# Servos

# HW Units :

[pca9685](https://store.fut-electronics.com/products/pca9685-16-channel-servo-pwm-driver-i2c-interface) used with I2c to connect up to 16 [servos](https://learn.adafruit.com/16-channel-pwm-servo-driver?view=all)

# Technical resources:

# Design choices:

**Servos control**

* Using of PWM peripheral channels, HOW MANY?
* Using DIO pins with timer
* Using external IC with protocol like I2c

**Positioning**

Servos can have positions from 0 to 180

0 90 180 , 90 is the middle position

Start position for each can be configurable

What about possible moves

From 0 to 90 can have a +10 or +5 or +1 increments which leads to 9 or 18 or 90 moves to reach middle

# Connections

A diagram of a circuit board

Description automatically generated

# TO BE TAKEN INTO CONSIDRATION:

* SLEEP MODE
* POWER AND POWER CONSUMPTION
* WDT

# Throwback:

A diagram of a motor vehicle

Description automatically generated with medium confidence