Here’s the complete list of **hardware components** used in your **AirAware Orb — Real-Time Air Quality Sphere** project:

**🧰 Hardware Components Used**

| **S.No** | **Component** | **Specification / Notes** |
| --- | --- | --- |
| 1. | **ESP32 Development Board** | ESP32 DevKit v1 (38-pin or 30-pin) |
| 2. | **MQ135 Gas Sensor** | For measuring air quality (CO₂, NH₃, etc.) |
| 3. | **DHT11 Sensor** | For measuring **temperature** and **humidity** |
| 4. | **WS2812B RGB LED Strip** | Addressable RGB LEDs (used as indicator light) |
| 5. | **16x2 LCD with I2C Module** | To display temperature, humidity, air quality |
| 6. | **Breadboard** | For prototyping and connections |
| 7. | **Jumper Wires (Male-Male)** | For connecting modules to ESP32 |
| 8. | **USB Cable (Micro USB)** | For powering and uploading code to ESP32 |
| 9. | **External Power Supply** *(Optional but Recommended)* | 5V 2A adapter for RGB LED strip |
| 10. | **Resistors (Optional)** | 220Ω resistor for data line of RGB (optional for stability) |
| 11. | **Capacitor (Optional)** | 1000µF, 6.3V or higher across power for RGB strip (optional) |

**🔌 Power Source Note:**

* RGB strip and MQ135 require **5V** — use **Vin pin** of ESP32 or external 5V adapter if needed.
* DHT11 works with **3.3V or 5V**, but if both 3.3V and 5V are used already, use a **breadboard power module** or connect via **external 5V source** (with common GND).