

Bill of Materials (BOM)

This table lists all the components required to build the ESP32 Pulse & Temperature Monitoring System.

Component Name	Purpose in Project	Quantity	Notes / Specifications
ESP32	Main microcontroller	1	ESP32 DevKit V1 (recommended)
Heart Rate Pulse Sensor	Measure heart rate (BPM)	1	Standard 3-pin pulse sensor
I ² C LCD 16x2	Display all readings	1	With I ² C backpack for easy wiring
IR Thermometer (MLX90614)	Measures body temperature	1	Object & ambient temperature sensing
9V Battery	Powers the system	1	Rechargeable or disposable
9V Battery Snap Connector	Connects battery to breadboard	1	Male DC barrel jack optional
Jumper Wires	Electrical connections	–	Male-male + female-male assorted
Breadboard	Circuit assembly & prototyping	1	400–830 tie-points recommended

Optional / Useful Extras

- USB cable (for programming ESP32)
- Small enclosure / 3D printed case for protection