

# L24YK 6-port Switch Module

2.4G FHSS

## Item Info

### General Information :

L24YK series are switch transmitters and receivers, of which L24YK-TXH, L24YK-TXL are transmitters , L24YK-RX1,L24YK-RX2,L24YK-RX3,L24YK-RX4 are receivers. L24YK series adopts newest SOC technology, no further development is needed. It features 120m distance in open space, and FHSS technology enables it to work in groups without frequency interference. One L24YK transmitter can work with multi L24YK receivers, and one receiver multi transmitters.

### Quick Reference Data

- \*Frequency : 2.4-2.5Ghz
- \*Interface: 6-port switch
- \*Distance: 120m in open space
- \*Consumption: Transmit standby mode3uA , Receive Min 0.06mA
- \*Features: Code matching Configurable Latch or Unlatch
- \*Supply Voltage: 2.2-3.6V, typical 3.3V

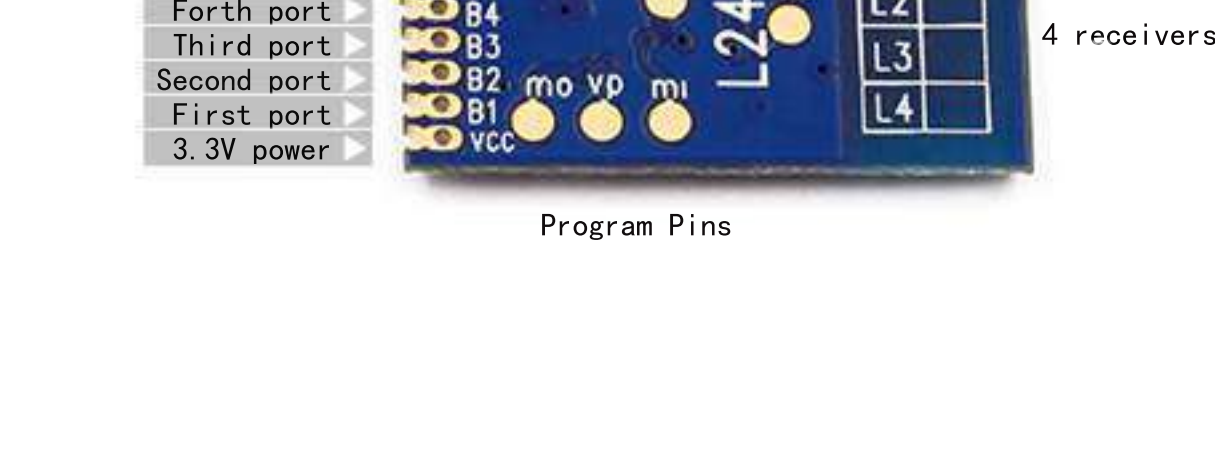
## Apperance

Antenna

Front

Reverse

## Pin Assignment



## Features

- Long Distance**  
Internal Power Amplifier  
120m in open space
- Development -Free**  
Internal MCU En/Decode
- Easily Use**  
6 keys directly connect for transmit  
Receive output 6-port switch
- Low Power Consumption**  
Transmit standby mode 3uA  
Receive customed 0.06mA
- 2.4G FHSS**  
No frequency interference
- Security Code matching/Forbidden code matching**  
Unique ID for every transmit ID  
One receive match 20 transmit IDs
- Operate Temperature**  
-40-80 °C
- Latch/Unlatch switch**  
Through configurate Pin B8

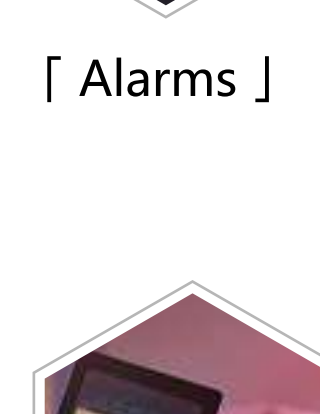
## Applications



「 RC TOY 」



「 Controller 」



「 Alarms 」



「 Anti-Lost Device 」



「 RC Switch 」



「 Light Control 」



「 Home Automation 」



「 Anti-Thief System 」

## Parameters

### L24YK-TXL/H ( Transmitters )

Frequency	2.4-2.5Ghz
Standby Current	3uA
Output Power	12dBm
Max Data Rate	2Mbps
ID	Unique
Distance	120m
Voltage	2.2 ~ 3.6V
Sleep Current	3uA
Modulation	GFSK
Input	6-port switch
Antenna	PCB Antenna
Dimensions	23.3X13.7X2.1mm

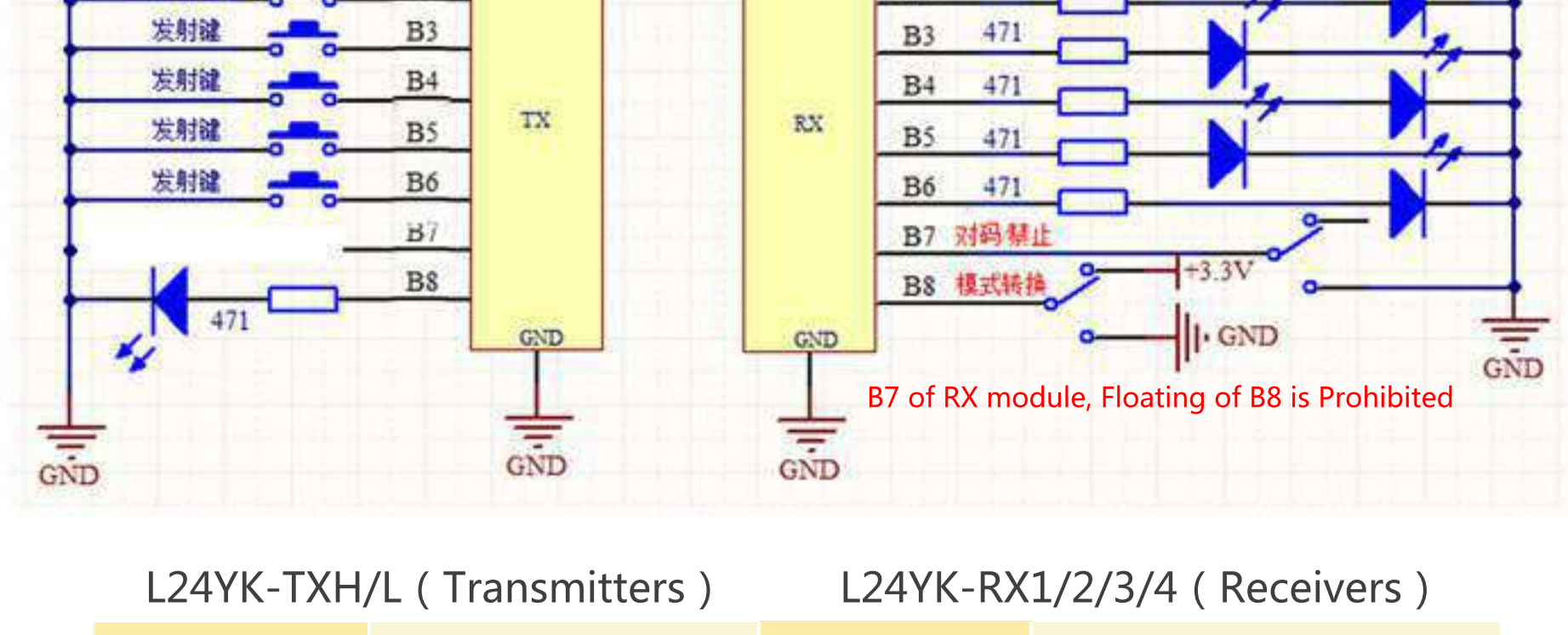
### L24YK-RX1/2/3/4 ( Receivers )

Frequency	2.4-2.5Ghz
Receive Current	0.06/0.2/2/24mA , Default : 24mA
Modulation	GFSK
Output Status	Latch/Unlatch
Code Match	Max 20 transmit IDs
Distance	120m
Voltage	2.2 ~ 3.6V
Receive Sensitivity	-95dBm
Data Channel	6
Ouput	6 switch
Antenna	PCB Antenna
Dimensions	23.3X13.7X2.1mm

Transmitters : L24YK-TXH , work with L24YK-RX4 , quick response, multi channels task at one time  
L24YK-TXL , work with-L24YK-RX1/2/3 , late response, one channels only

Receivers : L24YK-RX1, work with L24YK-TXL , 0.06mA 1s long push, zero custom  
L24YK-RX2, work withL24YK-TXL , 0.2mA 0.3s push ,zero custom  
L24YK-RX3, work withL24YK-TXL , 2mA for 0.03s push zero custom  
L24YK-RX4, work with L24YK-TXH , 24mA ,quick response, multi channels task at one time

## Reference Diagram



### L24YK-TXH/L ( Transmitters )

VCC	+3.3V (2.2-3.6)
B1-B6	data pin , connect to transmit key , valid when low when receiver in code matching mode , click pin B7 for code match.
B7	Transmit code match pin valid when low
B8	Transmit status signal connect to LED
GND	Ground

### L24YK-RX1/2/3/4 ( Receivers )

VCC	+3.3V (2.2-3.6)
B1-B6	6 data output pins , high for output mode , low for normal
B7	Code Match Enable/Disable , pull up to enter Code Matching mode;after short connect to ground..Connect to ground for over 5s will clear all matching code ( Floating is Prohibited )
B8	Output mode configuration , connect to ground is latch ouput , connect VCCis unlatch output ( Floating is Prohibited )
GND	Ground

## Code Match :

Supply power, short connect to ground of pin B7 of Receiver and enter into code matching mode, LED light stay on.(LED connect to pin B6, high when enter into code matching mode)

Supply power to transmitter within 10s, push down pin B7 for code matching, succeed while LED of receivers flashing. Receiver can work with muti transmitter, receiver will exit code matching mode after stay on over 10s, re-supply power if not continue code matching

Push pin B1-B6 successively of transmitter after code match succeeded, port relative to receiver should output high level and LED on.

Under unlatch mode, keep pushing on the transmit key, output high level on receive end, quit pushing the transmit key makes it zero level on receive end

Under latch mode, click the key one time, receive output high level and latch, click the key again, receive output change to low level

One transmitter can match multi receivers at the same time, one receiver can match max 20 transmitters. Pull up pin B7 of receiver to prohibit code matching after code match succeeded.

Keep pull-down pin B7 of receiver over 5s, all saved code will be clear. Re-match code is required if use.

## Test :

The controller can test valid distance after code matching succeed, push pin B1-B6 of transmitter, if pin B1-B6 of receiver has output, LED light will be on.

Distance is 120m in open space.Normal mode of transmitter is standby mode with low power consumption, transmit current appears when transmit keys are pushed down, life time of battery can be years. L24YK-RX4 is with quick response, there is no sleep mode of it, works with L24YK-TXH.

L24YK-RX1/2/3 is designed for low power consumption, the low consumption is achieved through sleep mode, it needs to wake up by pushing the transmit key for 1s. The module requires stable power supply.

Output signal of receiver is level signal, output current is 2mA, 3V LED is workable, for more load, power amplifier is needed. Teh connection of supply power must be correct, supply voltage cannot be more than 3.6V, or the module will be burned.

Antenna of the module is PCB antenna, can be welded on user's PCB, but no lines or metal is allowed on the board under the Antenna of the module, otherwise valid distance may shorten.

