Esp32 Gamepad

# Layout:

## Inputs:

## **Directional Keys**

## **W**: Move Forward

## **A**: Move Left

## **S**: Move Backward

## **D**: Move Right

## **Abilities**

## **Q**: Focus Enemy

## **E**: Use Item

## **Space**: Dodge (single press, cannot be held)

## **F**: Attack

## Overview:

A circuit board with wires and wires

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F

E

Space

D

S

W

A

Q

# Technical Information:

**How It Works**

1. **Button Inputs**:
   * Each button on the gamepad is connected to a specific pin on the ESP32.
   * When you press a button, the ESP32 detects the change and maps it to a corresponding key (e.g., "W", "A", "Space").
2. **Input Log on the LCD**:
   * The gamepad has an LCD screen that displays the last 5 button inputs, like an "input log."
   * Every key you press is added to this log and shown in real-time, with spaces between the characters for better readability.
   * For example, if you press "W", "A", "S", "D", and "Space," the LCD might display: W A S D \_ (where \_ represents Space).
3. **Bluetooth Connection**:
   * The ESP32 communicates with your PC or other Bluetooth-enabled devices.
   * Button presses are sent as input signals, which act like keyboard keys. This allows you to control games or other applications.

**Limits of the Gamepad**

1. **Maximum Input Display**:
   * The LCD can only show the last 5 button presses at any time. Older inputs are removed from the log as new ones are added.
2. **Key "Space" Behaviour**:
   * The "Space" key is unique and cannot be held down like other keys. It is sent as a single input each time you press it.
3. **No Multi-Key Hold Recognition**:
   * The gamepad does not support recognizing two simultaneous key presses. If you press two buttons together, only one is registered at a time.
4. **Input Timing**:
   * There is a slight delay (200 ms) to ensure stable operation. If you rapidly press and release a button, it may not register correctly.
5. **Bluetooth Range**:
   * The gamepad’s Bluetooth connection typically works within a range of about 10 meters. Beyond this, inputs may not be received.

This setup makes the gamepad great for simple games or tasks but limits its use in fast-paced or highly complex games that require precise multi-key inputs or advanced features like analogue controls.

# Contact:

## GitHub:

* <https://github.com/YannikSand/Esp32-Gamepad>
* Email: [MiataIsBack@gmail.com](mailto:MiataIsBack@gmail.com)
* This project is open source and I am very open for any kind of improvement
* This project was originally a school Project which turned out to be better than expected
* Tested and mainly used in “DARK SOULS™ II Scholar of the First Sin”. ( I suck at it)
* You may encounter an Issue with the Port, since you manually have to set it to the correct one in the Python code.

A circuit board with wires and a display

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* Have fun testing / using this project!