

## Homemade librairy to configure ad7768 with Arduino SPI

This librairy is adapted from the original ad7768 librairy from [Analog device ad7768](#). It implements the same logic but adapted with the Arduino SPI function.

All functions are based on a *ad7768\_chip* object:

```
typedef struct {  
    ad7768_chip_select_pin chipSelectPin = 10; //teensy 4.0 CS pin  
    ad7768_power_mode      power_mode;  
    ad7768_mclk_div        mclk_div;  
    ad7768_dclk_div        dclk_div;  
    ad7768_dec_rate        dec_rate;  
    ad7768_filt_type       filt_type;  
} ad7768_chip;
```

This object contains a list parameters of a type enum. This makes it easier and cleaner when configuring a new chip. For example, in the declaration of a new chip, one can decide to set the power mode to only these values:

```
typedef enum {  
    AD7768_ECO = 0,  
    AD7768_MEDIAN = 2,  
    AD7768_FAST = 3,  
} ad7768_power_mode;
```

Some functions have a mask input parameter. This allows to write in only a specific part of a registry without changing the already in place values. The function *print\_config* has a stream input parameter. This allows to print the configurations in a specific Serial port.

A list of the registry address is define in the .h file. Those are taken from the datasheet. This librairy is dependant on the Arduino SPI librairy and Stream librairy only.