



1. Introduction

Rolling code remote control is a transmitter using HCS300/HCS301 chip coding. It is a cost-effective and widely used wireless remote control coding method. Products have billions of different address codes, and unique 16-bit vendor code bipolar encryption. Products can be designed into a remote control with a shell, can also be designed into a coded launch plate, to meet the needs of different customers.

2. Product Features:

- Frequency: 315MHZ/433.92MHZ (customized frequency is available)
- Frequency Deviation: ± 0.2 MHZ
- Modulation: ASK
- Working Current: 18mA (12V battery) /10mA (3V_6V battery)
- Quiescent Current: 0uA
- Transmitting Power: 10-15mW
- Transmitting Range: About 50m in open space
- Coding Chip: HSC200/HCS300/HCS301/HCS360

3. Application:

- Shutter door, shutter window controller
- Road gate, telescopic door controller
- Bus door control system
- Remote control system
- Intelligent housing system
- Remote control door opening machine;
- Wireless security alarm
- Remote control curtain machine
- Wireless industrial controller
- RGB lamp strip, lamp strip, lighting lamp control
- Fingerprint lock
- Car alarm/central lock



4. Transmitting format specification

Please refer to the chip specification for the code format.

The rolling code remote control is a remote control with 64-bit data. The first 32 bits are the unique jump algorithm of the rolling code remote control, and the last 32 bits are the serial number (address code) and key value of the remote control. Hundreds of millions of address codes can be programmed through the serial number rolling code remote control. The key value is fixed at 8 4 2 1 (hexadecimal).



The rolling code remote control needs to be decoded by the 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 learning key is pressed, 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 as shown 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. The process of pairing is the process of storing the address code of the remote controller in the storage unit of the single-chip microcomputer, and calculating the manufacturer's code.



Rolling Code Remote Control

The synchronization head and 12 boot codes are not considered in the decoding process of the single chip computer.

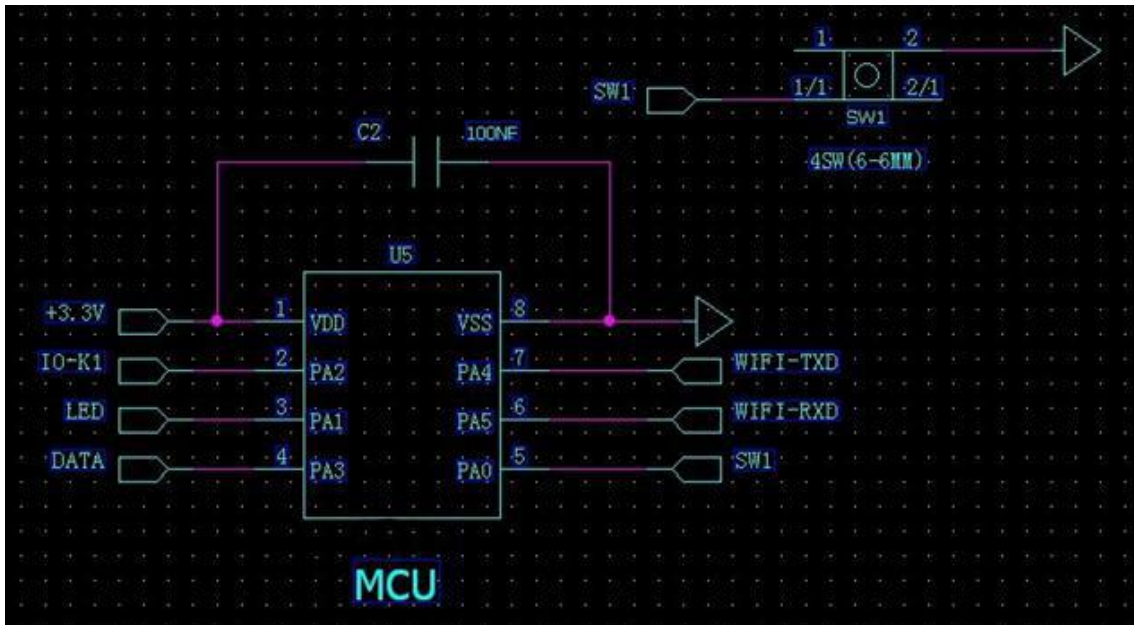


FIGURE 4-1: CODE WORD FORMAT

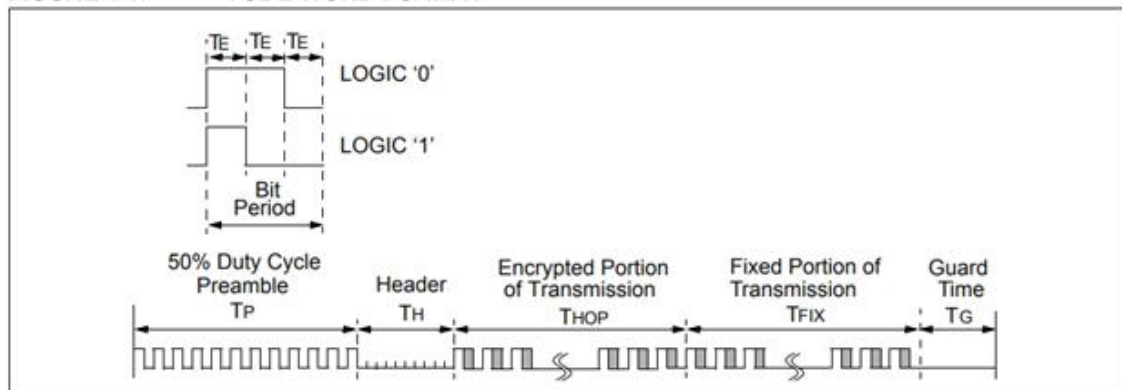


FIGURE 4-2: CODE WORD ORGANIZATION

