Everything shall be connected
INSIDE
THE CONTROLLER
YOUR CONTRAPTION
HAS A LIFE

Internet Of Things

A system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network.

It goes without saying
SERVO MOTOR
Has Great Roles
in AI machines.

Exclusive
small but abundant, elegant but robust, compact but powerful.

WAYS TO STEER
PERFECT CONTROL
help you from scratch

15KG HV

2KG HV

CORELESS DIGITAL

[2020] CAMELLIA
awesome Mini
CONTROLLER

Pulse Width Modulation
Analogue Signal

The average value of voltage (current) fed to motors is controlled by turning the switch between supply and load on and off at a fast rate. The longer the switch is on compared to the off periods, the higher the total power supplied to the load.

Motors are inertial loads which react slowly; thus, they are not as quickly affected by this discrete switching. The **PWM** is particularly suited for running motors. The **PWM** switching frequency has to be high enough not to touch the load, which is to say that the resultant waveform perceived by the load must be as smooth as possible.

The main advantage of **PWM** is that power loss in the switching devices is shallow. When a switch is off, there is practically no current, and when it is on, and power is being transferred to the load, there is almost no voltage drop across the switch.

<u>Duty Cycle</u> describes the proportion of "on" time to the regular interval or "period" of time. A low value of Duty Cycle corresponds to low power.

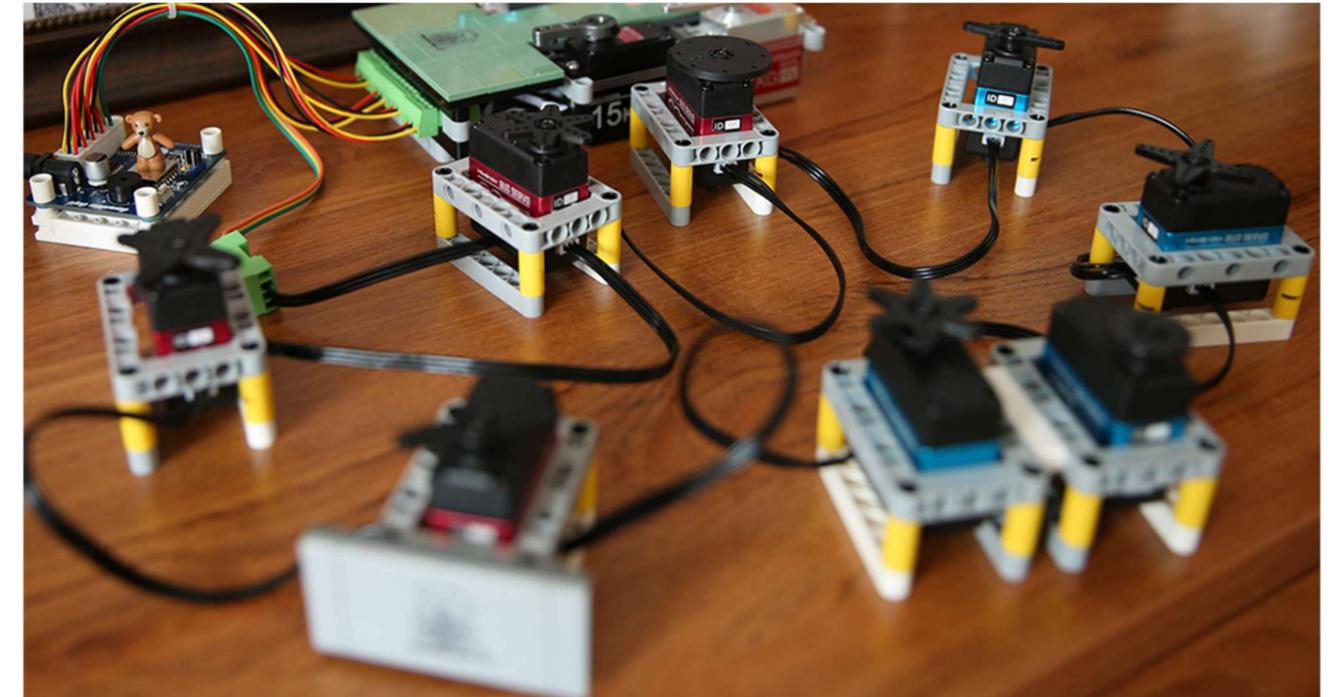In Steering Servo Motor, each value of Duty Cycle means a unique position of a motor.

PWM

- Port: 4 Steering Servo Motors

- Frequency: 400~2000Hz *

- Range of Duty Cycle: 5~95%

- Minimum ⊿ of Duty Cycle: 40microseconds *

- Motor Power: 6-12VDC *

More could be specially designed.

Universal Asynchronous Receiver-Transmitter
Digital Signal in a Network

" The **UART** takes bytes of data and sequentially transmits the individual bits. The controller is the Transmitting UART while steering servo motors are Receiving UARTs. They must be set for the same bit speed, character length, parity, and stop bits for proper operation. Each motor has a unique identity, and the transmitted data has ID information in it. Only the ID matched motor or motors run to the set position. Of course, the broadcast way could control all motors together. Motors could be connected in a bus topology, in a star topology, or in a loop topology which is very useful for different motor arrange in your AI machines. "