

ADC2 - DAC EXAMPLE

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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 <driver/dac.h>
#include <esp_system.h>
#include <esp_adc_cal.h>

#define DAC_EXAMPLE_CHANNEL CONFIG_EXAMPLE_DAC_CHANNEL
#define ADC2_EXAMPLE_CHANNEL CONFIG_EXAMPLE_ADC_CHANNEL

void app_main(void) {
    uint8_t output_data = 0;
    int read_now;
    esp_err_t r;
    gpio_num_t adc_gpio_num, dac_gpio_num;

    r = adc2_pad_get_io_num(ADC2_EXAMPLE_CHANNEL, &adc_gpio_num);
    assert(r == ESP_OK);
    r = dac_pad_get_io_num(DAC_EXAMPLE_CHANNEL, &dac_gpio_num);
    assert(r == ESP_OK);
    printf("ADC channel %d @ GPIO %d, DAC channel %d @ GPIO %d\n",
           ADC2_EXAMPLE_CHANNEL, adc_gpio_num,
           DAC_EXAMPLE_CHANNEL, dac_gpio_num);
}

```

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dac_output_enable(DAC_EXAMPLE_CHANNEL);
printf("adc2_init ... \n");
adc2_config_channel_atten(ADC2_EXAMPLE_CHANNEL,
                           ADC_ATTEN_0db);
vTaskDelay(2 * portTICK_PERIOD_MS);

printf("start conversion. \n");
while (1) {
    dac_output_voltage(DAC_EXAMPLE_CHANNEL, output_data);
    r = adc2_get_raw(ADC2_EXAMPLE_CHANNEL,
                     ADC_WIDTH_12Bit, &read_raw);
    if (r == ESP_OK) {
        printf("%d : %d \n", output_data, read_raw);
    } else if (r == ESP_ERR_INVALID_STATE) {
        printf("%s: ADC2 is in use by WiFi. \n", esp_err_to_name(r));
    } else {
        printf("%s \n", esp_err_to_name(r));
    }
    vTaskDelay(2 * portTICK_PERIOD_MS);
}
```