1. General Description

The learning code remote control is a transmitting device that adopts EV1527/PT2240 and other chip codes. It is a cost-effective and widely used wireless remote control coding method. The product has millions of different address codes and 4 fixed key values, which can be combined to generate 15 different keys at most. The product has different casings to choose from, and can be customized by mold opening or developed according to the customer's launch format to meet the needs of different customers.

2. Features

Frequency: 315MHZ/433.92MHZ（Other frequencies are available to customize）

Frequency Deviation: ±0.2MHZ

Modulation：ASK

Working Current:18mA（12V voltage supply）/10mA（3V_6V voltage supply）

Quiescent Current: 0uA

Transmission Power: 10-15mW

Transmission Distance: 50m in the open space

Coding: EV1527/PT2240/HS1527

3. Application

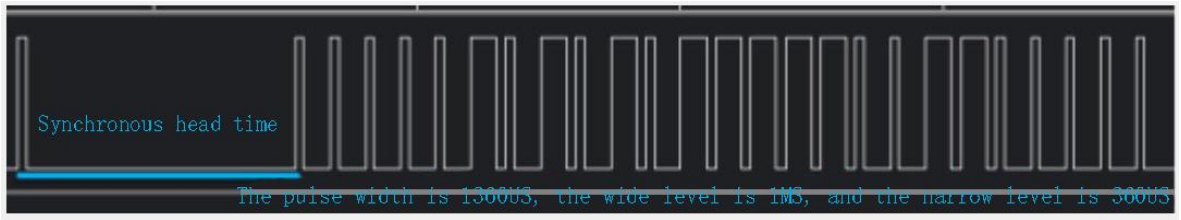
(1) Rolling shutter door, shutter window controller;
(2) Road gate, retractable door controller;
(3) Passenger door control system;
(4) remote control system;
(5) smart home system;
(6) remote control door opener;
(7) Wireless security alarm;
(8) Remote control curtain machine;

(9) Wireless industrial controller;
(10) RGB light bar, light strip, lighting fixture control;

4. Code Sending Format Description

The following only provides the emission pulse width data of 1-2 common resistors. Different oscillation resistors will have different emission pulse widths, and the specific samples shall prevail.。

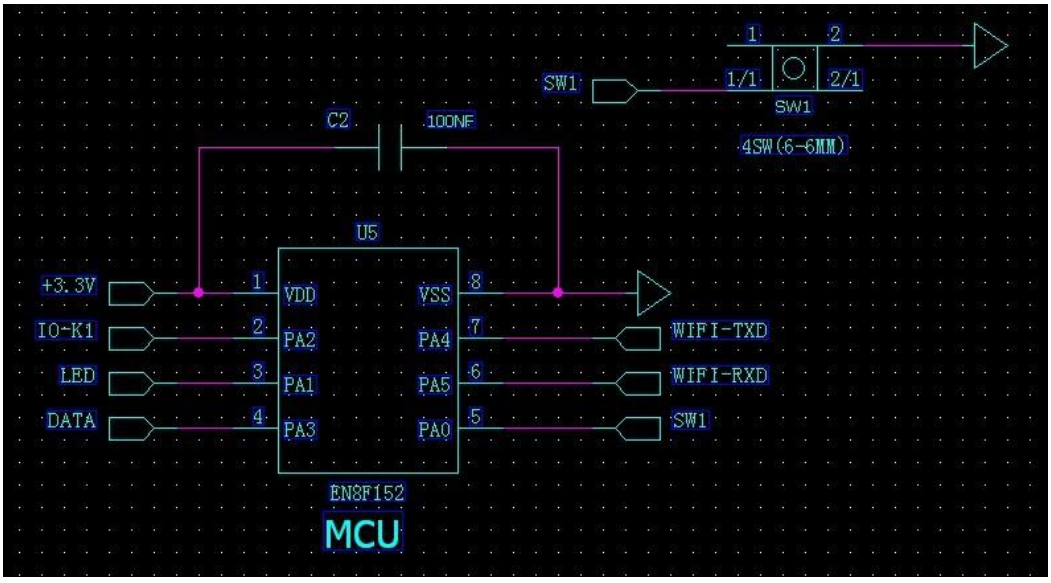
Chip/Resistor	Sync header time	High level time	Low level time
EV1527/330K	10.5MS	1MS	360US
EV1527/270K	8.6MS	840MS	280US
HS1527/270M	10.5MS	1MS	360US



The learning code remote control is a remote control with 24-bit data, the first 20 bits are the address data of the remote control, and the last 4 bits are the key value of the remote control. The first 20 digits implement millions of different address codes, and the addresses of the remote control do not repeat in one million. If there is no combination of the last 4 digits, the key values are 8 4 2 1 (hexadecimal), and the key values of the remote control are fixed.

The learning code remote control needs to be decoded by a single-chip microcomputer, so as to realize the one-to-one control of the remote control. Before use, the remote control and the receiving control terminal need to perform remote pairing operation. As shown in the figure below, pin 5 of the

MCU is externally connected to the learning key. When the level of pin 5 of the learning key changes when the level changes, the program considers it to be in the learning pairing state. Press the remote control immediately, the pairing is completed, and the program exits the pairing state. You can also complete the pairing by pressing any button on the remote control in the learning state a few seconds before power on. Pairing In order to see the effect more intuitively, the third pin of the MCU in the figure below can be connected to an LED for indication. When the fifth pin has a level change and enters the learning state, the LED can be lit for indication. After the learning is successful, the LED can be Blinks several times to indicate. The above two methods are commonly used pairing methods in our remote control industry. Programmers can also design different operation methods according to the characteristics of their own products. The above are for reference only.



Based on the pulse width of the sample, there are ±20% deviation to avoid that the remote control is not sensitive or cannot be remotely controlled.

Output Encoding Format

Synchronize	C0-C19(1 million groups)	D0	D1	D2	D3