Ultra-Pro 6CH RDM DMX512 Decoder

09.2853B.04714

TÜV CE FC RoHS COMPLIANT

Important: *Read All Instructions Prior to Installation*

Function introduction

- 3/5 Pin male & female XLR terminal: DMX512 signal input & output
- 2xRJ45 terminal: DMX512 signal input & output 10V DC power output
- DC power input
- Common Anode Output(+)
- 10V DC power switch
- CH 6 output(-)
- CH 5 output(-)
- CH 4 output(-)
- Software interface
- CH 3 output(-)
- CH 2 output(-)
- CH 1 output(-)
- Digital display
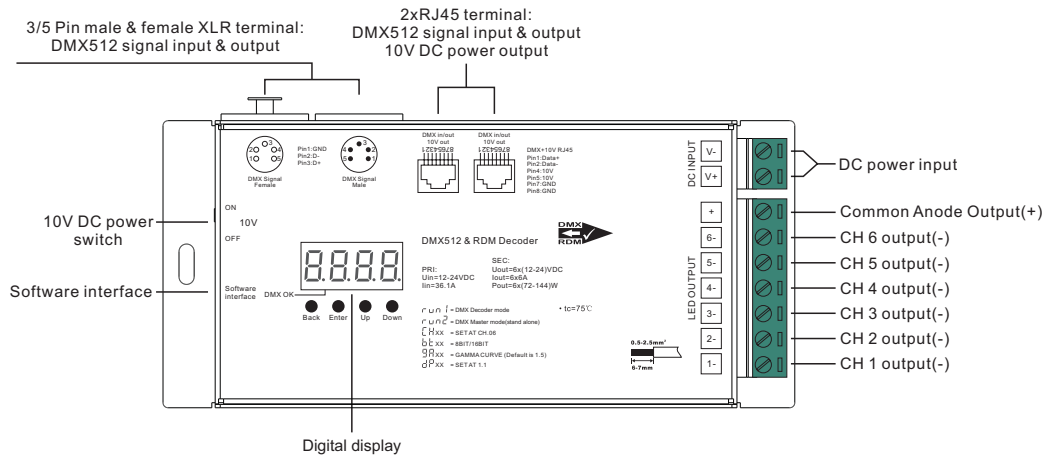
Product Data

Input Voltage	Output Current	Output Power	Remarks	Size(LxWxH)
12-24VDC	6x6A	6x(72-144)W	Constant voltage	187.7x85.3x41mm
12-48VDC	6x350mA	6x(4.2-16.8)W	Constant current	187.7x85.3x41mm
12-48VDC	6x700mA	6x(8.4-33.6)W	Constant current	187.7x85.3x41mm

- 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 , normal screws.
- Total 6 PWM output channels, common anode. DMX channel quantity 1CH or 6CH settable
- PWM output resolution ratio 8bit , 16bit settable.
- Output PWM frequency from 1KHz ~ 25.5KHz 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:

Back Enter Up Down

Means brightness for each output PWM channel. First 1 means PWM output channel 1 and it is selectable from 1 to 6 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.

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 5, output 6, then simultaneously fade-up and fade-down of output 1, 2, 3, 4, 5, 6, then fade-up and down of output 1, ..., cycling chase

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 4 and up of output 5, simultaneous down of output 5 and up of output 6, simultaneous down of output 6 and up of output 1, then up of output 1, ……, cycling chase

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3, ……, output 5, output 6, then simultaneously fade-up of output 1, output 2, output 3, output 4, output 5 and output 6, then fade up of output 1, ……, cycling chase

CA04: Fade-down (100%-0%) of output 1, then output 2, output 3, ……, output 5, output 6, then simultaneously fade-down of output 1, output 2, output 3, output 4, output 5, output 6, then fade-down of output 1, ……, cycling chase

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

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

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

A XXX   Means DMX address. factory defaults setting is 001.

CH XX   Means DMX channels quantity. factory defaults setting is Ch06

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

F XXX   Means PWM frequency. factory defaults setting is F010 which means 1KHz
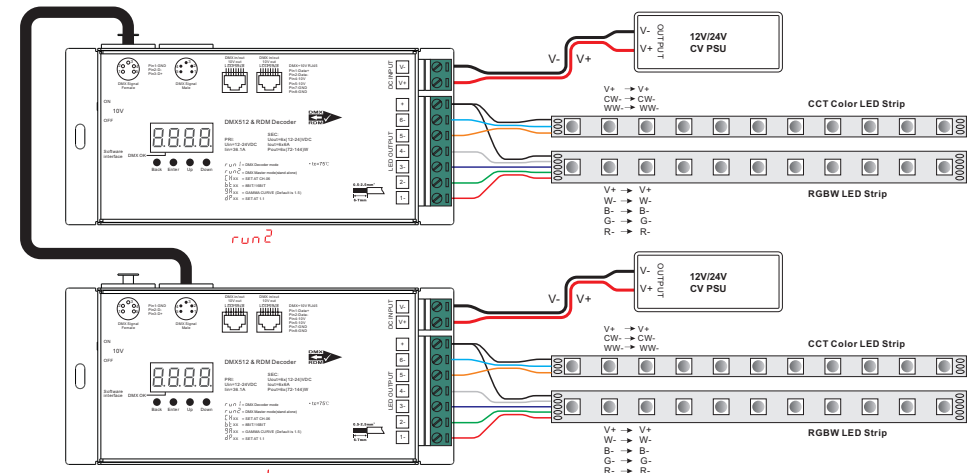
ga XX   Means output dimming curve gamma value, factory defaults setting is ga 1.5

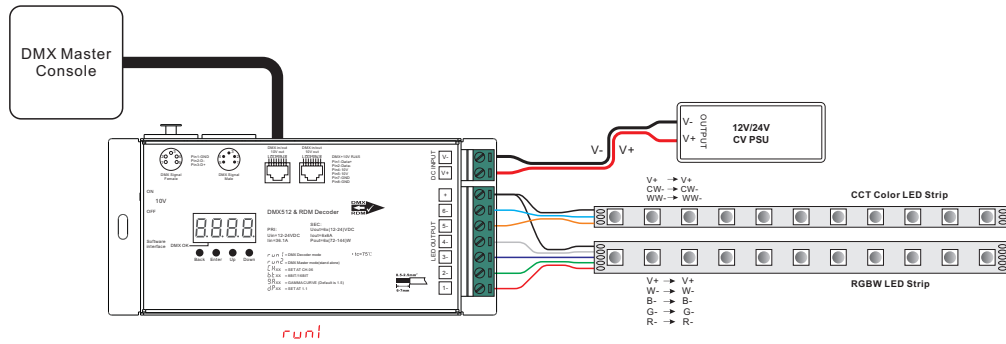**dP** XX   Means Decoding mode, factory defaults setting is dp1.1

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

Wiring diagram
1.Work as Master mode

- 12V/24V CV PSU
- CCT Color LED Strip
- RGBW LED Strip
- V+ → V+
- CW- → CW-
- WW- → WW-
- V+ → V+
- W- → W-
- B- → B-
- G- → G-
- R- → R-

2.Work as Decoder mode

1. DMX address setting:

select menu A.XXX , click button "Enter", 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 $C.H$.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 001.
CH01=1 DMX address for all the output channels, which are all address 001.
CH06=6 DMX addresses, output 1, 2, 3, 4, 5, 6 is address 001, 002, 003, 004, 005, 006.
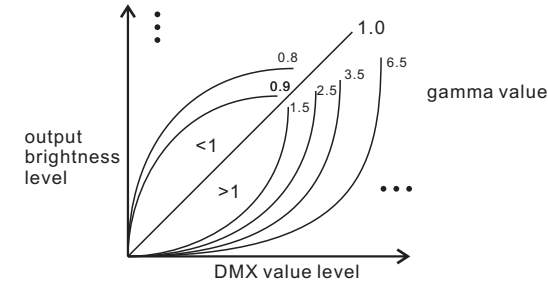
3. PWM output resolution Bit setting:

select menu $b.t$.XX , click button "Enter",display flashes, then click button "Up" / "Down"
to choose 08 or 16 bit, then click button "Back" to confirm.

DMX address is 001, CH01

DMX Console Slider number / DMX channel	dp1.1	dp2.1
1	for all output dimming	for all outputs dimming
2	No use	for all outputs fine dimming

DMX address is 001, CH06

DMX Console Slider number / DMX channel	dp1.1	dpA.1	dpA.2	dpA.3	dpA.4	dpA.6
1	for output 1 dimming	for output 1 dimming	for output 1 dimming	for output 1 dimming	for output 1 dimming	for outputs 1+2 color tuning
2	for output 2 dimming	for output 2 dimming	for output 2 dimming	for output 2 dimming	for output 2 dimming	for outputs 1&2 master dimming
3	for output 3 dimming	for output 3 dimming	for outputs 1&2 master dimming	for output 3 dimming	for output 3 dimming	for outputs 3+4 color tuning
4	for output 4 dimming	for output 4 dimming	for output 3 dimming	for outputs 1&3 master dimming	for output 4 dimming	for outputs 3&4 master dimming
5	for output 5 dimming	for output 5 dimming	for output 4 dimming	for output 4 dimming	for outputs 1&4 master dimming	for outputs 5+6 color tuning
6	for output 6 dimming	for output 6 dimming	for outputs 3&4 master dimming	for output 5 dimming	for output 5 dimming	for outputs 5&6 master dimming
7	for PWM frequency set	for all outputs master dimming	for output 5 dimming	for output 6 dimming	for output 6 dimming	for PWM frequency set
8		for PWM frequency set	for output 6 dimming	for outputs 4&6 master dimming	for outputs 5&6 master dimming	No use
9		strobe effects	for outputs 5&6 master dimming	for PWM frequency set	for PWM frequency set	No use
10		No use	for PWM frequency set	strobe effects	No use	No use

4. PWM Output Frequency setting:

select menu F.XXX , click button "Enter",display flashes, then click button "Up" / "Down"
to choose 010-255-$F.F.F$, then click button "Back" to confirm. 010-255 means 1KHz-25.5KHz selectable,
when the value increases by 1 increment, the PWM frequency will increases by 0.1KHz increment. $F.F.F$
means setting the frequency through DMX master console PWM frequency setting channel.

5. output dimming curve gamma value setting:

select menu $g.a$.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 or hold 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.

Data definitions for PWM frequency setting channel

The output PWM frequency can be set by changing the DMX value of PWM frequency
setting channel. PWM frequency is settable from 1KHz to 25.5KHz. DMX values 000-
010 correspond to PWM frequency 1KHz, for DMX values from 011-255, when the DMX
value increases by 1 based on 010, the PWM frequency will increaes by 0.1KHz based
on 1KHz. Different DMX values for different PWM frequencies are as follows:

DMX value	PWM frequency
001-010	1KHz
011	1.1KHz
012	1.2KHz
......	......
020	2KHz
......	......
130	13KHz
......	......
200	20KHz
......	......
255	25.5KHz

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

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: ch06, SW1=1: ch01
PWM Resolution Mode: bt16
PWM frequency: F010
Gamma: ga1.5
Decoding Mode: dp1.1

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