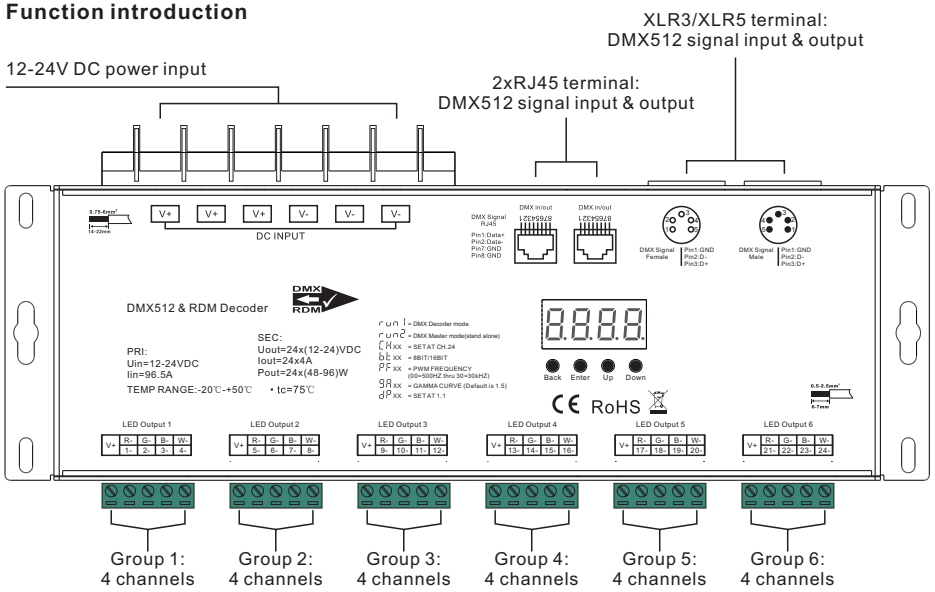
Ultra-Pro 24CH RDM DMX512 Decoder

09.21824B.04297

Important: *Read All Instructions Prior to Installation*

Function introduction



Product Data

Input Voltage	Output Current	Output Power	Remarks	Size(LxWxH)	Protection
12-24VDC	24x4A	24x(48-96)W	Constant voltage	264.5X83X42mm	Short circuit

- Master & decoder mode, RDM function
- Metal housing, digital display to show data directly, easily to set and show DMX address.
- With multiple kinds of DMX in/out ports: RJ 45, XLR , pluggable terminal blocks.
- Total 12 PWM output channels, common anode. DMX channel quantity 1CH or 24CH settable.
- PWM output resolution ratio 8bit , 16bit settable.
- Output PWM frequency from 500HZ ~ 30K HZ settable.
- Output dimming curve gamma value from 0.1 ~ 9.9 settable.
- Decoding mode settable.
- Galvanic isolation

Safety & Warnings

- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.

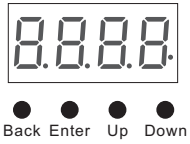
Operation

Before you do other settings, please set the device to be Master or Decoder mode.

run1 = DMX Decoder mode , run2 = DMX Master mode(stand alone).

Keep on clicking Down button, to get run1 or run2, then click Enter, then click Down button to choose 1 or 2, then click Back button.

After choose run1 or run2, please power off and power on again the device.



I. For run2 DMX Master mode: After power on the device, if keep on clicking Up button, you will find below menu on display:

01.01 Means brightness for each output PWM channel. First 01 means PWM output channel 1 and it is selectable from 01 to 24 by clicking “UP” or “Down” button. Second 01 means brightness level, click “Enter” button, the display flashes, then click “UP” or “Down” button to select from 00-99-FL, which means 0%-99%-100% brightness, then click “Back” button to confirm.

CA08 means chasing effects, total 4 effects selectable from 01-04. Click “Up” or “Down” button to select the menu, then click “Enter” button to enter into the effect, then click “Up” or “Down” button to select from 01-04.

CA01: Fade-up (0%-100%) and fade-down (100%-0%) of output 1, then output 2, output 3, ……, output 24, output 1, ……, cycling chasing

CA02: Fade-up (0%-100%) of output 1, then simultaneous fade-down (100%-0%) of output 1 and fade-up (0%-100%) of output 2, simultaneous down of output 2 and up of output 3, ……, simultaneous down of output 23 and up of output 24, simultaneous down of output 24 and up of output 1, ……, cycling chasing

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3, ……, output 24, output 1, ……, cycling chasing

CA04: Fade-down (100%-0%) of output 1, then output 2, output 3, ……, output 24, output 1, ……, cycling chasing

SP.09 means chasing speed, it selectable from 01-09, 01 is the slowest, 09 is the fastest.

II. For run1 DMX decoder mode: After power on the decoder, if keep on clicking Up button, you will find below menu on display:

A.XXX **DMX signal indicator** : When DMX signal input is detected, the indicator on the display following after A turns on red .

A.XXX Means DMX address. fa ctory defaults setting is 001.

CH XX Means DMX channels quantity. factory defaults setting is Ch24

bt XX Means Bit (8bit or 16bit). factory defaults setting is 16bit

PF XX Means output PWM frequency. factory defaults setting is 1K HZ

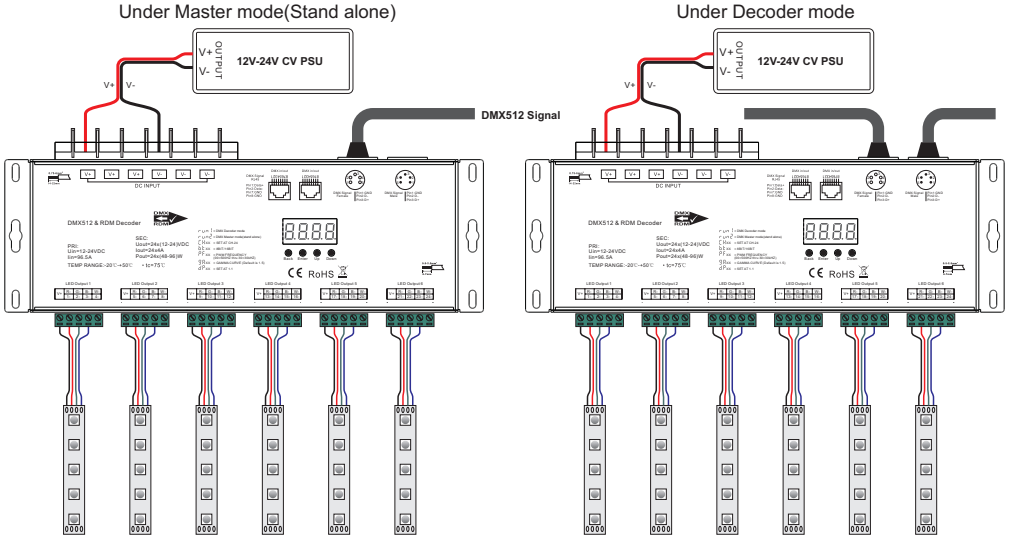
GA XX Means output dimming curve gamma value, factory defaults setting is ga 1.5

dP XX Means Decoding mode, factory defaults setting is dp1.1

run1 Means the device at run1 mode (DMX decoder mode).

By holding button Back + Enter together at the same time over 5 seconds until the display go off, it will restore default settings .

Wiring diagram



1. DMX address setting:

select menu A.XXX , click button “Enter”, display flashes,then click or hold button “Up” / “Down” to set DMX address (click is slow, hold is fast.), then click button“Back” to confirm.

2. DMX channel quantity setting:

Select menu CH.XX , click button “Enter”, display flashes, then click button “Up” / “Down” to set DMX channel quantity , then click button “Back” to confirm.

For example the DMX address is already set as 001.

CH01=1 DMX address for all the output channels, which are all address 001.

CH24=24 DMX addresses, output 1-24 is address 001-024 respectively.

3. PWM output resolution Bit setting:

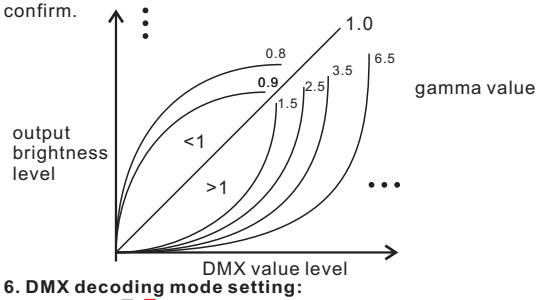
select menu 8.8.XX, click button “Enter”,display flashes, then click button “Up” / “Down” to choose 08 or 16 bit, then click button“Back” to confirm.

4. output PWM frequency setting:

select menu P.F.XX, click button “Enter”, display flashes,then click button “Up” / “Down”to choose 00~30, then click button“Back” to confirm. 00=500HZ, 01=1kHZ, 02=2kHZ.....30=30kHZ.

5. output dimming curve gamma value setting:

select menu 9.9.XX, click button “Enter”, display flashes, then click or hold button “Up” / “Down” to choose 0.1~9.9, then click button“Back” to confirm.



6. DMX decoding mode setting:

Select menu d.P.XX , click button “Enter”, display flashes, then click button “Up” / “Down” to choose the decoding mode, then click button “Back” to confirm.

“dPxx” means the DMX address quantity used for control of corresponding PWM output channel quantity. 1st “x” is DMX address quantity, 2nd “x” is PWM channel quantity.

Micro dimming: the micro dimming effect can only be visible when the dimming curve gamma value is set lower than 1.4, and the lower the value is, the more visible the micro dimming effect will be.

DMX address is 001, CH01

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp2.2	dp3.1
1	all output dimming	all output dimming	all output dimming	all output dimming
2		all output micro dimming	all output strobe effects	all output micro dimming
3				all output strobe effects

Short circuit protection

If short circuit of the connected load is detected, the display will flash to alarm and the load will be forced to open circuit status. Once the fault is removed, the decoder will recover after re-powered on.

The data definitions for strobe channel are as follows:

{0, 7},//undefined
{8, 65},//slow strobe-->fast strobe
{66, 71},//undefined
{72, 127},//slow push fast close
{128, 133},//undefined
{134, 189},//slow close fast push
{190, 195},//undefined
{196, 250},//random strobe
{251, 255},//undefined

The supported RDM PIDs are as follows:

DISC_UNIQUE_BRANCH
DISC_MUTE
DISC_UN_MUTE
DEVICE_INFO
DMX_START_ADDRESS
IDENTIFY_DEVICE
SOFTWARE_VERSION_LABEL
DMX_PERSONALITY
DMX_PERSONALITY_DESCRIPTION
SLOT_INFO
SLOT_DESCRIPTION
MANUFACTURER_LABEL
SUPPORTED_PARAMETERS

Restore to Factory Default Setting

Press and hold down both “Back” and “Enter” keys until the digital display turns off, then release the keys, system will reset and the digital display will turn on again, all settings will be restored to factory default.
Default settings are as follows:
DMX Address Code: a001
DMX Address Quantity: SW1=0: ch24, SW1=1: ch01
PWM Resolution Mode: bt16
PWM Frequency: pf01
Gamma: ga1.5
Decoding Mode: dp1.1

DMX address is 001, CH24

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp3.2	dp3.4	dp4.3	dp5.3	dp5.4	dp6.4	dp8.6	dp9.6
1	output 1 dimming	output 1 dimming	output 1&2 dimming	output 1&2 &3&4 dimming	output 1&2 &3 dimming	output 1&2 &3 dimming	output 1&2 &3&4 dimming	output 1&2 &3&4 dimming	output 1&2 &3&4 dimming	output 1&2 &3&4 dimming
2	output 2 dimming	output 1 micro dimming	output 1 dimming	output 1 &3 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming
3	output 3 dimming	output 2 dimming	output 2 dimming	output 2&4 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming
4	output 4 dimming	output 2 micro dimming	output 3&4 dimming	output 5&6 &7&8 dimming	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming
5	output 5 dimming	output 3 dimming	output 3 dimming	output 5&7 dimming	output 4&5 &6 dimming	output 1&2 &3 strobe effects	output 4 dimming	output 4 dimming	output 4 dimming	output 4 dimming
6	output 6 dimming	output 3 micro dimming	output 4 dimming	output 6 &8 dimming	output 4 dimming	output 4&5 &6 dimming	output 5&6 &7&8 dimming	output 1&2&3 &4 strobe effects	output 5&6 dimming	output 5&6 dimming
7	output 7 dimming	output 4 dimming	output 5&6 dimming	output 9&10&11 &12 dimming	output 5 dimming	output 4 dimming	output 5 dimming	output 5&6 &7&8 dimming	output 5 dimming	output 5 dimming
8	output 8 dimming	output 4 micro dimming	output 5 dimming	output 9&11 dimming	output 6 dimming	output 5 dimming	output 6 dimming	output 5 dimming	output 6 dimming	output 6 dimming
9	output 9 dimming	output 5 dimming	output 6 dimming	output 10 &12 dimming	output 7&8 &9 dimming	output 6 dimming	output 7 dimming	output 6 dimming	output 7&8&9 &10 dimming	output 1&2&3&4 &5&6 strobe effects
10	output 10 dimming	output 5 micro dimming	output 7&8 dimming	output 13&14& 15&16 dimming	output 7 dimming	output 4&5 &6 strobe effects	output 8 dimming	output 7 dimming	output 7 dimming	output 7&8&9 &10 dimming
11	output 11 dimming	output 6 dimming	output 7 dimming	output 13&15 dimming	output 8 dimming	output 7&8 &9 dimming	output 9&10&11 &12 dimming	output 8 dimming	output 8 dimming	output 7 dimming
12	output 12 dimming	output 6 micro dimming	output 8 dimming	output 14 &16 dimming	output 9 dimming	output 7 dimming	output 9 dimming	output 5&6&7 &8 strobe effects	output 9 dimming	output 8 dimming
13	output 13 dimming	output 7 dimming	output 9&10 dimming	output 17&18& 19&20 dimming	output 10&11 &12 dimming	output 8 dimming	output 10 dimming	output 9&10 &11&12 dimming	output 10 dimming	output 9 dimming
14	output 14 dimming	output 7 micro dimming	output 9 dimming	output 17&19 dimming	output 10 dimming	output 9 dimming	output 11 dimming	output 9 dimming	for output 11 &12 dimming	output 10 dimming
15	output 15 dimming	output 8 dimming	output 10 dimming	output 18 &20 dimming	output 11 dimming	output 7&8&9 strobe effects	output 12 dimming	output 10 dimming	for output 11 dimming	output 11&12 dimming
16	output 16 dimming	output 8 micro dimming	output 11&12 dimming	output 21&22& 23&24 dimming	output 12 dimming	output 10&11& 12 dimming	output 13&14& 15&16 dimming	output 11 dimming	for output 12 dimming	output 11 dimming
17	output 17 dimming	output 9 dimming	output 11 dimming	output 21&23 dimming	output 13&14 &15 dimming	output 10 dimming	output 13 dimming	output 12 dimming	output 13&14& 15&16 dimming	output 12 dimming
18	output 18 dimming	output 9 micro dimming	output 12 dimming	output 22 &24 dimming	output 13 dimming	output 11 dimming	output 14 dimming	output 9&10&11 &12 strobe effects	output 13 dimming	output 7&8&9&10 &11&12 strobe effects
19	output 19 dimming	output 10 dimming	output 13&14 dimming		output 14 dimming	output 12 dimming	output 15 dimming	output 13&14 &15&16 dimming	output 14 dimming	output 13&14&15 &16 dimming
20	output 20 dimming	output 10 micro dimming	output 13 dimming		output 15 dimming	output 10&11&12 strobe effects	output 16 dimming	output 13 dimming	output 15 dimming	output 13 dimming
21	output 21 dimming	output 11 dimming	output 14 dimming		output 16&17 &18 dimming	output 13&14& 15 dimming	output 17&18& 19&20 dimming	output 14 dimming	output 16 dimming	output 14 dimming
22	output 22 dimming	output 11 micro dimming	output 15&16 dimming		output 16 dimming	output 13 dimming	output 17 dimming	output 15 dimming	for output 17 &18 dimming	output 15 dimming
23	output 23 dimming	output 12 dimming	output 15 dimming		output 17 dimming	output 14 dimming	output 18 dimming	output 16 dimming	for output 17 dimming	output 16 dimming
24	output 24 dimming	output 12 micro dimming	output 16 dimming		output 18 dimming	output 15 dimming	output 19 dimming	output 13&14&15 &16 strobe effects	for output 18 dimming	output 17&18 dimming
25		output 13 dimming	output 17&18 dimming		output 19&20 &21 dimming	output 13&14&15 strobe effects	output 20 dimming	output 17&18 &19&20 dimming	output 19&20& 21&22 dimming	output 17 dimming
26		output 13 micro dimming	output 17 dimming		output 19 dimming	output 16&17& 18 dimming	output 21&22& 23&24 dimming	output 17 dimming	output 19 dimming	output 18 dimming
27		output 14 dimming	output 18 dimming		output 20 dimming	output 16 dimming	output 21 dimming	output 18 dimming	output 20 dimming	output 13&14&15&16 &17&18 strobe effects
28		output 14 micro dimming	output 19&20 dimming		output 21 dimming	output 17 dimming	output 22 dimming	output 19 dimming	output 21 dimming	output 19&20&21 &22 dimming
29		output 15 dimming	output 19 dimming		output 22&23 &24 dimming	output 18 dimming	output 23 dimming	output 20 dimming	output 22 dimming	output 19 dimming
30		output 15 micro dimming	output 20 dimming		output 22 dimming	output 16&17&18 strobe effects	output 24 dimming	output 17&18&19 &20 strobe effects	output 23&24 dimming	output 20 dimming
31		output 16 dimming	output 21&22 dimming		output 23 dimming	output 19&20& 21 dimming		output 21&22 &23&24 dimming	output 23 dimming	output 21 dimming
32		output 16 micro dimming	output 21 dimming		output 24 dimming	output 19 dimming		output 21 dimming	output 24 dimming	output 22 dimming
33		output 17 dimming	output 22 dimming			output 20 dimming		output 22 dimming		output 23&24 dimming
34		output 17 micro dimming	output 23&24 dimming			output 21 dimming		output 23 dimming		output 23 dimming
35		output 18 dimming	output 23 dimming			output 19&20&21 strobe effects		output 24 dimming		output 24 dimming
36		output 18 micro dimming	output 24 dimming			output 22&23& 24 dimming		output 21&22&23 &24 strobe effects		output 19&20&21&22 &23&24 strobe effects
37		output 19 dimming				output 22 dimming				
38		output 19 micro dimming				output 23 dimming				
39		output 20 dimming				output 24 dimming				
40		output 20 micro dimming				output 22&23&24 strobe effects				
41		output 21 dimming								
42		output 21 micro dimming								
43		output 22 dimming								
44		output 22 micro dimming								
45		output 23 dimming								
46		output 23 micro dimming								
47		output 24 dimming								
48		output 24 micro dimming								