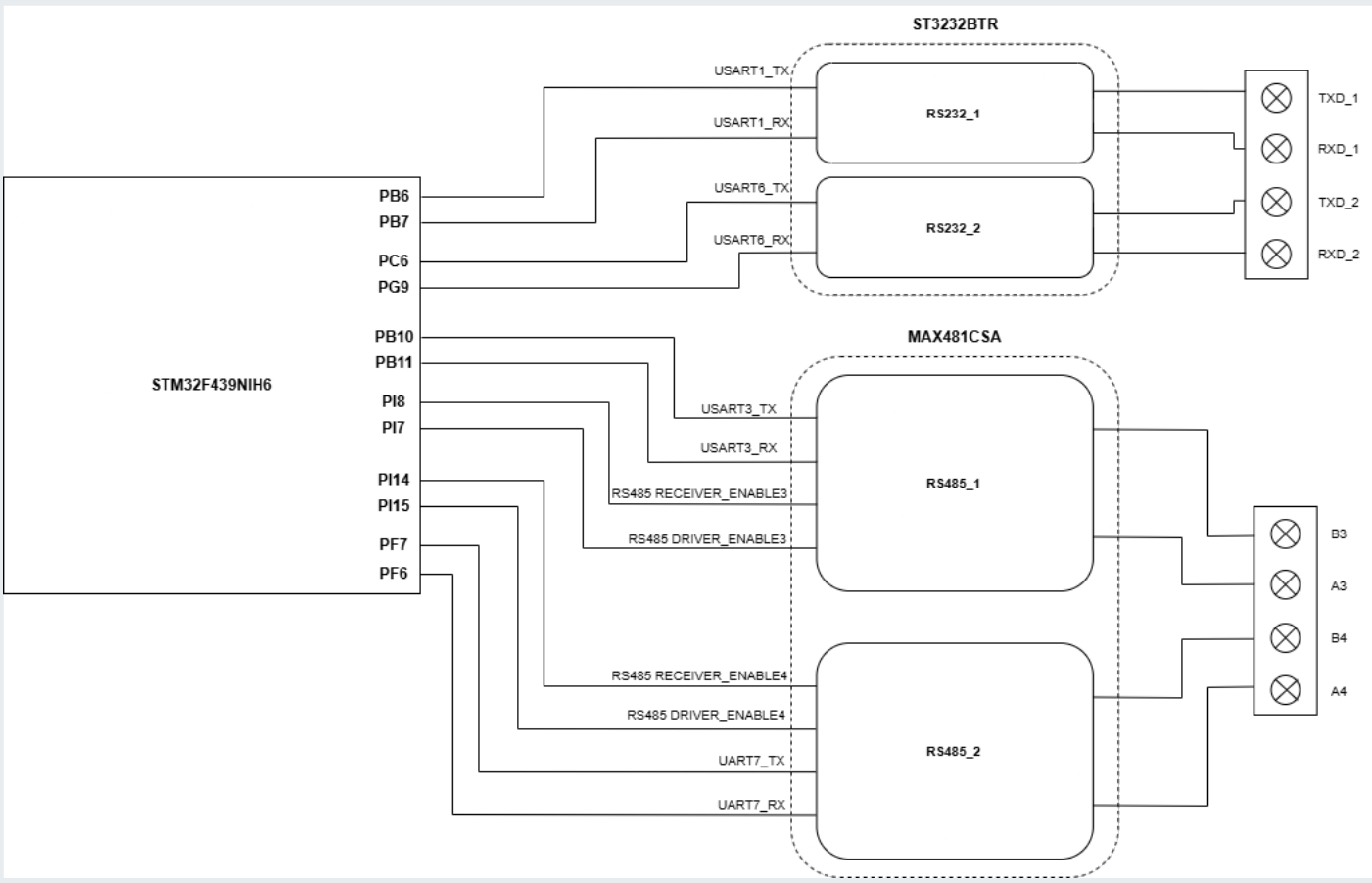
### P11 (4x RS485)

The P11 gateway is equipped with 2x MAX481CSA to ensure transmission in RS485 standard.



## P12 (2x RS232, 2x RS485)

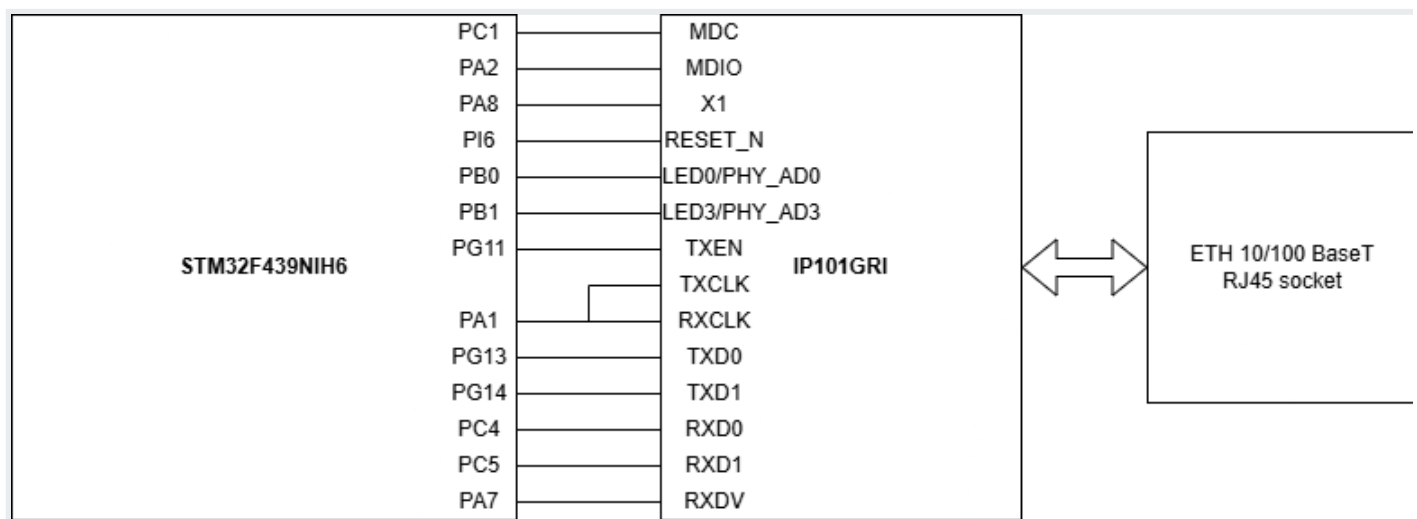
The P12 gateway is equipped with 1x ST3232BTR and 2x MAX481CSA to ensure transmission both in RS232 and RS485 standardsm



# Ethernet PHY

## STM32 Open IoT and IIoT Gateways (P10 - P12)

The Ethernet interface is provided by the IP101G physical layer. An external board with an RJ45 socket ensures a wired connection to the network.

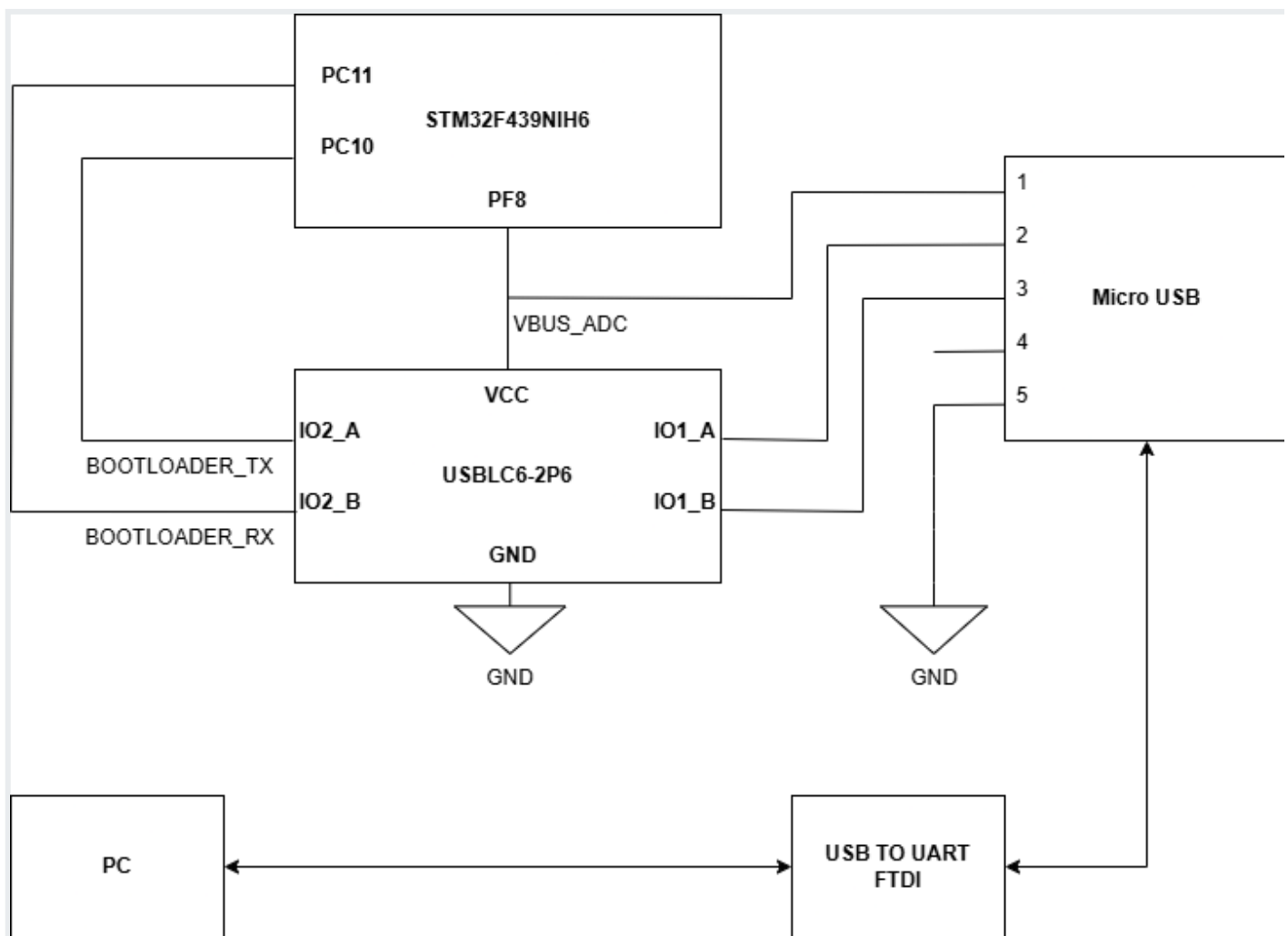




# MicroUSB

## STM32 Open IoT and IIoT Gateways (P10 - P12)

MicroUSB ensures access straight to UART interface (UART4). The Open IoT Gateway does not have inbuilt FTDI converter so an external USB to UART FTDI converter is needed to run a serial port monitor on a PC.

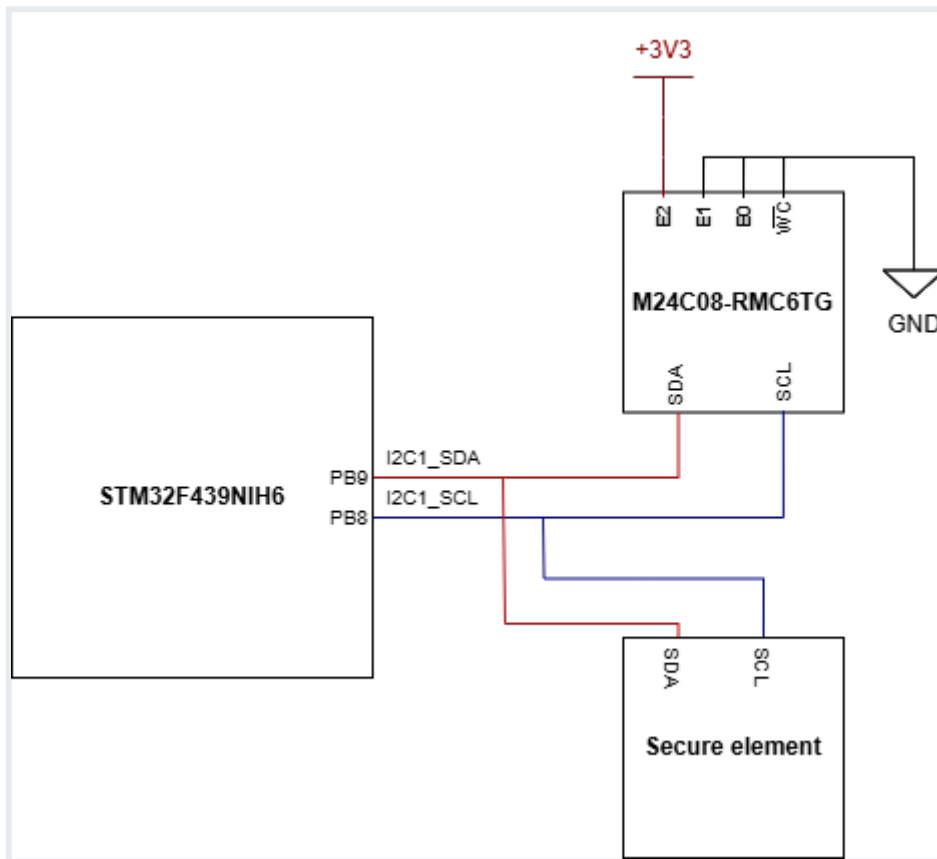




# I2C EEPROM

## STM32 Open IoT and IIoT Gateways (P10 - P12)

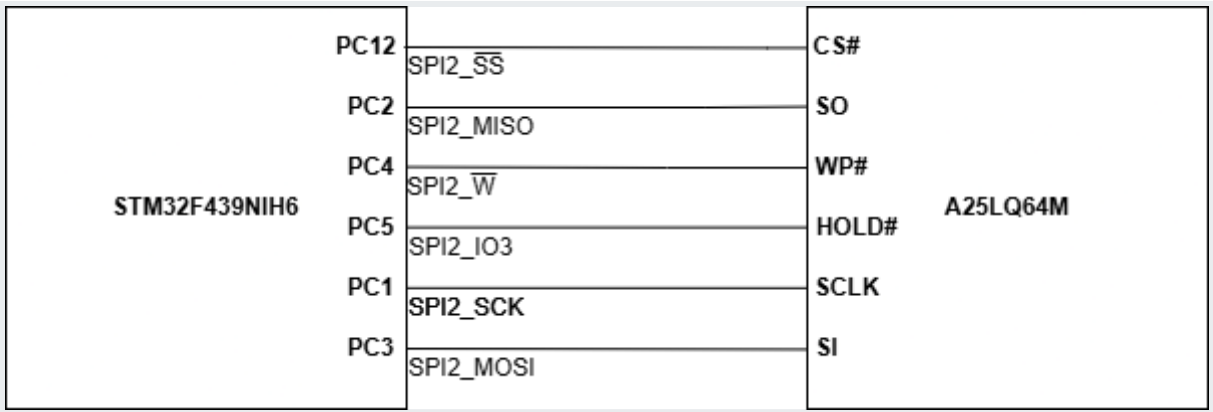
The Open IoT Gateway has a built-in Serial EEPROM with a secure element connected to the STM32 via I2C bus.



# Serial Flash

## STM32 Open IoT and IIoT Gateways (P10 - P12)

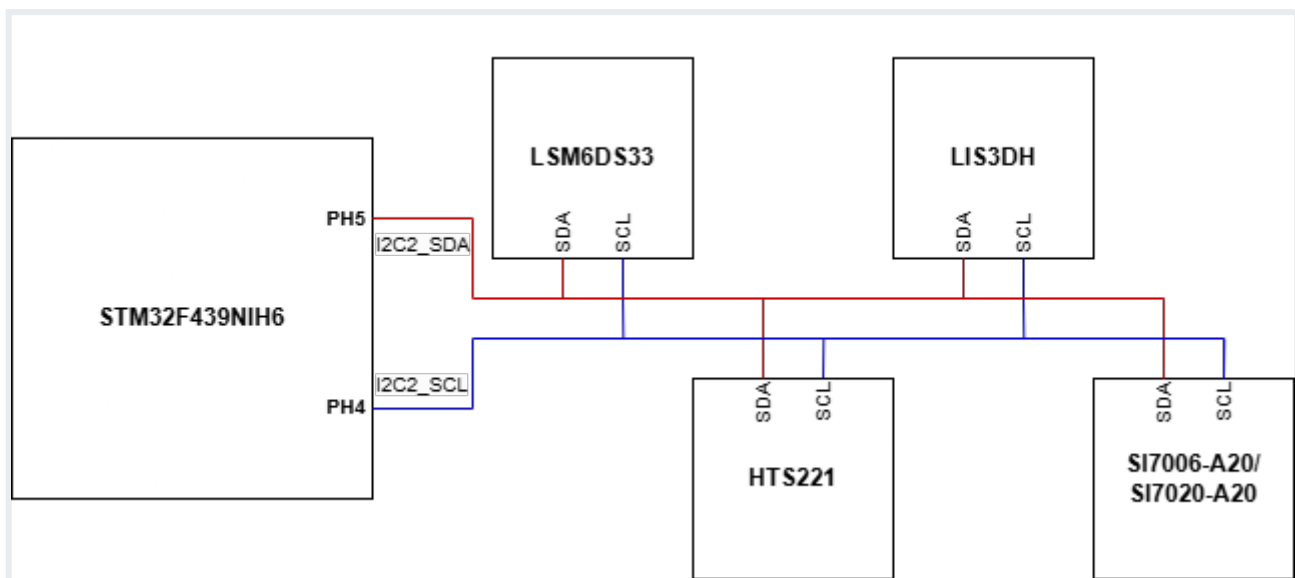
The Gateway has a Serial flash memory which can be programmed via SPI.



# I2C Sensors (optional)

## STM32 Open IoT and IIoT Gateways (P10 - P12)

There is a possibility of connecting peripheral I2C sensors. The board has dedicated pins for soldering devices. Below is a proposal for additional sensors that match the hardware.



- LSM6DS33 - 3D accelerometer and 3D gyroscope
- LIS3DH - 3-axis "nano" accelerometer
- HTS221 - capacitive digital sensor for relative humidity and temperature measurements
- SI7006-A20 / SI7020-A20 - humidity and temperature sensor

The presented devices are not included in the Open IoT Gateway.