

DMX – SPI Decoder

Commercial Grade



Specification

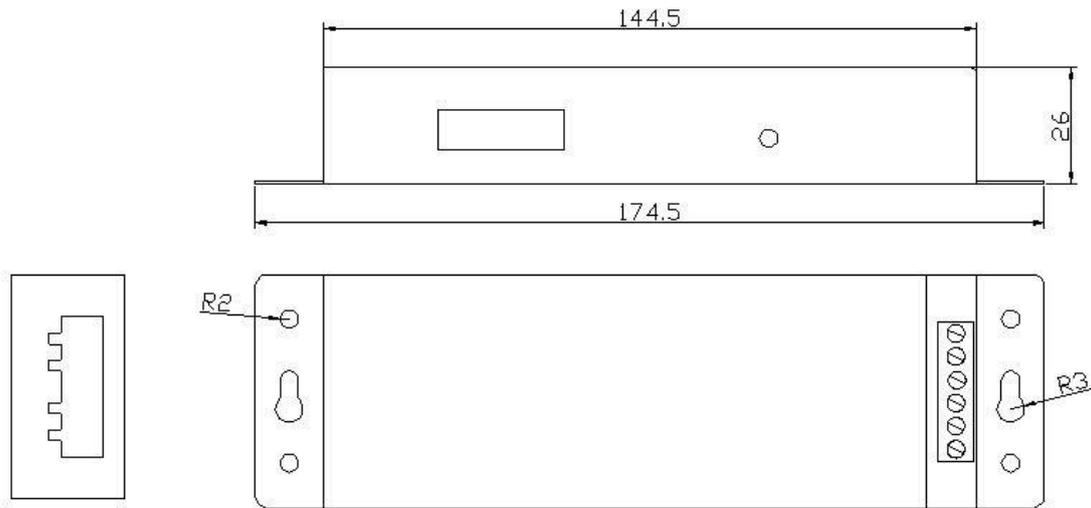
- Input voltage 5v - 24v DC
- Output SPI signal (DATA, CLK)
- DMX Addressable by DIP switches
- Operating temp -20 to +60 degrees
- Max output 480w
- Dimensions L175mm x W53mm H27mm
- 35 mode sequences
- CE & RoHS certified
- Warranty 2 years

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External Dimension:



Interface Specification

Interface of DMX signal adopts the 6PIN green terminal interface, wiring is as follows:



DMX IN: input interface of DMX signal, D+ should be connected with positive of signal, D- connected with negative of signal, GND connected with ground.

DMX OUT: output interface of DMX signal, D+ should be connected with positive of signal, D- connected with negative of signal, GND connected with ground.



POWER: input interface of power, V+ should be connected with positive of power, V- connected with negative of power, the range of supply voltage is DC5-24V.

OUT PUT: load output interface, V+ should be connected with the positive of light, GND connected with negative, DATA connected with data interface of light, CLK connected with clock interface of light.

Direction for use:

You can modify the light type that decoder supports through the DIP switch. The decoder can support 10 kinds of SPI strips in market. As follows:

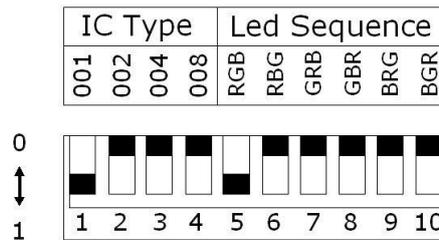
Number	Model	Signal line
1	LPD6803	DATA, CLK
2	TM1803	DATA
3	TM1809	DATA
4	TM1812	DATA
5	UCS1903	DATA
6	WS2811	DATA
7	WS2801	DATA, CLK
8	TLS3001	DATA
9	TLS3008	DATA
10	P9813	DATA, CLK

If there are 2 signal lines, then you need to connect the ground wire, clock line, data line with GND, CLK, DATA; if it is 1 signal line, then just need to connect the ground wire, data line with GND, DATA .

Remark: if the V+ voltage of strip is the same as the controller input voltage, then it can be directly connected with the controller V+; if not, you need to connect another power supply.

Since the specifications of light in the market are different, the sequence of RGB may be different, the sequence of some lights is RGB, some sequence is RBG, GRB and so on, so the DIP switch provides modification of RGB sequence.

DIP switch is shown as below:



IC type: selection of light type. The accumulation of first four DIP is $1*1+2*0+4*0+8*0=1$, lookup the table, you can find it is LPD6803.

LED Sequence: selection of RGB sequence. DIP 5 above is pressed, it indicates that the colour sequence of light is RGB.

Remark: if the accumulation of IC type is more than 10, such as 12, 14, the default is 10, that is P9813; when LED sequence, there are two or more DIP are press, such as 5, 7, 9 are pressed simultaneously, default it will take the largest value 9, that is BRG.

About buttons: buttons can only be used when the controller is not connected with DMX signal, when controller is connected with DMX console, the mode of console is priority, and the buttons will not have any effect .

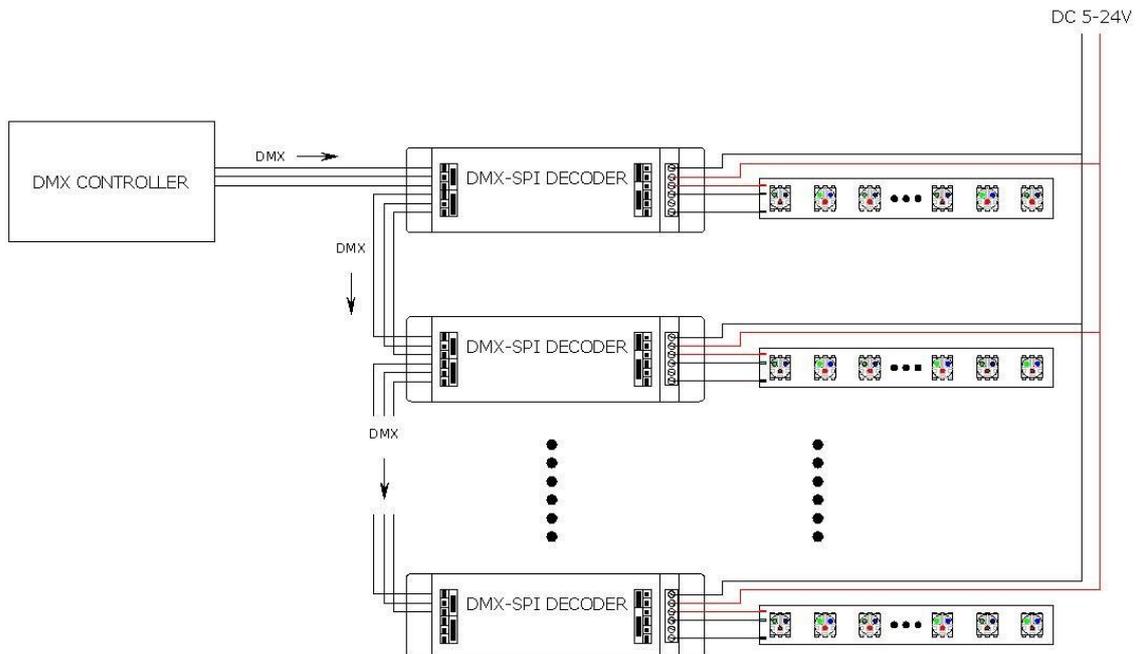
Mode changes are as the following table:

Mode	Mode instruction
1	Static red
2	Static green
3	Static blue
4	Static yellow
5	Static purple
6	Static cyan
7	Static white
8	Red horse race to right
9	Green horse race to right
10	Blue horse race to right
11	Three base colour strobe / flash
12	Seven-colour strobe / flash
13	Three base colour jumpy change
14	Seven-colour jumpy change
15	Three mixing colour three colour wave by wave running forward direction
16	Seven-colour wave forward direction
17	Red trail forward direction
18	Red trail backward direction
19	Green trail forward direction
20	Green trail backward direction
21	Blue trail forward direction
22	Blue trail backward direction
23	Seven-colour running trail backward direction

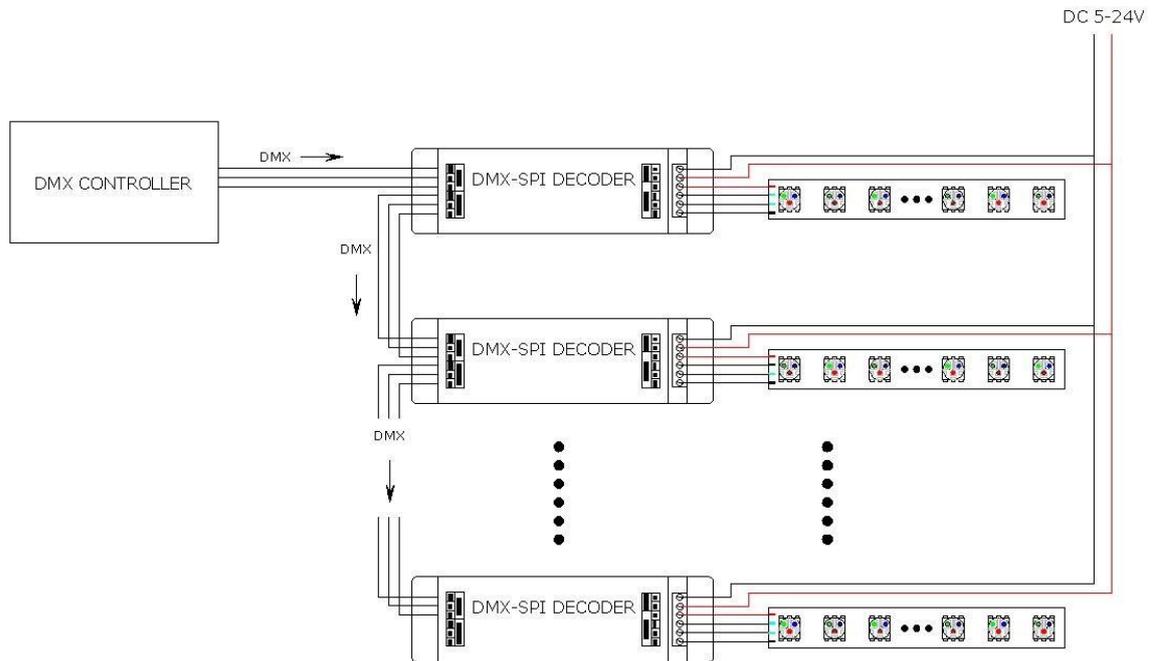
24	Seven-colour running trail forward direction
25	Change colour purple-red-purple forward direction
26	Change colour yellow-green-yellow forward direction
27	Change colour cyan-green-cyan forward direction
28	Change colour purple-blue-purple forward direction
29	Change colour cyan-blue-cyan forward direction
30	Change colour white-red-white forward direction
31	Change colour yellow-red-yellow forward direction
32	Change colour red-yellow-red
33	Change colour green-cyan-green
34	Change colour blue-purple-blue
35	Automatically play 8~34

Typical Application

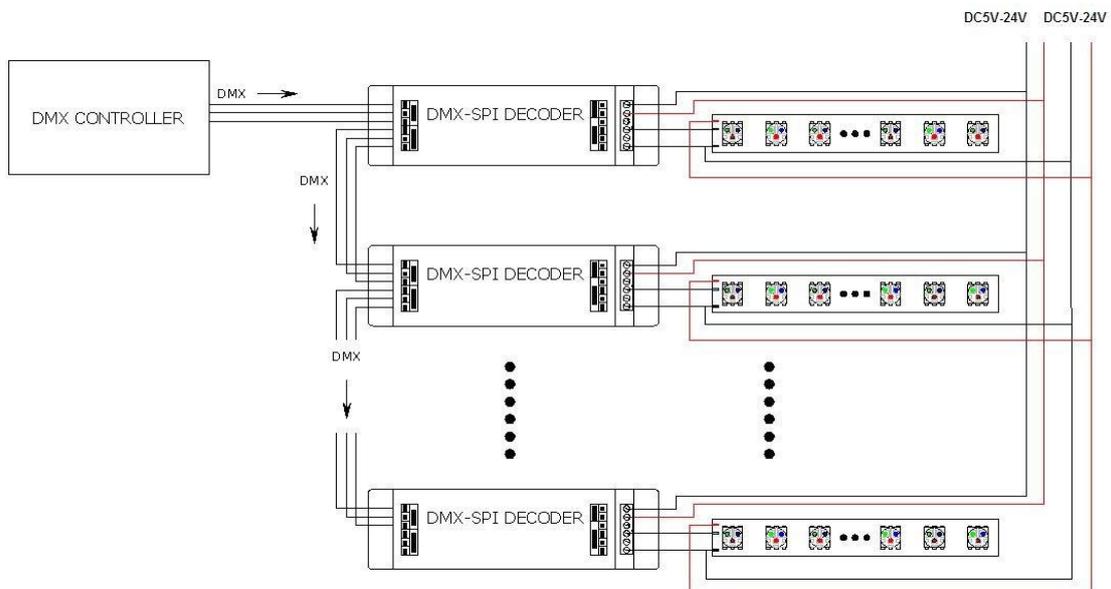
Single power connect, single signal line strip condition: if the V+ voltage of strip is the same with controller input voltage and the light signal is single then it can directly connect with the controller V+;



Single power connect, double signal line strip condition: if the V+ voltage of strip is the same with controller input voltage and the light signal is double then it can directly connect with the controller V+;



Double power connect, single signal line strip condition: if the V+ voltage of the strip is not the same with controller input voltage and light signal is single, you need to connect another power supply.



Double power connect, double signal line strip condition: if the V+ voltage of strip is not the same with controller input voltage and light signal is double, you need to connect another power supply.

