1. Battery

Recommended Option for Your Device

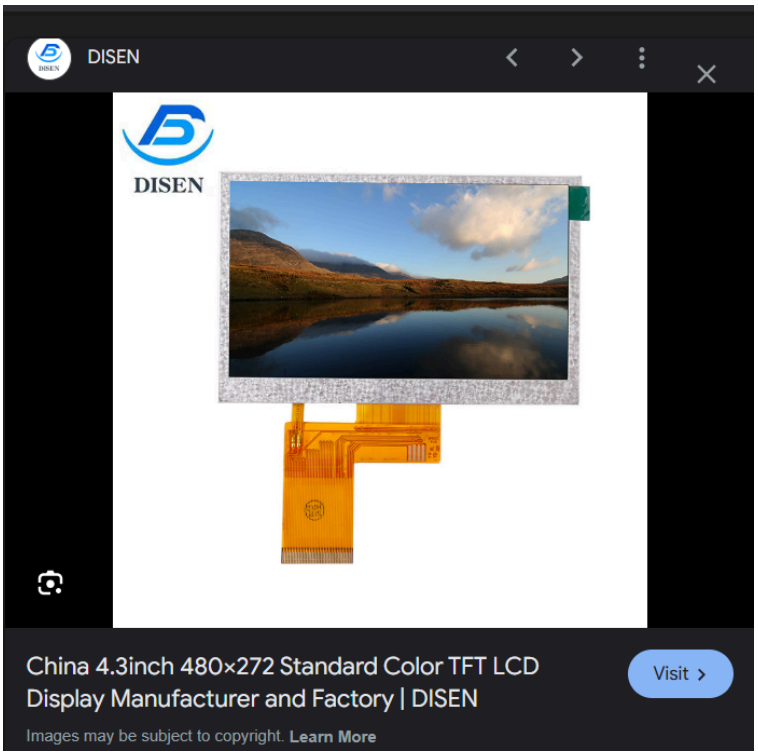
- **Battery Type**: Lithium-Ion or Lithium-Polymer.
- **Voltage**: 7.4V (two 3.7V cells in series) or 3.7V (single cell, depending on the circuit).
- **Capacity**: 3000mAh or higher (to sustain Wi-Fi, sensors, motors, and displays for several hours).

Charging and Backup

- Include a **charging module** such as TP4056 for lithium batteries.
- Add a **backup mechanism**, like a wall adapter or power bank compatibility, to ensure uninterrupted usage.

2. Display

Type: TFT LCD with capacitive touchscreen.
Size: 3.2" (for displaying medication information, schedules, and alerts).
Resolution: 480x320 pixels.
Integration: Use libraries like `Adafruit_GFX` for microcontroller-based systems.



3. Buttons

Essential Buttons:

- **Power On/Off** (Push Button or Rocker Switch).

- **Dispense** (Tactile Push Button).
- **Navigation** (Capacitive or Tactile Up/Down/Select buttons).
- **Emergency Stop** (Red Tactile or Rocker Button for safety).

4. Medicine Compartment Design

1. Material

- **Preferred Material**: Food-grade, non-toxic plastic (e.g., **polypropylene (PP)** or **polycarbonate (PC)**).
    - **Benefits**: Durable, lightweight, safe for storing medications, and easy to clean.
    - Transparent or semi-transparent lids to allow visibility of pills.

5. Alert system

- **Buzzer Module (e.g., KY-012)**: For sound alerts.
- **RGB LED Strip or Single LEDs**: For visual notifications.
- **Vibration Motor (e.g., DC 3V)**: For tactile feedback.
- **Wi-Fi/Bluetooth Module (e.g., ESP32)**: To send app-based notifications

6. Temperature sensor :

DHT11 or DHT22

- **Type**: Digital
- **Range**: DHT11: 0-50°C, DHT22: -40 to 125°C
- **Accuracy**: ±2°C (DHT11) and ±0.5°C (DHT22)
- **Features**: These sensors measure both temperature and humidity, which might be useful if your device also monitors environmental conditions.
- **Use Case**: Suitable for general-purpose temperature monitoring.