HX711 Library Documentation

DESCRIPTION

The hx711.h library provides functions to interact with the HX711 ADC (Analog to Digital Converter) module used for weight measurement. The library is designed to work with microcontrollers STM32 and offers functionality to initialize the HX711 module and obtain weight values.

LIBRARY STRUCTURE

The library consists of a header file (hx711.h) and a corresponding implementation file (hx711.c).

HX711 Structure

```
#include "main.h"
```

Include the main file with the program. If your file is named differently, replace the name with your own.

```
typedef struct hx711{
GPIO_TypeDef *Data_GPIO; //set GPIOA
GPIO_TypeDef *SCK_GPIO; //set GPIOA
uint16_t dataPin; // Data pin number
uint16_t sckPin; // Clock pin number
uint8_t gain; // channel A: 1 or 3, channel B: 2
}HX711;
```

Gain is used to change the channel. Gains 128 and 64 in the library are labeled 1 and 3 respectively and represent channel A, 32 is labeled 2.

```
void hx711_init(HX711 *data, GPIO_TypeDef *Data_GPIO,
uint8_t dataPin, GPIO_TypeDef *SCK_GPIO, uint8_t
sckPin);
```

Defines the pins to which it is connected. Call this function when you want to switch HX711.

HX711 *data: Pointer to the HX711 structure.

GPIO_TypeDef *Data_GPIO: GPIO port for the data pin.

uint8_t dataPin: Data pin number.

GPIO_TypeDef *SCK_GPIO: GPIO port for the clock pin.

uint8_t sckPin: Clock pin number.

SETINGS OF PINS
DATA and SCK are connected to analog outputs on STM32.

EXAMPLE OF USE

```
int32_t first_weightA;
int32_t second_weightA;
hx711_init(&hx711, GPIOA, DOUT1_Pin, GPIOA,
PD_SCK1_Pin);
zero_first_weightA = hx711_value(&hx711, 1);
zero_first_weightB = hx711_value(&hx711, 2);
```