SPI-16S

MiNi LED Fantastic Controller

RF WIRELESS

Wall-mounted

FC CE RoHS warranty 5 years SGS UKAS ISO9001:2008

SPI-16S is a Mini LED pixel controller, equipped with RF remote M16S, almost able to control all IC-driven LED lights. Compact and powerful, various built-in changing effects and customized scene modes can bring you fantastic color!

By RF remote control M16S, you can select from a variety of dynamic lighting effects, set controlled pixels quantity, adjust the changing speed and brightness, change the lighting moving direction, adjust RGB sequence, select the IC type, store and play customized scene etc.

1. Product Parameter:

SPI-16S Controller:

Power Input:	5~24Vdc
Output :	SPI
Wireless Signal:	RF 2.4GHz
Working Temperature:	-30℃~55℃
Dimensions:	L135×W30×H20(mm)
Weight(N.W.):	52g

M16S Remote:

Working Voltage:	3V (battery CR2032)
Wireless Signal:	RF 2.4GHz
Changing Mode:	16 kinds
Working Temperature:	-30℃~55℃
Dimensions:	L104×W58×H9(mm)
Weight(N.W.):	42g

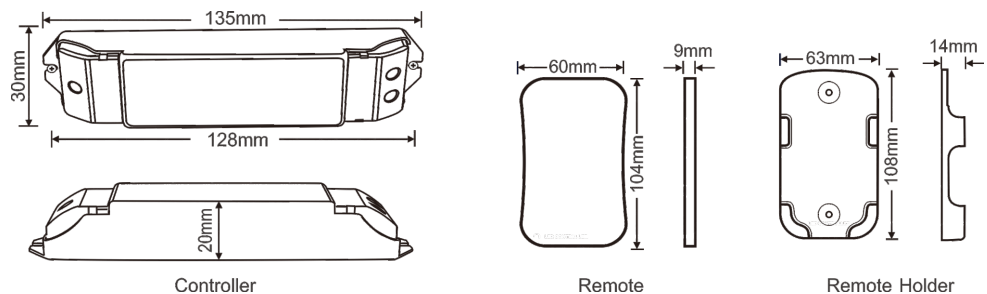Compatible driving IC: any kinds, can be customized also.

Package Size: L132×W198×H22(mm)   Total Weight(G.W.): 145g

★ Connect power supply to pixel LEDs separately, in case of overvoltage, overcurrent to the receiver. Receiver only supply a signal to the LEDs.
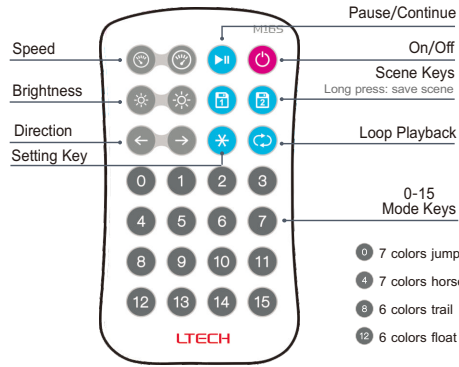
---

2. System Diagram:

4G 3G L-Home Cloud Service Global remote control

Internet

Wi Fi   Wi Fi

Smart Remote (Gateway Version)

M1+M3-3A   M2+M3-3A   M3+M3-3A   M5+M3-3A   M6+M3-3A   M7+M3-3A   M4+M4-3A   M8+M4-3A   SPI-16S+M16S

3. Product Dimension:

135mm
30mm
128mm
20mm

Controller

60mm   9mm
104mm

Remote

63mm   14mm
108mm

Remote Holder
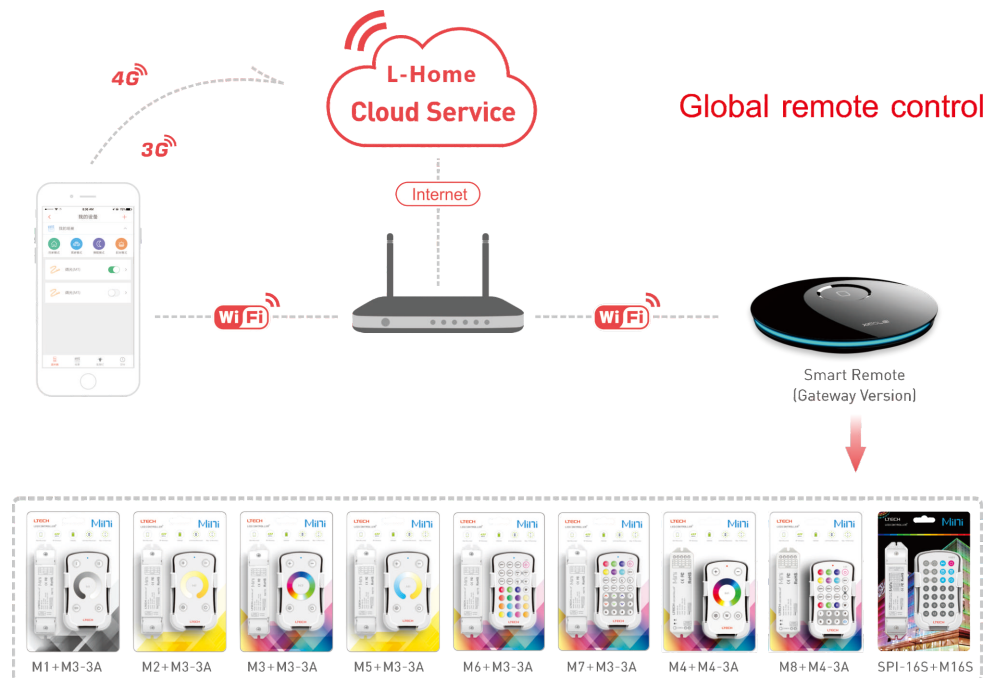
4. The Remote Instruction:

Speed
Brightness
Direction
Setting Key

M165

Pause/Continue
On/Off
Scene Keys
Long press: save scene

Loop Playback

0-15
Mode Keys

0	7 colors jump	1	7 colors flash	2	7 colors fade	3	7 colors smooth
4	7 colors horse race	5	7 colors circle horse race	6	7 colors flow	7	7 colors gradients flow
8	6 colors trail	9	6 colors circle trail	10	Gradients trail	11	White meteor
12	6 colors float	13	6 colors double trail	14	Color white float	15	Bi-color float

Other Setting Instructions of Remote

1. Loop playback: Short press ✻ key, then continuous press any 0-15 numeric keys, last press ↻ key to finish. Controller will play cycle the corresponding mode of the numeric key.

2. Method for selecting IC / RGB Sequence:

Can control the following pixel LEDs: APA102, KL590, KL592D, LPD6803/1101/8803/8806, P9813, TLS3001/3002, TM1804/1809/1812, UCS1903/1909/1912/2903/2909/2912UCS6909/6912,WS2801/2803/2811/2812 in factory default.

Manipulate table for choosing ICs, RGB order or pixel No..

IC Type	Setting e.g.
TM1809	✻1809✻
LPD6803	✻6803✻
KL590	✻0590✻
KL592D	✻0592✻
APA102	✻0102✻
┄┄┄┄	✻□□□□✻

RGB Order	Setting
RGB	✻123✻
RBG	✻132✻
GRB	✻213✻
GBR	✻231✻
BRG	✻312✻
BGR	✻321✻

Pixel	Setting e.g.
8	✻✻008
16	✻✻016
100	✻✻100
160	✻✻160
1020	✻✻1020
Range: 8-1020 pixels	

[Attn]: The running light of SPI-16S controller flashes 2s means set completed.

When setting IC type, pixel number and RGB order, select multiple keys at uniformed speed. Not too fast.

5. Terminal Description:

Power Input Socket
ID Learning Button
Running Light

POWER DC+ DC-
ADDRESS SETTING
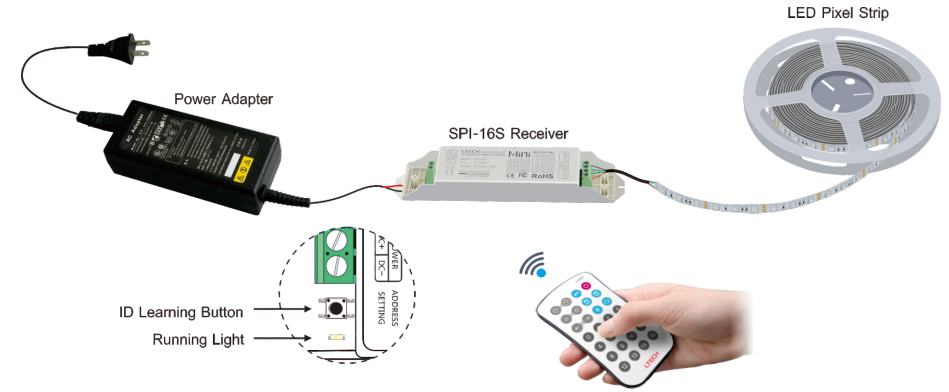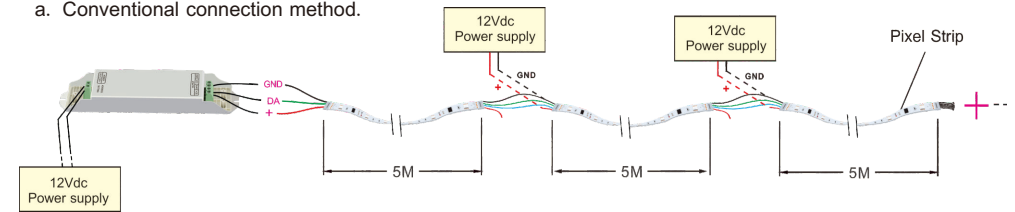OUTPUT DC+ DAT CLK GND

LED Lamps
Connection Socket

The Learning ID Method:

The receiver and remote are Pre-synced at factory. If deleted accidentally, the sync method is as follows (multiple remotes could be synced to one receiver):

Learning ID:

Short press "ID learning button" on SPI-16S receiver, the running light is on. Then press any key on M16 remote , the running light flicker several times, activated.

Canceling ID:

Press "ID learning button" on SPI-16S receiver for 5s, the running light flicker several times, canceled.

5. Wiring Diagram:

LED Pixel Strip
Power Adapter
SPI-16S Receiver

PWER DC+ A+
ADDRESS SETTING

ID Learning Button
Running Light

LED pixel strip wiring diagram:

a. Conventional connection method.

12Vdc Power supply
12Vdc Power supply
Pixel Strip

GND
DA
+

GND
+

GND
+

12Vdc Power supply

5M   5M   5M

b. Light fixtures and controller using different operating voltages.

36Vdc Power supply
36Vdc Power supply
Pixel Strip

GND
DA
+

GND
+

GND
+

5-24Vdc Power supply
36Vdc Power supply

5M   5M   5M