

Component	Pin Name	Connection Type	Connect To (ESP32 Pin)	Connect To (Breadboard)
ESP32-CAM	5V	Power Input	N/A	Red Rail (+)
	GND	Ground	N/A	Blue Rail (-)
	GPIO 12	Output (Trigger)	Pin 12	Row 20
	GPIO 13	Input (Entry Echo)	Pin 13	Row 4
	GPIO 14	Output (Servo Sig)	Pin 14	Row 6
	GPIO 15	Input (Exit Echo)	Pin 15	Row 5
	GPIO2	Output (GREEN LED)	Pin 2	Row 28 (Left)
	GPIO3	Output (RED LED)	Pin 3	Row 28 (right)
Servo Motor	Red	Power	5V	Red Rail (+)
	Brown	Ground	GND	Blue Rail (-)
	Orange	Signal	GPIO 14	Row 6
Entry Sensor	VCC	Power	5V	Red Rail (+)
	GND	Ground	GND	Blue Rail (-)
	Trig	Signal Input	GPIO 12	Row 20
	Echo	Signal Output	GPIO 13	Row 4
Exit Sensor	VCC	Power	5V	Red Rail (+)
	GND	Ground	GND	Blue Rail (-)
	Trig	Signal Input	GPIO 12	Row 20
	Echo	Signal Output	GPIO 15	Row 5
Green LED	Anode	Signal Input	GPIO 2	row 28
	Cathode	Ground Path	N/A	row 29
Resistor (Green LED)	Side A	Current Limit	N/A	Row 29
	Side B	Ground	N/A	Blue Rail (-)
Red LED	Anode	Signal Input	GPIO 3	Row 28
	Cathode	Ground Path	N/A	Row 29
Resistor (RED LED)	Side A	Current Limit	N/A	Row 29
	Side B	Ground	N/A	Blue Rail (-)
Power Rail	End A	Power Bridge (+)	N/A	Red Rail (+) [Left Side]
	End B	Power Bridge (+)	N/A	Red Rail (+) [Right Side]
Ground Rail	End A	Ground Bridge (-)	N/A	Blue Rail (-) [Left Side]
	End B	Ground Bridge (-)	N/A	Blue Rail (-) [Right Side]