



## Data Storage

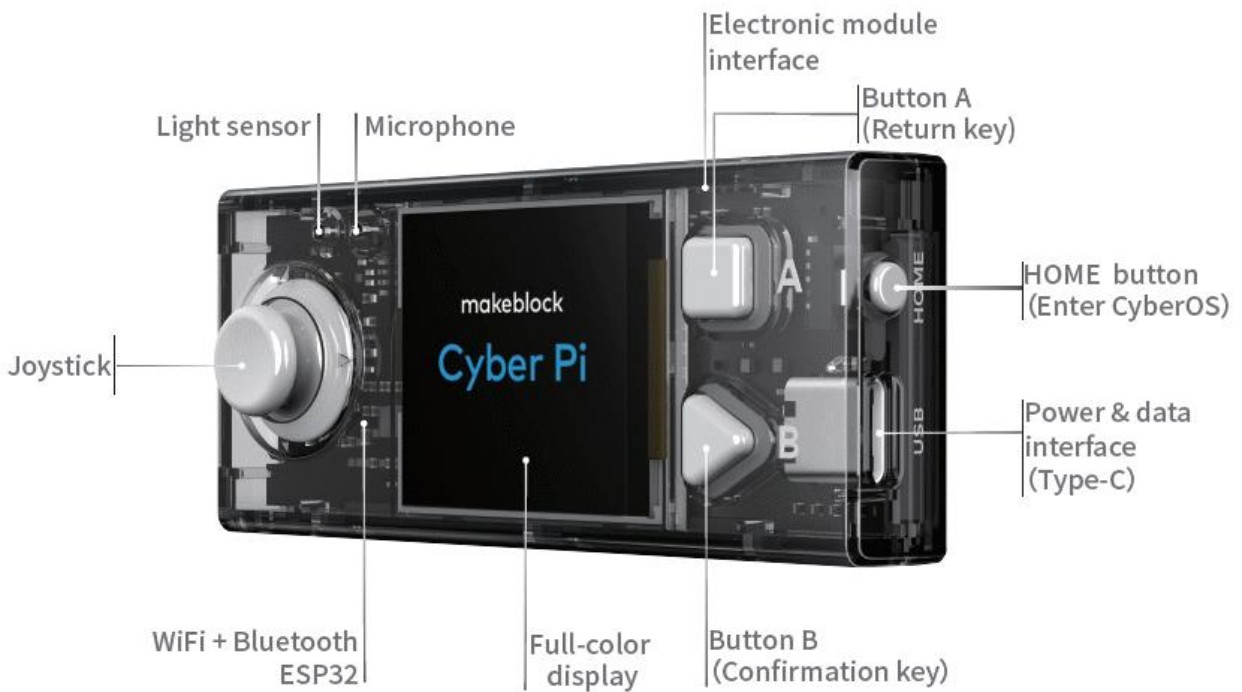
### Worksheet

#### K-W-L Chart

| What I Know | What I Wonder | What I Learnt |
|-------------|---------------|---------------|
|             |               |               |

**New Commands:** make a list of all the new Python commands you learn throughout the lesson

## Features of CyberPi



**Activity 1:**

Read the program.

```
1. import cyberpi
2. import psutil
3.
4. cyberpi.chart.clear()
5. while True:
6.     CPU = psutil.cpu_percent()
7.     mem = psutil.virtual_memory()
8.     mem_p = mem.percent
9.     cyberpi.display.set_brush(0, 0, 255)
10.    cyberpi.linechart.add(int(CPU))
11.    cyberpi.display.set_brush(255, 255, 0)
12.    cyberpi.linechart.add(int(mem_p))
13.    print("CPU:", CPU, "% Memory:", mem_p, "%")
```

**Answer:**

- ☐ The library for calling functions to monitor the CPU and memory usage
- ☐ The two variables plotted in the line chart;
- ☐ The function that plots the lines;
- ☐ The function that set the colour of the line.

Draw a Flowchart for the example program:

**Activity 2:**

**Task:** Add control structures and light effects to the example program. Define the thresholds of the alarm and the corresponding alarm indicators.

**Note:** CPU performance

| Lower CPU performance | Higher CPU performance   |
|-----------------------|--------------------------|
| Single-core           | Multi-core               |
| Low clock speed       | High clock speed         |
| Small or no cache     | Large, multi-level cache |

**Extension:**

- Encourage students to further explore computer architecture
- Ask students to build their own computer:
- For this task they would research various parts and simulate buying the components they need to build their own computer.