LDT-WIFI-RF-DMX-512

Wi-Fi & RF 512-Channel Pixel DMX Master

Control individually addressed DMX lighting and pixel effects across up to 512 channels. This is a DMX master/interface, not a power output for LED strips.

Model specifications

Supply voltage	12-36 VDC
Output signal	DMX512, multipixel / 512 channels
Lighting modes	RGB / RGBW / RGB+DUO
Channel / pixel capacity	512 channels: RGB 170 / RGBW 128 / RGB+DUO 102 pixels
Control inputs	Wi-Fi + 2.4 GHz RF + two push switches
Resolution	DMX channel / pixel addressing
Body dimensions	114 x 38 x 20 mm
Operating temperature	-20 to +55 °C
Maximum case temperature	+65 °C
IP rating	IP20
Dimensions	114 x 38 x 20 mm
Protection	Reverse polarity

A compatible DMX decoder and separately rated LED supply are required. DMX output is a control signal, not LED load power. Supply this master at 12-36 VDC as specified by its technical table and device rating. A legacy label in the wiring illustration shows a different range; it is not the supply specification.

The following technical-reference pages retain the complete diagrams, dimensions, settings and installation instructions. Select the lighting variant stated on this cover; family diagrams may also illustrate other variants.

Wi-Fi / RF / DMX

WiFi & RF 3 in 1 DMX512 Master

Features

- **WiFi & RF RGB/RGBW/RGB+DUO 3-in-1 DMX512 master, Max 512 channel output.**
- Comply with the DMX512 standard protocols, compatible with DMX decoder from other supplier.
- **Control app cloud control.**
- Voice control, support for Amazon Alexa, Google Assistant, Tmall Genie and Xiaodu voice assistant.
- Painted segment color mixing: full color filling, color pencil segment painting, eraser segment light off.
- Rich dynamic effects: 44 default and 10 + custom dynamic scenarios, 16 variations.
- 3 APP music rhythms.
- Connect with external two push switch, supports on/off, brightness adjustment, dynamic mode change type and speed settings.
- **Match with RF 2.4G remote control optional, such as RF**



CE RoHS

Technical Parameters

Input and Output	
Input voltage	12-36VDC
Input signal	WiFi, RF 2.4G, Push switch
Output signal	DMX512 (multipixel)
Channel number (Pixel Dots)	Max 512 Channel RGB: 170 pixels RGBW: 128 pixels RGB+CCT: 102 pixels

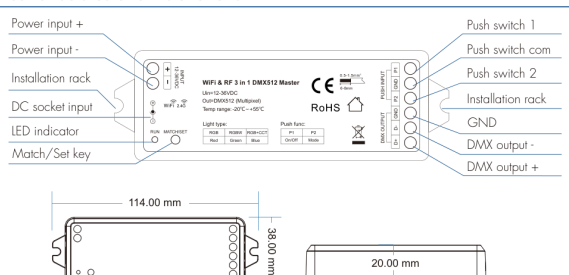
Environment	
Operation temperature	Ta: -20˚C ~ +55˚C
Case temperature(Max.)	Tc: +65˚C
IP rating	IP20

Package	
Size	L120 x W43 x H27mm
Gross weight	0.055kg

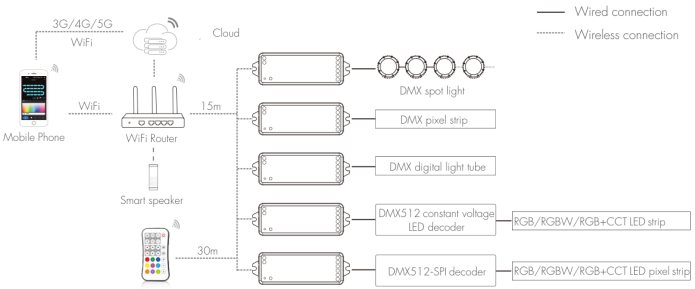
Safety and EMC	
EMC standard	EN IEC 55015/ EN IEC 61547 ETSI EN 301 489-1/-3/-17
Safety standard	EN 61347-1/-2
Radio equipment	ETSI EN 300 440 ETSI EN 300 328
Certification	CE RoHS

Warranty and Protection	
Warranty	5 years
Protection	Reverse Polarity

Mechanical Structures and Installations



System Wiring

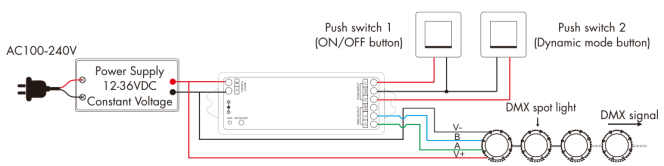


Note:

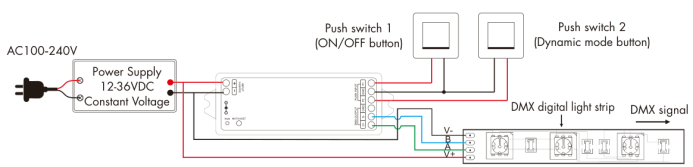
1. The above distance is measured in spacious (no obstacle) environment, Please refer to the actual test distance before installation.
2. Please check if the WiFi router net in 2.4G band, the 5G band is not available, and do not hide your router network.
3. **Please keep the distance between DMX devices and router close, and check the WiFi signals.**
4. WiFi signal strength detection: open the main interface of social security, click ◪ enter the device interface, click "check device network" for testing.

Wiring Diagram

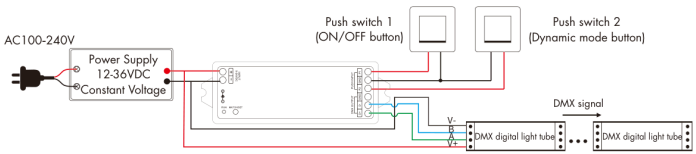
1. DMX connect with DMX512 spot light



2. DMX connect with DMX512 pixel strip

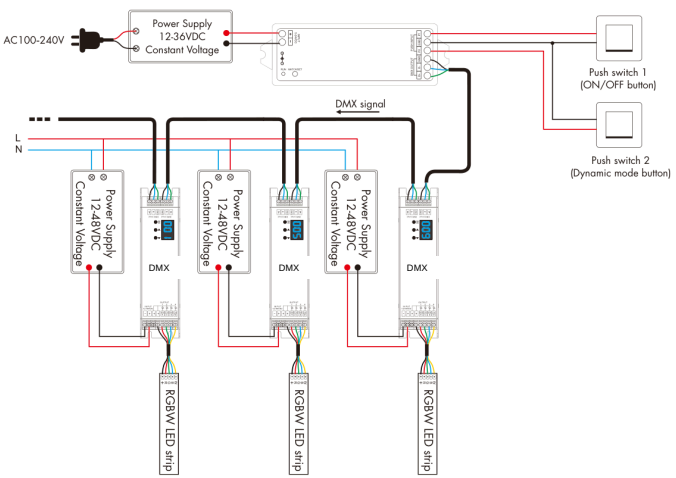


3. DMX connect with DMX512 Digital light tube



4. DMX connect with multiple DMX512 constant voltage decoder

(Connecting multiple four-channel constant voltage DMX512 decoders to control multiple RGBW LED strips as an example)

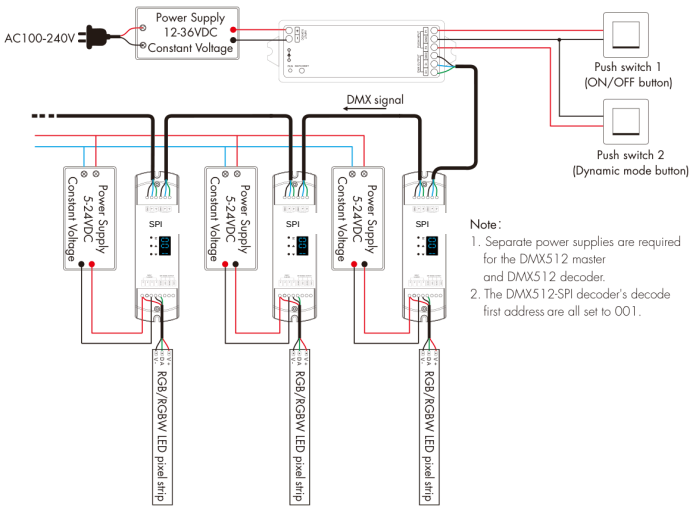


Note:

1. Separate power supplies are required for the DMX512 master and DMX512 decoder.
2. The decode first address sequence of DMX512 constant voltage LED decoder is set as follows 509, ..., 009, 005, 001, address interval 4.
3. **The DMX master uses 8-bit gray scale output.**
   Note that set the DMX512 decoder to 8-bit decode mode.
4. An DMX signal amplifier is needed if more than 32 DMX512 decoders are connected, or use overlong signal line, signal amplification should not be more than 5 times continuously.
5. If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each DMX signal line.

5. DMX connect with one or multiple DMX512-SPI decoder

(Connecting multiple DMX512 to SPI decoders to control multiple pixel RGB/RGBW LED strips as an example)



Note:

1. Separate power supplies are required for the DMX512 master and DMX512 decoder.
2. The DMX512-SPI decoder's decode first address are all set to 001.

Push Switch Function

Use the push switch 1 to turn the light on/off or adjust the brightness.

Push switch 1 (ON/OFF Button)

Short press: Turn on/off the light.

Long press (1-10s): Brightness increases or decreases continuously.
Each time you release and then long press again, the brightness changes in the opposite direction.
Increasing or decreasing the brightness by 1 level every 2s,
a total of 5 levels of brightness(20%, 40%, 60%, 80%, 100%).

Push switch 2 (Dynamic Mode Button)

Use the push switch 2 to switch the dynamic mode change type, direction and speed,
and the dynamic mode color is fixed to seven colors (red, yellow, green, cyan, blue, purple and white).

Short press: Switch the change type of dynamic mode in sequence,
9 types in total (flow, chase, block, float, trail, trail + black, jump, smooth, chaotic flash).

Double-click: Switch the motion direction (forward or reverse) of the dynamic mode.
Jump, smooth, chaotic flash dynamic mode do not support the motion direction setting.

Long press(1-10s): Speed increases or decreases continuously.
Each time you release and then long press again, the speed changes in the opposite direction.
Increasing or decreasing the speed by 1 level every 2s, a total of 5 levels of speed.

Light Type Setting

Long press the Match/set key for 2s, sequential switching of three light types (RGB, RGBW, RGB+DUO), and the RUN indicator changes to the corresponding color (red: RGB, green: RGBW, blue: RGB+DUO).

Long press the Match/set key for 15s to restore factory defaults.
factory default RGB light type, R/G/B color sequence, output 510 channels.

The channel address correspondence of each pixel point for different light types is as follows:

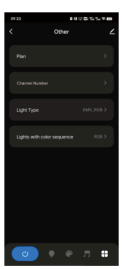
RGB				RGBW					RGB+CCT					
Pixel	R	G	B	Pixel	R	G	B	W	Pixel	R	G	B	WW	CW
1	1	2	3	1	1	2	3	4	1	1	2	3	4	5
2	4	5	6	2	5	6	7	8	2	6	7	8	9	10
3	7	8	9	3	9	10	11	12	3	11	12	13	14	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
170	508	509	510	128	509	510	511	512	102	506	507	508	509	510

Note: When RGBW and RGB+DUO light type, no matter APP interface, push switch or RF remote control operation,
when changing the dynamic mode effect, it only changes the R/G/B channel output,
i.e., W channel and WW/CW channel are not involved in the dynamic effect output.

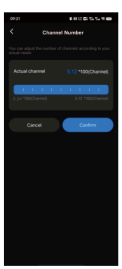
Control app Network Connection and Operation Interface

Push twice Match key fastly, or press and hold Match key for 5s, clear previous network connection, enter WiFi config mode, LED indicator flash fastly.
If Control app network connection succeed, the RUN LED indicator will stop flash, and in Control app,
you can find RGBm-DMX, RGBWm-DMX or RGBCCTm-DMX device.
You can set the number of channels and R/G/B/W/C color sequence through the APP setting interface.

When controlling the light with Smart Life app, if the network connection is poor,
you can control the light with Bluetooth connection within the Bluetooth control range.
Note: The light can not be directly controlled by Bluetooth without WiFi configuration.



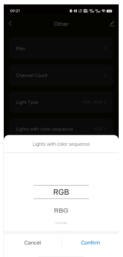
Other interface
For the first time use,
set channel number,
light type and color sequence.



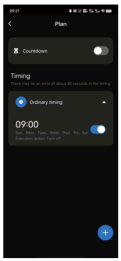
Channel number interface
According to requirements
select number of channels,
channel number range:24-512.



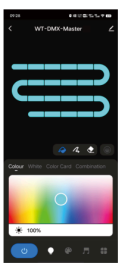
Light type interface
Show the current light type
(DMX_RGB, DMX_RGBW,
or DMX_RGBCCT.)



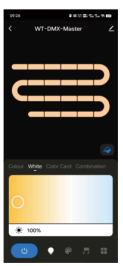
Lights with color sequence interface
Select the corresponding R/G/B/W/C sequence according to the color sequence of the light.
(RGB, RBG, GRB, GBR, BRG, BGR,RGBW, RBGW, GRBW, GBRW, BRGW,BGRW, WRGB,WRBG, WGRB, WGBR, WBRG, WBGR, RGBWC, RBGWC, GRBWC, GBRWC, BRGWC, BGRWC, RGBCW, RBGCW, GRBCW, GBRCW, BRGCW, BGRCW, WRGBC, WRBGC, WGRBC, WGBRC, WBRGC, WBGRC, CRGBW, CRBGW, CGRBW, CGBRW, CBRGW, CBGRW)



Plan interface
Countdown: Customize the countdown time (Max.24 hours) to perform the on/off action.
Timer: Customize multiple times
to perform the on/off light action.



Colour:
Touch the color rectangle to adjust color and saturation. Touch the brightness slide to adjust brightness.



White:
Touch the color rectangle to adjust color temperature. Touch the brightness slide to adjust brightness.
RGB or RGBW light types
Use R/G/B mixing to simulate color temperature.



Color Card:
Touch the color card array to select many different colors. Touch the brightness slide to adjust brightness.



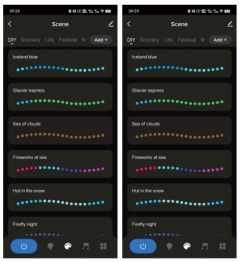
Combination:
Select a proportional distribution of multi-color circle, evenly distribute these colors on the LED strip.

Color Fill:
Change the color of the full segment of the LED strip.

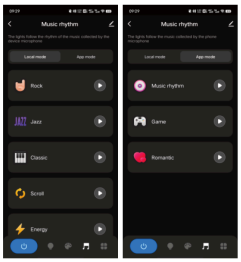
Color pen:
change the color of a single segment of the LED strip.

Eraser:
Erase the color of a single segment of the LED strip, i.e., turn off the light.

Color transition:
When there are multiple colors in the LED strip, you can set to turn on or off the color segment gradient transition.



Scene interface
44 predefined scenarios and 10+ custom dynamic scenarios selectable.
The custom scenarios can select 16 types variations (fade, jump, breath, flash, flow, rainbow, shooting star, pile-up, floating down, chasing light, floating, flashing, bouncing, shuttle, chaotic flashing, open and close), the 1-8 colors, full or segment control, forward or reverse motion direction, adjustable brightness and speed.



Music rhythm interface
6 local music modes (rock, jazz, classical, rolling, energy, spectrum) selectable.
3 APP modes (music rhythm, game, romance) selectable.
Adjustable sensitivity of the received sound.
The light follows the rhythm according to the music collected by the phone microphone.
Note: the DMX512 master only supports APP mode.

RF Remote Control

The DMX512 master can be matched with optional RF remote control,

then through the remote control to switch static or dynamic mode, set the R/G/B color sequence and the number of output channels.

Remote control match and deletion method:

Match: Short press match key, immediately press on/off key of the remote.
Delete: Press and hold match key for 10s to delete all match,
LED indicator flash fastly means all matched remotes were deleted.

RF remote control set R/G/B/W/C color sequence and number of output channels:

1. The DMX signal default to the RGB color order. If the RGB color is not correct, you can change the R/G/B/W/C color order by pressing 3 buttons (* + 1 digit + *):
   1:RGB, *2*:RBG, *3*:GRB, *4*:GBR, *5*:BRG, *6*:BGR, *7*:RGBWC, *9*:WRGBC.
   For other color sequences, you can set them by the Control app.
2. DMX signal output default 512 channels, you can set the number of channels (024-512) by pressing five buttons (* + 3 digits + *) consecutively, e.g.: *060* to set 60 channel outputs.

RF remote control calls up dynamic modes list:

No.	Name	No.	Name
P01	Red horse race white ground	P21	Green float
P02	Green horse race white ground	P22	Blue float
P03	Blue horse race white ground	P23	Purple float
P04	Yellow horse race blue ground	P24	RGBW float
P05	Cyan horse race blue ground	P25	Red Yellow float
P06	Purple horse race blue ground	P26	Green Cyan float
P07	7 color multi horse race	P27	Blue Purple float
P08	7 color horse race close + open	P28	Blue White float
P09	7 color multi horse race close + open	P29	6 color float
P10	7 color scan close + open	P30	6 color smooth sectionally
P11	7 color multi-scan close + open	P31	7 color jump sectionally
P12	Blue White chase	P32	7 color strobe sectionally
P13	Green Cyan chase	P33	White horse race (RGB jump)
P14	RGB chase	P34	White smooth horse race (RGB smooth)
P15	7 color chase	P35	White starlight (RGB random jump)
P16	Blue meteor	P36	White smooth starlight (RGB random smooth)
P17	Purple meteor	P37	White flow,forward
P18	White meteor	P38	White flow,forward on +backward off
P19	7 color meteor	P39	White flow,forward on +backward on
P20	Red float	P40	White float,forward

Note:
P33-P40 dynamic modes are applicable to DMX type white light strip.
P33-P36 dynamic modes, if the color DMX strip is connected, the corresponding color effect will appear.