

## Neuron Block Card



**Block Name:** Light Sensor

**Feature:** The light sensor block detects light intensity of environments. The stronger the light is, the stronger the output signal will be.

**Connecting Example:**



**Building Example:**



Example Details: The light sensor detects the light intensity of environments. The brightness and number of lights on the LED panel vary according to signals from the input block. (When the light intensity is strong, the LED lights will be brighter and the number of lights will be larger; otherwise, the lights will be darker and the number will be smaller. )

## Neuron Block Card



**Block Name:** Dual IR Detector

**Feature:** The dual IR detector block includes two pairs of infrared reflective photoelectric sensors. They can work separately as buttons or used to detect black lines on the ground.

**Connecting Example:**



**Building Example:**



**Example Details:** The example is called Morse Telegraph. Tap the magnetic plate rhythmically and the buzzer will make sounds according to the rhythm. Try sending a group of encoded messages for seeking help?

## Neuron Block Card



**Block Name:** Color Sensor

**Feature:** The color sensor detects the color of an object.

**Connecting Example:**



**Building Example:**



**Example Details:** The setup detects colors and display lights of the detected color . Try to make yourself a marquee.

## Neuron Block Card



**Block Name:** Gyro Sensor

**Feature:** The gyro sensor provides values of angles and acceleration.

**Connecting Example:**



**Building Example:**



**Example Details:** When you press the plate to the left, the ball on the LED panel will tilt towards the left; press the plate to the right, the ball on the LED panel will tilt towards the right. Have a try.

## Neuron Block Card



**Block Name:** Funny Touch

**Feature:** The Funny Touch detects whether current goes between the four-way pins and the GND pin and facilitates the machine-human interactions.

**Connecting Example:**



**Building Example:**



**Example Details:** Take turns touching alligator clips of different colors and touch the GND wire clip with the right hand. Listen, the buzzer is making different sounds.

## Neuron Block Card



**Block Name:** Humiture Sensor

**Feature:** The humiture sensor detects the temperature and humidity of environments.

**Connecting Example:**



**Building Example:**



**Example Details:** After the sensor finishing detecting the temperature and humidity of an environment, the LED display will show the value.

## Neuron Block Card



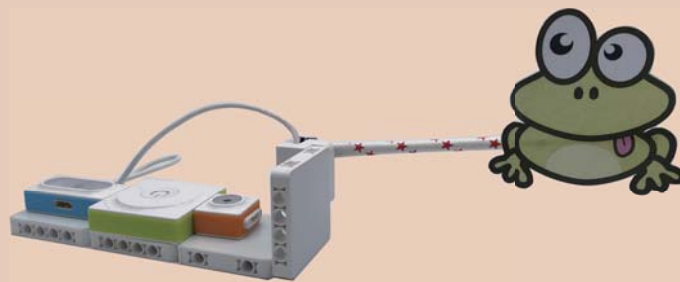
**Block Name:** Sound Sensor

**Feature:** The sound sensor detects the light intensity of environments. When it receives a strong sound signal, it will also output a strong signal.

**Connecting Example:**



**Building Example:**



**Example Details:** The frog sways according to the sound intensity that is detected by the sound sensor; the more greatly the volume changes, the more greatly the frog will shake.

## Neuron Block Card



Block Name: PIR Sensor

Feature: The PIR sensor can detect the movements of a human being within a distance of 3cm.

Connecting Example:



Building Example:



Example Details: When someone is approaching, the dog will wag its tail.



## Neuron Block Card



**Block Name:** Temperature Sensor

**Feature:** The temperature sensor detects the temperature of objects like water and human body. Detection Range: -30-100 C .

**Connecting Example:**



**Building Example:**



**Example Details:** The temperature value of the the water determines the brightness of the LED panel( expansion).

## Neuron Block Card



**Block Name:** Soil Moisture Sensor

**Feature:** The soil moisture sensor detects the moisture of soil.

**Connecting Example:**



**Building Example:**



**Example Details:** The LED display will show the soil moisture value.

## Neuron Block Card



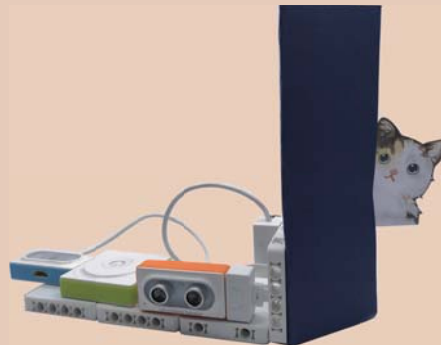
**Block Name:** Ultrasonic Sensor

**Feature:** The ultrasonic sensor detects the distance from itself to an obstacle ahead. Detection Range: 3cm~300cm.

**Connecting Example:**



**Building Example:**



**Example Details:** The ultrasonic sensor detects the distance from itself to an obstacle. The servo keeps rotating according to the value, allowing the cat to show up or hide himself.

## Neuron Block Card



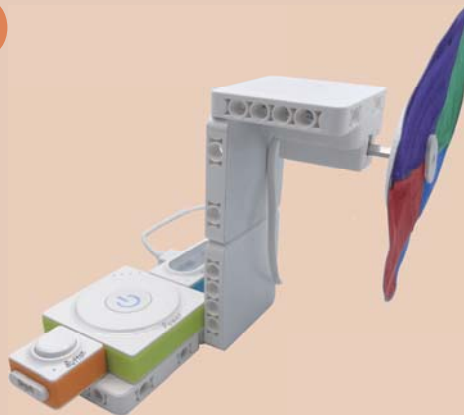
**Block Name:** Button

**Feature:** The button is a common input device. It can serve as a switch.

**Connecting Example:**



**Building Example:**



**Example Details:** Click the button to start the turn plate.

## Neuron Block Card



**Block Name:** Knob

**Feature:** The knob is a common input device. Turning the knob will output a value.

**Connecting Example:**



**Building Example:**



**Example Details:** Make a lighting panel. The larger the knob value is, the brighter the LED panel will be.

## Neuron Block Card



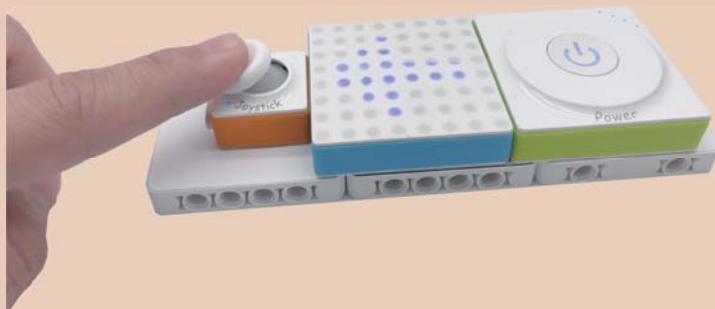
Block Name: Joystick

Feature: Push the joystick to get the X-axis and Y-axis values.

Connecting Example:



Building Example:



Example Details: Move the joystick from side to side and from back to front. The LED panel will show arrows representing different directions.

## Neuron Block Card



**Block Name:** Camera

**Feature:** The camera is used for taking pictures and face recognition.

**Connecting Example:**



**Building Example:**



**Example Details:** You should connect the camera to the Wi-Fi block and the power block. Next, connect them to the Neuron app.

## Neuron Block Card



**Block Name:** RGB LED

**Feature:** RGB LED means red, blue and green LEDs. RGB LED products combine these three colors to produce different colors of light.

**Connecting Example:**



**Building Example:**



Example Details: Design a lamp. Use the button to control the lamp.



## Neuron Block Card



**Block Name:** Buzzer

**Feature:** The buzzer is used to produce such sounds like alarms, doorbells, phones.

**Connecting Example:**



**Building Example:**



**Example Details:** Design a toy that sings. Turn the knob to control the volume.

## Neuron Block Card



**Block Name:** LED Panel

**Feature :** The LED panel is made up of an  $8 \times 8$  RGB matrix display. It is used to output images, texts, animations, etc.

**Connecting Example :**



**Building Example:**



**Example Details:** Design a palette. Touch the Funny Touch to change the light color.

## Neuron Block Card



**Block Name:** Dual Servo Driver

**Feature:** The dual servo driver block enables two servos to rotate simultaneously. By working with the dual servo driver block, the servos can rotate by 0~180°.

**Connecting Example:**



**Building Example:**



**Example Details:** Design a catapult. Change the rotation angles by controlling how the gyro sensor vibrates.

## Neuron Block Card



**Block Name:** DC Motor Driver

**Feature:** The DC motor driver enables two motors to rotate simultaneously. By working with the DC motor driver, the motors can control its rotation speed and direction all together.

**Connecting Example**



**Building Example:**



**Example Details:** Design a car. Press the button and the car is moving.

## Neuron Block Card



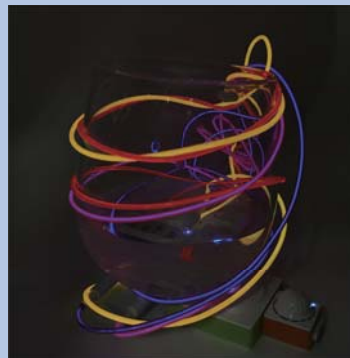
**Block Name:** EL Wire Driver

**Feature :** The EL wire driver can power 4 EL wires to glow simultaneously.

**Connecting Example :**



**Building Example:**



**Example Details:** Create a fun project . Turn the knob to control the brightness of EL wires.

## Neuron Block Card



Block Name: LED Strip

Feature: The LED strip block controls the LED strips.

Connecting Example:



Building Example:



Example Details: Make a glow stick . Press the button to control the glow stick.

## Neuron Block Card



**Block Name:** Display

**Feature:** The display shows the values of the input module.

**Connecting Example:**



**Building Example:**



**Example Details:** Measure the distance from the ultrasonic sensor to an obstacle. Use the display block to show the value.

## Neuron Block Card



**Block Name:** Speaker

**Feature:** The block is used to record sounds and play the sounds.

**Connecting Example:**



**Building Example:**



**Example Details:** Connect the speaker to the Wi-Fi block. Then connect the blocks to the Neuron app to make the speaker work.



## Neuron Block Card



**Block Name:** Power

**Feature:** provide the power to other modules.

**Connecting Example:**



**Building Example:**



**Example Details:** Each time the power block connects to an output block, the startup program will run (image, sound and rotation).

## Neuron Block Card



**Block Name:** Wi-Fi

**Feature:** 1) Facilitate wireless communication between devices and blocks;  
2) Connect to routers to achieve more things; 3) When it is connected to a mobile power source, it can be used as a power module.

**Connecting Example:**



**Building Example:**



**Example Details:** Connect the Wi-Fi block to the speaker and the camera. Look, they are working now.

## Neuron Block Card



**Block Name:** Bluetooth

**Feature:** The Bluetooth block facilitates the wireless connection between devices and blocks .

**Connecting Example:**



**Building Example:**



**Example Details:** Program the blocks with the Neuron app.

## Neuron Block Card



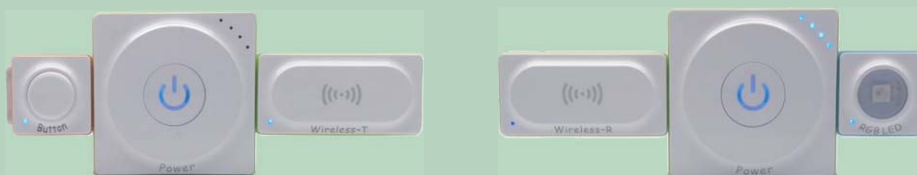
**Block Name:** Wireless Transmitter and Wireless Receiver

**Feature:** The wireless receiver block receives signals from the wireless transmitter block within a distance of 10 meters.

**Connecting Example:**



**Building Example:**



**Example Details:** Pair the wireless transmitter block and the wireless receiver block. Then connect the wireless transmitter block to the input block and the wireless receiver block to the output block; the input block can remotely control the output block.