



General

|                   |                 |
|-------------------|-----------------|
| Product Type      | Wireless        |
| Length (mm)       | 104             |
| Width (mm)        | 58              |
| Height (mm)       | 9               |
| Housing Color     | White           |
| Housing Material  | Plastic         |
| Mounting          | Surface mounted |
| Weight (g)        | 42              |
| Wire Strip Length | 5mm             |
| Wire Type         | 2.5mm2          |

Electronics

|               |            |
|---------------|------------|
| Input Domain  | DC         |
| Input Voltage | 5 ~ 24V DC |
| Power Supply  | N/A        |
| LED Outputs   | 1          |

Lighting

|             |      |
|-------------|------|
| Color Range | RGBW |
|-------------|------|

Control

|                 |              |
|-----------------|--------------|
| Output Signal   | SPI(TTL)     |
| Control         | Manual       |
| Dimming Range   | 0~100%       |
| Remote Distance | 30m          |
| Functions       | programmable |

Protection

|                          |     |
|--------------------------|-----|
| Reverse Polarity         | Yes |
| LED Output Short         | Yes |
| Overload                 | Yes |
| Restart after Protection | Yes |

Environmental

|                       |              |
|-----------------------|--------------|
| Operating Temperature | -20 ~ +55 °C |
| Ingress Protection    | IP20         |
| Battery               | 1x CR2032    |

CE FCC IP20

3year warranty

Disclaimer

Due to the technical evolution and improvement of our products, the data provided in this document may be updated on a regular basis, and as such, confirmation of this information is strongly recommended prior to the order process. OneEightyOne is not responsible for any discrepancies in this document following changes in our products. We reserve the right to make technical changes to our products and to change information, at its sole discretion, without notice.

# SPI-16S Mini LED Fantastic Controller

RF WIRELESS



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°C~55°C       |
| Pixel Range:         | 8~1020px         |
| Dimensions:          | L135×W30×H20(mm) |
| Weight(N.W.):        | 52g              |

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

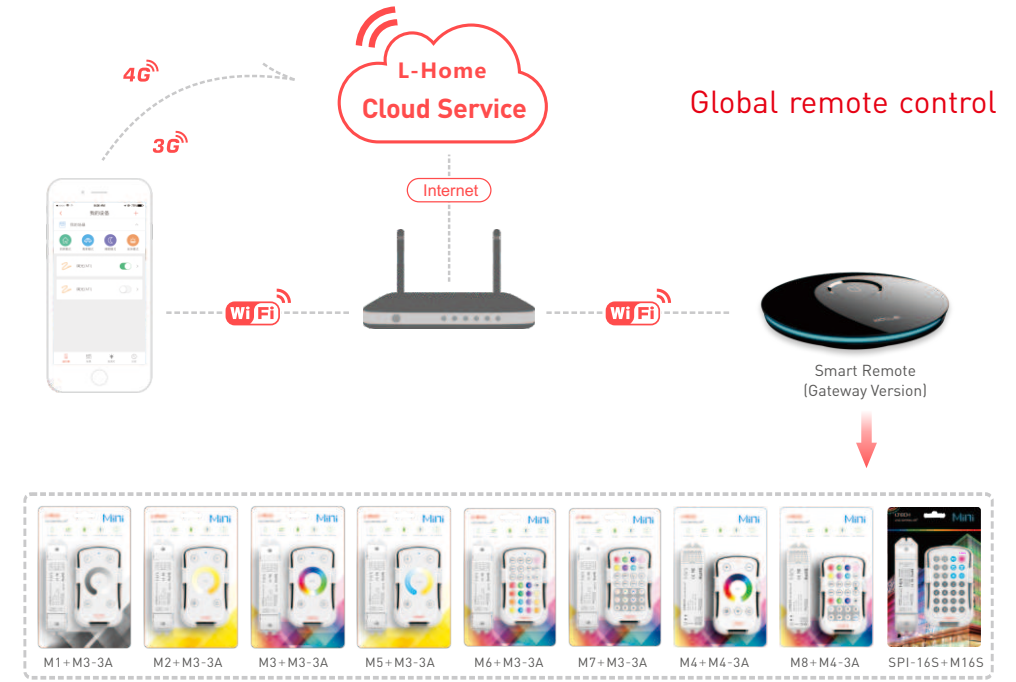
**Package size: L132×W198×H22(mm) Total weight(G.W.): 145g**

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

### M16S Remote:

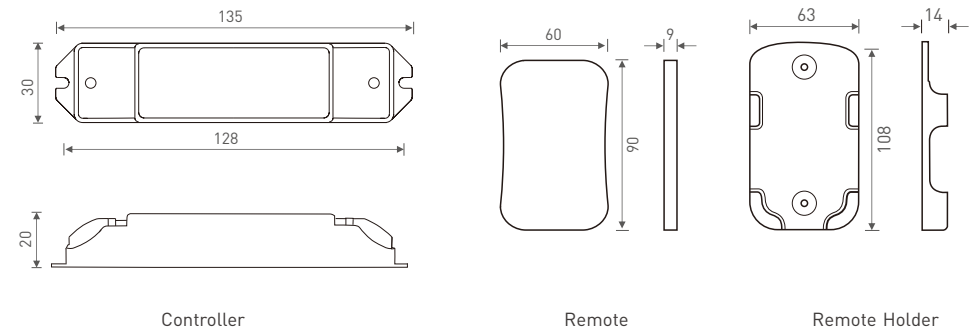
|                      |                     |
|----------------------|---------------------|
| Working Voltage:     | 3V (battery CR2032) |
| Wireless Signal:     | RF 2.4GHz           |
| Changing Mode:       | 16 kinds            |
| Working Temperature: | -30°C~55°C          |
| Dimensions:     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

## 2. System diagram:

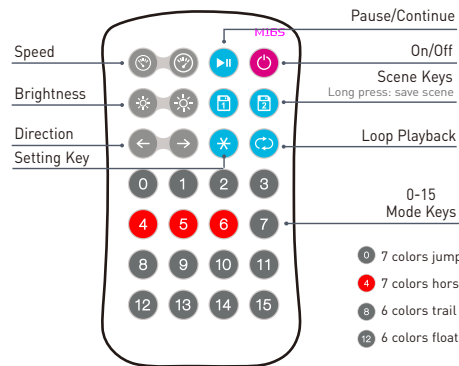


## 3. Product dimension:

Unit: mm



## 4. The remote instruction:



## 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.

## Other Setting Instructions of Remote

- 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.
- After the remote being paired with the controller, the IC model, pixel ranges and RGB sequence can be set by the remote. By factory default, controller works with TM1809IC pixel light. If work with different IC model, please setting follow below instructions. This controller is compatible with following IC models:

TM1803/TM1804/TM1809/TM1812/TM1814/TM1914/TM1914A/UCS1903/UCS1909/ UCS1912/UCS2903/UCS2904B/U CS2909/UCS2912/UCS5603A/UCS6909/UCS6912/WS2801/WS2803/WS2811/WS2812/WS2821/APA102/AP A104/KL590/KL592D/LPD6803/LPD1101/LPD8803/LPD8806/P9813/TLS3001/TLS3002/P943/SK6812(RGB)/GS8206 (BGR)/GS8208/SM16703 in factory default.

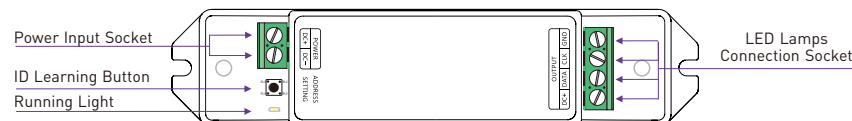
Manipulate table for choosing ICs, RGB order or pixel No.

| IC Type | Setting e.g. | Pixel                | Setting e.g. | RGB Order | Setting |
|---------|--------------|----------------------|--------------|-----------|---------|
| TM1809  | *1809*       | 8                    | **008        | RGB       | *123*   |
| LPD6803 | *6803*       | 16                   | **016        | RBG       | *132*   |
| KL590   | *0590*       | 100                  | **100        | GRB       | *213*   |
| KL592D  | *0592*       | 160                  | **160        | GBR       | *321*   |
| APA102  | *0102*       | 1020                 | **1020       | BRG       | *312*   |
| .....   | *0000*       | Range: 8-1020 pixels |              | BGR       | *321*   |

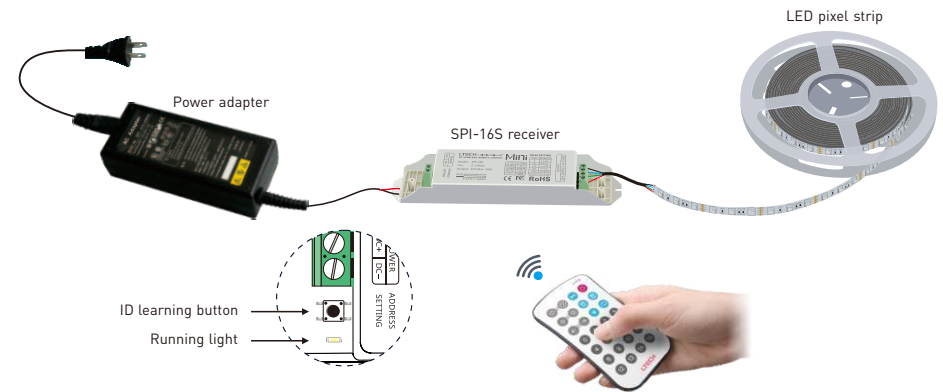
**[Attn]:** The running light of SPI-16S controller flashes 2s means set completed.

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

## 5. Terminal description:

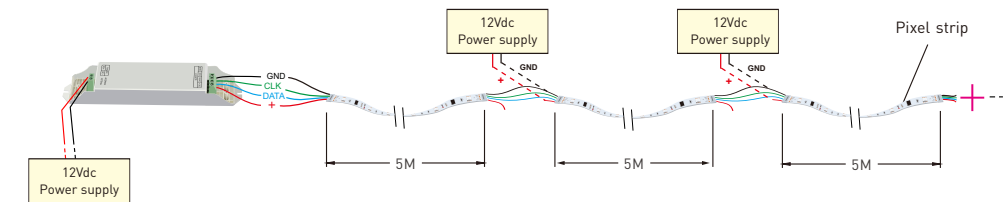


## 6. Wiring diagram:

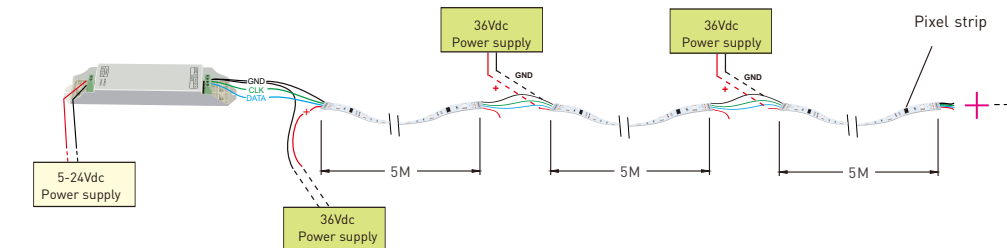


## LED pixel strip wiring diagram:

### a. Conventional connection method.



### b. Light fixtures and controller using different operating voltages.



\* No further notice if any changes in the manual. Product function depends on the goods. Please feel free to contact your supplier if any question.