AOS project

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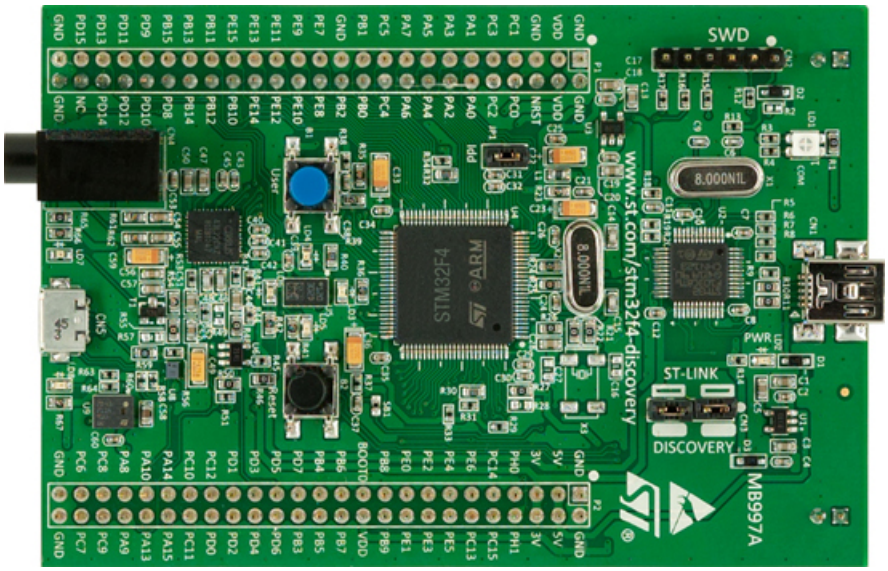
1 Introduction

The goal of this project is to recognize which button of a remote control is pushed by using the BPW34 photodiode and the stm32f407. This board has a Analogic to Digital Converter (ADC) built-in that converts the anologic signal received from the BPW to a digital signal. This board operating system is Miosix.



2 BPW34

The BPW34 is a photodiode that is sensitive to visible and infrared radiation.
Its carateristics are the following:

- It is sensitive at most 34KHz
- Fast response times
- Angle of half sensitivity: = 65
- High photo sensitivity
- Suitable for visible and near infrared radiation

For any other information on this photodiode visit: http://www.vishay.com/docs/81521/bpw34.pdf

3 How it works

3.1 Board configuration

Used pins are the following:

- GND: BPW34 black wire
- GND: FTDI black wire
- PC1: BPW34 red wire
- PB10:FTDI yellow wire
- PB11:FTDI orange wire
- VDD: FTDI black wire

4 Used Software

- QSTlink2: used to program the board.
- Github: to save every code changes online.
- Latex: to write this document.
- Notepad++: to write code.
- Miosix Toolchain: to compile the project
- ArduinoIDE: serial Arduino monitor