**Specifications Board Computer**

Computing power

RISC Architecture, more than 50MHz single processor needed

Memory

Nonvolatile memory: > 20kB

Volatile memory: > 500kB

Peripherals

ADC at least 10-bit, at least 5 of them

At least two integrated comparators

I2C, SPI and UART interface

At least 20 digital I/O pins that can drive 10mA

If possible a bluetooth interface on the same chip but not mandatory

Power Consumption

Lower than 50mA at full processing ower.

RTOS Support

FreeRTOS should be already ported.

Programming & Debugging

JTAG debugging should be supported.

**Device chosen**

**STM32M MCU family (based on ARM M-CORTEX)**.

Custom design will be made.

Programmer: STLINK v2 over JTAG (or SWD if the 20-pin connector will be too large)

RTOS: FreeRTOS

IDE: Atollic TrueStudio