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#include <stdio.h>
#include <stdlib.h>
#include "freertos/FreeRTOS.h"
#include "freertos/task.h"
#include "freertos/queue.h"
#include "driver/gpio.h"
#include "driver/adc.h"
#include "esp_system.h"
#include "esp_adc_cal.h"
#include "esp_log.h"

//adc1
#define PIN_ADC_Vbus (ADC1_CHANNEL_0) //GPIO 36
#define PIN_ADC_iBAT (ADC1_CHANNEL_6) //GPIO 34
//static const adc_bits_width_t width = ADC_WIDTH_BIT_12;
void app_main(void)
{
    uint8_t output_data=0;
    //Init ADC
    //adc1_config_width(ADC_WIDTH_BIT_12);
    adc1_config_channel_atten(PIN_ADC_Vbus, ADC_ATTEN_DB_12);
    adc1_config_channel_atten(PIN_ADC_iBAT, ADC_ATTEN_DB_12);
    uint32_t voltage;
    uint32_t voltage1;
    float v =0, v1 = 0, vRea = 0, Vreal = 0, t= 0, c = 0;
    while(1) {
        v =0; v1 = 0; vRea = 0; Vreal = 0; t= 0; c = 0;
        int i, j;
        for (i=0; i<=19; i++){
            voltage = adc1_get_raw(PIN_ADC_Vbus);
            v = voltage*(3.3/4095);
            c = c + v;
        }
        c = c/20;
        //vRea = ((45.1*c)-0.07);
        //printf("Corrente: %.2f \n", vRea);
        printf("Corrente: %.2f \n", c);

        for (j=0; j<=19; j++){
            voltage1 = adc1_get_raw(PIN_ADC_iBAT);
            v1 =(voltage1*(3.3/4095));
            t = v1 + t;
        }
        t = t/20;
        //Vreal = ((t*24.2)-16.1);
        //printf("tensao: %.2f \n", Vreal);
        printf("tensao: %.2f \n", t);

        vTaskDelay(pdMS_TO_TICKS(1000));
    }
}

```