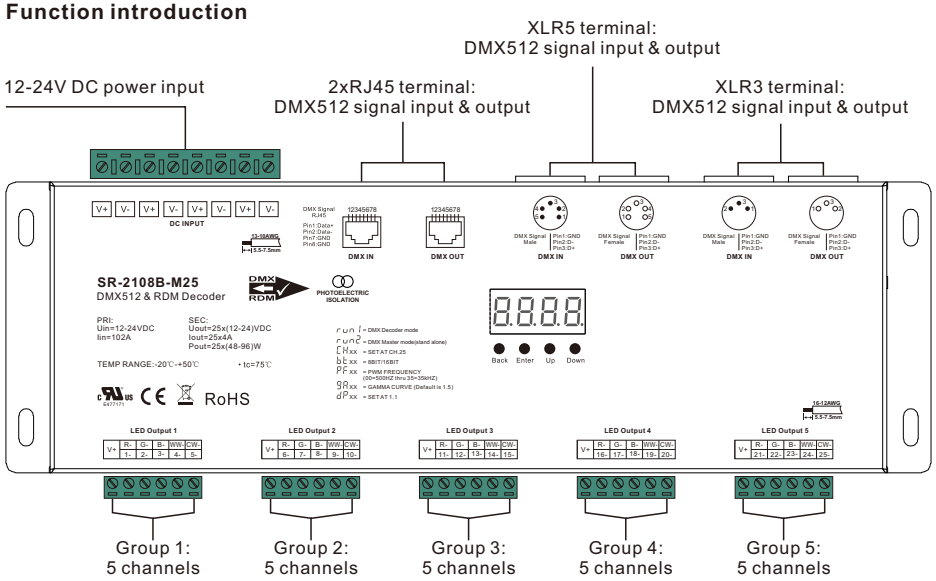
Ultra-Pro 25CH RDM DMX512 Decoder

70060027

Important: *Read All Instructions Prior to Installation*

Function introduction



Product Data

Input Voltage	Output Current	Output Power	Remarks	Size(LxWxH)
12-24VDC	25x4A	25x(48-96)W	Constant voltage	293.2X92.2X36mm

- 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 25 PWM output channels, common anode. DMX channel quantity 1CH, 2CH, 3CH, 4CH, 5CH, 25CH settable.
- PWM output resolution ratio 8bit , 16bit settable.
- Output PWM frequency from 500HZ ~ 35K HZ settable.
- Output dimming curve gamma value from 0.1 ~ 9.9 settable.
- Decoding mode settable.
- Galvanic isolation

Safety & Warnings

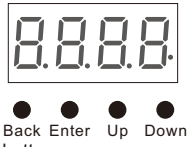
- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.

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.



I. For run2 DMX Master mode: After set the device as run2 (Master mode), 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 25 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.

CA01 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 25, 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 24 and up of output 25, simultaneous down of output 25 and up of output 1, ……, cycling chasing

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3, ……, output 25, output 1, ……, cycling chasing

Ca04: Fade-down (100%-0%) of output 1, then output 2, output 3, ……, output 25, 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 set the device as run1 (Decoder mode), 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. factory defaults setting is 001.

CHXX Means DMX channels quantity. factory defaults setting is Ch25

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

PFXX Means output PWM frequency. factory defaults setting is 10K HZ

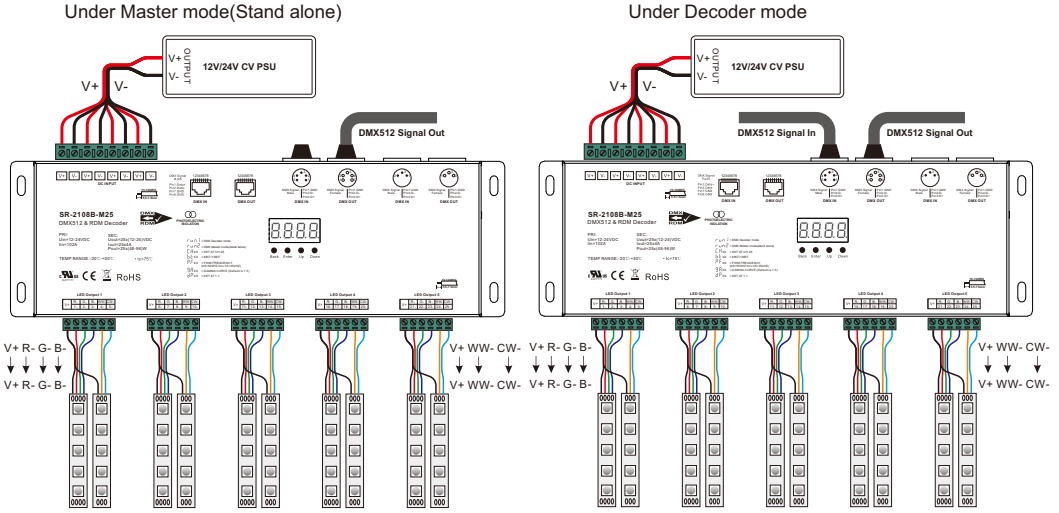
gAXX Means output dimming curve gamma value, factory defaults setting is ga 1.5

dPXX 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 CHXX , 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.

CH02=2 DMX addresses, output channels 1, 3, 6, 8, 11, 13, 16, 18, 21, 23 are address 001, output channels 2, 4, 7, 9, 12, 14, 17, 19, 22, 24 are address 002. Output channels 5, 10, 15, 20, 25 are not controlled.
CH03=3 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003. Output channels 4, 5, 9, 10, 14, 15, 19, 20, 24, 25 are not controlled.
CH04=4 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004. Output channels 5, 10, 15, 20, 25 are not controlled.
CH05=5 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004, output channels 5, 10, 15, 20, 25 are address 005.
CH25=25 DMX addresses, output 1-25 is address 001-025 respectively.

3. PWM output resolution Bit setting:

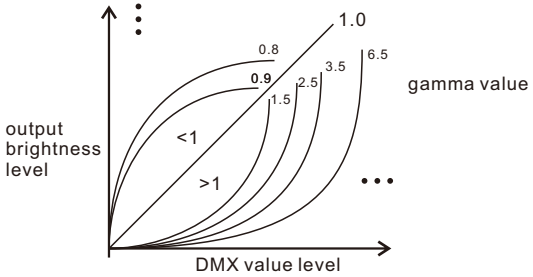
Select menu bt XX , click button “Enter”,display flashes, then click button “Up” / “Down” to choose 08 or 16 bit, then click button“Back” to confirm.

4. Output PWM frequency setting:

Select menu PF XX , click button “Enter”, display flashes,then click button “Up” / “Down”to choose 00~35, then click button“Back” to confirm. 00=500HZ, 01=1kHZ, 02=2kHZ.....25=25kHZ, 35=35kHZ.

5. Output dimming curve gamma value setting:

Select menu GA 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 dP 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.
Fine dimming: the fine 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 fine 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 fine dimming	all output strobe effects	all output fine dimming
3				all output strobe effects

DMX address is 001, CH02

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp2.2	dp3.2	dp4.3
1	output1,3,6,8,11,13 16,18,21,23dimming	output1,3,6,8,11,13 16,18,21,23dimming	output1-4,6-9,11-14, 16-19,21-24dimming	output1-4,6-9,11-14, 16-19,21-24dimming	output1-4,6-9,11-14, 16-19,21-24dimming
2	output2,4,7,9,12,14 17,19,22,24dimming	output1,3,6,8,11,13,16 18,21,23fine dimming	output1+2,3+4,6+7,8+9,11 +12,13+14,16+17,18+19, 21+22,23+24color tuning	output1,3,6,8,11,13 16,18,21,23dimming	output1,3,6,8,11,13 16,18,21,23dimming
3		output2,4,7,9,12,14 17,19,22,24dimming		output2,4,7,9,12,14 17,19,22,24dimming	output2,4,7,9,12,14 17,19,22,24dimming
4		output2,4,7,9,12,14,17 19,22,24fine dimming			strobe effects

DMX address is 001, CH03

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp4.3	dp5.3
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-3,6-8,11-13 16-18,21-23dimming	output1-3,6-8,11-13 16-18,21-23dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4		output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5		output3,8,13, 18,23dimming		strobe effects
6		output3,8,13, 18,23fine dimming		

DMX address is 001, CH04

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp5.4	dp6.4
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-4,6-9,11-14, 16-19,21-24dimming	output1-4,6-9,11-14, 16-19,21-24dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4	output4,9,14, 19,24dimming	output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5		output3,8,13, 18,23dimming	output4,9,14, 19,24dimming	output4,9,14, 19,24dimming
6		output3,8,13, 18,23fine dimming		strobe effects
7		output4,9,14, 19,24dimming		
8		output4,9,14, 19,24fine dimming		

DMX address is 001, CH05

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp6.5	dp7.5
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-25 dimming	output1-25 dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4	output4,9,14, 19,24dimming	output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5	output5,10,15, 20,25dimming	output3,8,13, 18,23dimming	output4,9,14, 19,24dimming	output4,9,14, 19,24dimming
6		output3,8,13, 18,23fine dimming	output5,10,15, 20,25dimming	output5,10,15, 20,25dimming
7		output4,9,14, 19,24dimming		strobe effects
8		output4,9,14, 19,24fine dimming		
9		output5,10,15, 20,25dimming		
10		output5,10,15, 20,25fine dimming		

DMX address is 001, CH25

DMX Console Slider number / DMX channel	dp1.1	dp2.1	dp2.2	dp3.2	dp4.2	dp4.3	dp5.3	dp5.4	dp6.4	dp6.5	dp7.5
1	output 1 dimming	output 1 dimming	output 1&2 dimming	output 1&2 dimming	output 1&2 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&5 dimming	output 1&2 &3&4&5 dimming
2	output 2 dimming	output 1 fine dimming	adjust 1&2 color temperature	output 1 dimming	output 1 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 3&4 dimming	output 2 dimming	output 2 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 fine dimming	adjust 3&4 color temperature	output 3&4 dimming	strobe effects	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 6&7 dimming	output 3 dimming	output 3&4 &6 dimming	output 6&7 &8 dimming	strobe effects	output 4 dimming	output 4 dimming	output 4 dimming	output 4 dimming
6	output 6 dimming	output 3 fine dimming	adjust 6&7 color temperature	output 4 dimming	output 3 dimming	output 6 dimming	output 6&7 &8 dimming	output 6&7&8 &9 dimming	strobe effects	output 5 dimming	output 5 dimming
7	output 7 dimming	output 4 dimming	output 8&9 dimming	output 6&7 dimming	output 4 dimming	output 7 dimming	output 6 dimming	output 6 dimming	output 6&7&8 &9 dimming	output 6&7 &8&9&10 dimming	strobe effects
8	output 8 dimming	output 4 fine dimming	adjust 8&9 color temperature	output 6 dimming	strobe effects	output 8 dimming	output 7 dimming	output 7 dimming	output 6 dimming	output 6 dimming	output 6&7 &8&9&10 dimming
9	output 9 dimming	output 5 dimming	output 11&12 dimming	output 7 dimming	output 6&7 &9 dimming	output 11&12 &13 dimming	output 8 dimming	output 8 dimming	output 7 dimming	output 7 dimming	output 6 dimming
10	output 10 dimming	output 5 fine dimming	adjust 11&12 color temperature	output 8&9 dimming	output 6 dimming	output 11 dimming	strobe effects	output 9 dimming	output 8 dimming	output 8 dimming	output 7 dimming
11	output 11 dimming	output 6 dimming	output 13&14 dimming	output 8 dimming	output 7 dimming	output 12 dimming	output 11&12&13 dimming	output 11&12&13 &14 dimming	output 9 dimming	output 9 dimming	output 8 dimming
12	output 12 dimming	output 6 fine dimming	adjust 13&14 color temperature	output 9 dimming	strobe effects	output 13 dimming	output 11 dimming	output 11 dimming	strobe effects	output 10 dimming	output 9 dimming
13	output 13 dimming	output 7 dimming	output 16&17 dimming	output 11&12 dimming	output 8&9 &12 dimming	output 16&17 &18 dimming	output 12 dimming	output 12 dimming	output 11&12&13 &14dimming	output 11&12&13 &14&15 dimming	output 10 dimming
14	output 14 dimming	output 7 fine dimming	adjust 16&17 color temperature	output 11 dimming	output 8 dimming	output 16 dimming	output 13 dimming	output 13 dimming	output 11 dimming	output 11 dimming	strobe effects
15	output 15 dimming	output 8 dimming	output 18&19 dimming	output 12 dimming	output 9 dimming	output 17 dimming	strobe effects	output 14 dimming	output 12 dimming	output 12 dimming	output 11&12&13 &14&15 dimming
16	output 16 dimming	output 8 fine dimming	adjust 18&19 color temperature	output 13&14 dimming	strobe effects	output 18 dimming	output 16&17 &18 dimming	output 16&17&18 &19dimming	output 13 dimming	output 13 dimming	output 11 dimming
17	output 17 dimming	output 9 dimming	output 21&22 dimming	output 13 dimming	output 11&12 &15 dimming	output 21&22 &23dimming	output 16 dimming	output 16 dimming	output 14 dimming	output 14 dimming	output 12 dimming
18	output 18 dimming	output 9 fine dimming	adjust 21&22 color temperature	output 14 dimming	output 11 dimming	output 21 dimming	output 17 dimming	output 17 dimming	strobe effects	output 15 dimming	output 13 dimming
19	output 19 dimming	output 10 dimming	output 23&24 dimming	output 16&17 dimming	output 12 dimming	output 22 dimming	output 18 dimming	output 18 dimming	output 16&17&18 &19 dimming	output 16&17&18 &19&20 dimming	output 14 dimming
20	output 20 dimming	output 10 fine dimming	adjust 23&24 color temperature	output 16 dimming	strobe effects	output 23 dimming	strobe effects	output 19 dimming	output 16 dimming	output 16 dimming	output 15 dimming
21	output 21 dimming	output 11 dimming		output 17 dimming	output 13&14 &18 dimming		output 21&22 &23 dimming	output 21&22&23 &24dimming	output 17 dimming	output 17 dimming	strobe effects
22	output 22 dimming	output 11 fine dimming		output 18&19 dimming	output 13 dimming		output 21 dimming	output 21 dimming	output 18 dimming	output 18 dimming	output 16&17&18 &19&20 dimming
23	output 23 dimming	output 12 dimming		output 18 dimming	output 14 dimming		output 22 dimming	output 22 dimming	output 19 dimming	output 19 dimming	output 16 dimming
24	output 24 dimming	output 12 fine dimming		output 19 dimming	strobe effects		output 23 dimming	output 23 dimming	strobe effects	output 20 dimming	output 17 dimming
25	output 25 dimming	output 13 dimming		output 21&22 dimming	output 16&17 &21 dimming		strobe effects	output 24 dimming	output 21&22&23 &24 dimming	output 21&22&23 &24&25dimming	output 18 dimming
26		output 13 fine dimming		output 21 dimming	output 16 dimming				output 21 dimming	output 21 dimming	output 19 dimming
27		output 14 dimming		output 22 dimming	output 17 dimming				output 22 dimming	output 22 dimming	output 20 dimming
28		output 14 fine dimming		output 23&24 dimming	strobe effects				output 23 dimming	output 23 dimming	strobe effects
29		output 15 dimming		output 23 dimming	output 18&19 dimming				output 24 dimming	output 24 dimming	output 21&22&23 &24&25 dimming
30		output 15 fine dimming		output 24 dimming	output 18 dimming				strobe effects	output 25 dimming	output 21 dimming
31		output 16 dimming			output 19 dimming						output 22 dimming
32		output 16 fine dimming			strobe effects						output 23 dimming
33		output 17 dimming			output 21&22 dimming						output 24 dimming
34		output 17 fine dimming			output 21 dimming						output 25 dimming
35		output 18 dimming			output 22 dimming						strobe effects
36		output 18 fine dimming			strobe effects						
37		output 19 dimming			output 23&24 dimming						
38		output 19 fine dimming			output 23 dimming						
39		output 20 dimming			output 24 dimming						
40		output 20 fine dimming			strobe effects						
41		output 21 dimming									
42		output 21 fine dimming									
43		output 22 dimming									
44		output 22 fine dimming									
45		output 23 dimming									
46		output 23 fine dimming									
47		output 24 dimming									
48		output 24 fine dimming									
49		output 25 dimming									
50		output 25 fine dimming									

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
MODULATION_FREQUENCY
MODULATION_FREQUENCY_DESCRIPTION
CURVE
CURVE_DESCRIPTION

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

RDM Discovery Indication:

When using RDM to discover the device, the digital display will flash and the connected lights will also flash at the same frequency to indicate. Once the display stops flashing, the connected light also stops flashing.

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: ch25, SW1=1: ch01
PWM Resolution Mode: bt16
PWM Frequency: pf10
Gamma: ga1.5
Decoding Mode: dp1.1