Specification

GC-6612Pro V1.2



Shenzhen Rose Lighting Technology Co., Limited

GC-6612Pro is a 12-port SD card offline controller. With 12 groups of output ports, can support DMX512, SPI type lamps, such as: TM1812, WS2811, UCS2903, UCS9812, SM17512 and other IC widely used in the industry. GC-6612Pro uses FPGA as the core processor, and realizes high load, high frame rate, high gray scale and high synchronization control with the super parallel data computing capability of FPGA. The realization of a single station carrying 12K pixel point is very conducive to the construction of the engineering site wiring。

GC-6612Pro has an Ethernet interface, supports ART-NET, GC-NET standards,Users can connect to the controller via Ethernet and preview online. In ART-NET mode,support 72 DMX512 universes.

GC-6612 has external DMX512 trigger function, can access control console and KTV intelligent lighting control box, very suitable for bar, KTV room lighting control, accept the command call program, adjust speed, brightness, special effects, support up to 13 channels OF DMX512 instruction。

GC-6612 supports the multi-function editing software "ShadowDraw" independently developed by GICO Technology, Polar Color technology provides software tools that allow users to simply record MADRIX effect files for offline playback. Gc-6612 has been widely used in KTV, bars, office buildings, hotels, shop signs and other LED lighting projects。

Function Features:

- FPGA as the core processor, to achieve high load, high speed, high gray, high synchronization control。
- Offline SD card controller, plug and play。
- OLED display screen, display parameters and address code, quick button setting address code and parameters。
- Support 12 port output, each port support 1024 pixels, single support 12K pixels。
- Can support a variety of lighting driver IC: DMX512, UCS series, TM series, LX series, GW series, TLS series, MY series and so on。
- The output interface is compatible with RS485 signal and SPI (TTL) signal。
- Support RGBW four-color control and a variety of special control, RGBW can choose energy-saving mode and brightening mode。
- Up to 65536 gray level control, built-in user - defined gamma correction curve。
- Support SD cards of various capacities, such as 128M-32GB, and supports a maximum of 64 scenario files。
- Can be triggered by external DMX512 console for extended use。
- Support MIX、Grouping by external DMX512 console。
- Support MADRIX online Preview, can record ARTNET scene files
- Support LEDview online Preview, can Generate SD scene file

Product Parameter

Working Voltage：AC 90-240V

Power Consumption：3W

Input trigger interface：RJ45（DMX512）

Ethernet interface： RJ45（10M/100M）

Output port: 12 ports

Control Qty/Port:1024 pixels

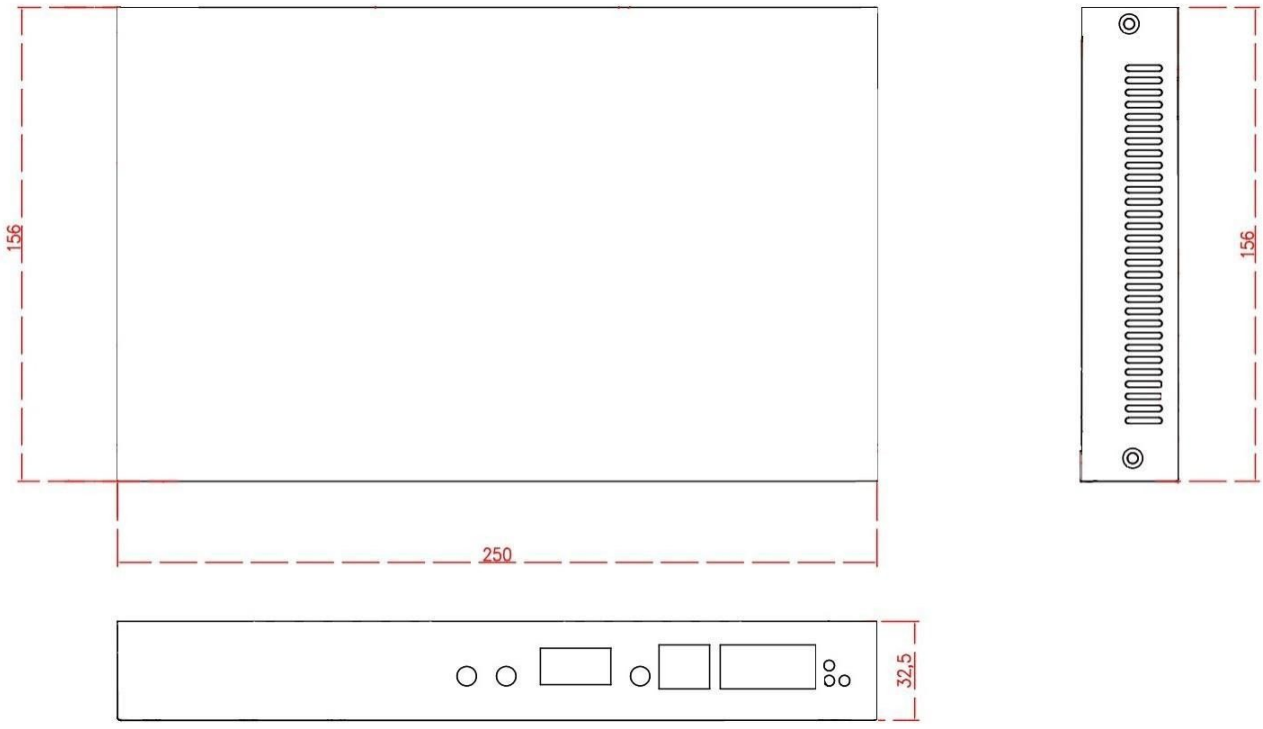
Output Signal：DMX512/SPI(TTL)

Working Temperature：-20℃～65℃

Dimension:：L250×W175×H35 mm

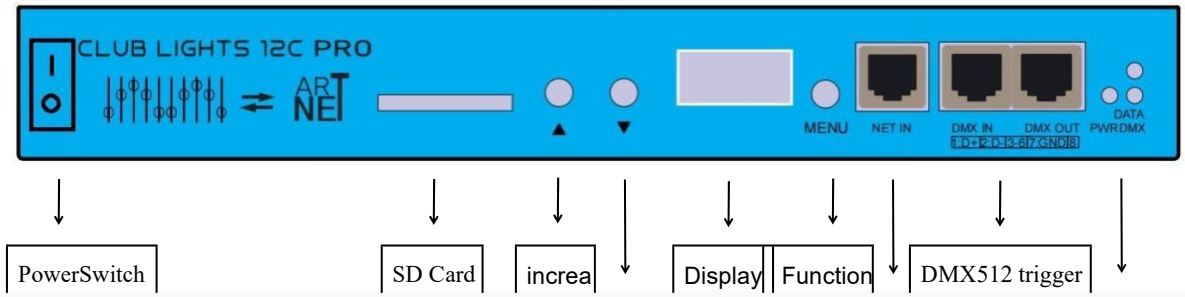
Weight (G.W):1.3 Kg

Dimensions

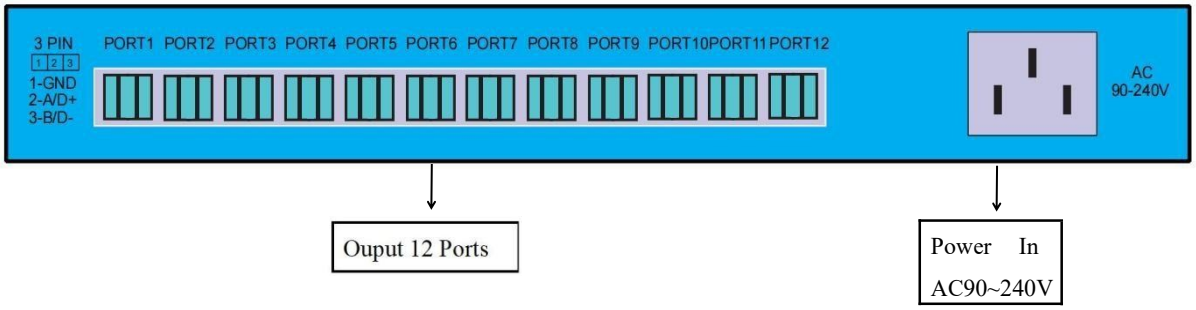


Configuration Diagram:

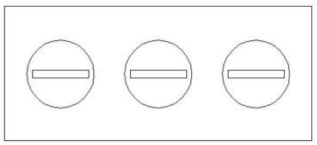
Front:



Back:



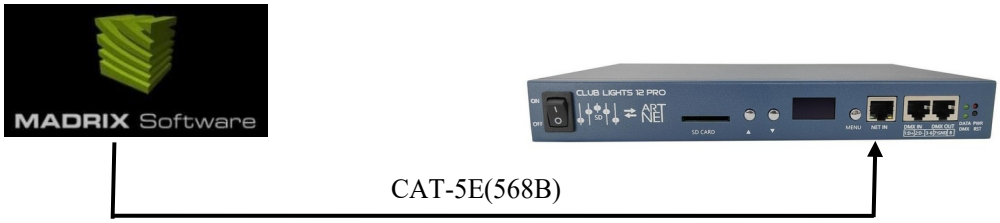
Output Port Instruction：



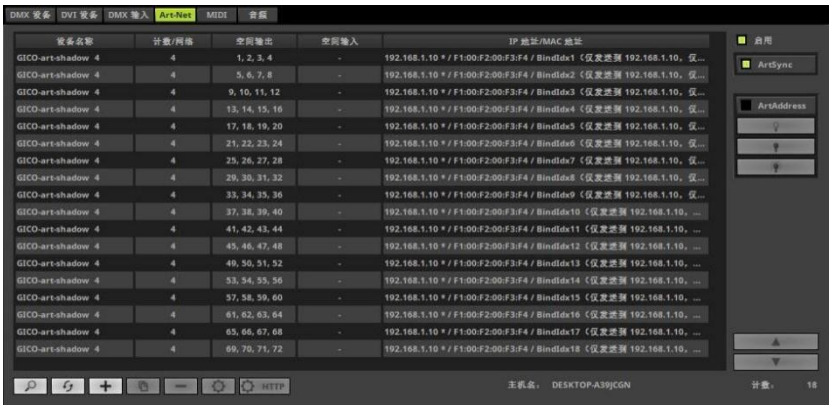
Pin1	Pin2	Pin3
GND	DA/D+	D-

Application diagram :

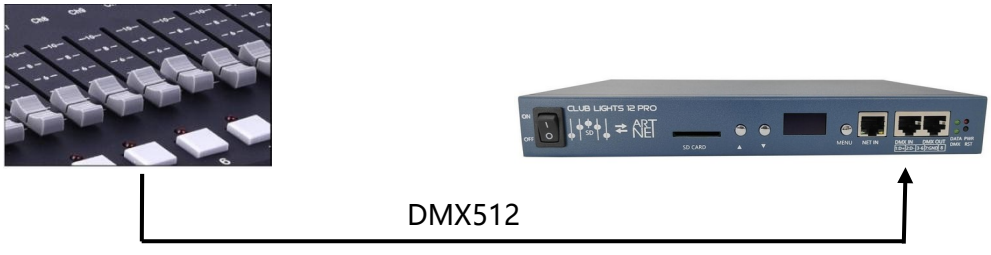
Application 1: MADRIX directly connect 6612 Pro online ARTNET preview debugging



- Standard Ethernet cable CAT5E- 568B. 100M Ethernet
- The CONTROLLER IP address is fixed at 192.168.1.10
- Output 12 ports, 6 universes/Port, one universe is 170 pixels.
- Connect MADRIX, search the device can be used.
- After connecting MADRIX debugging preview, we can use the recording tool to record ARTNET data package and generate offline copy card file.

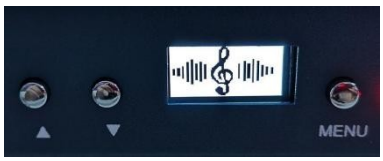


Application 2: 6612 Pro connects to DMX512 console



Button Instruction:

User interface



includes：display、“Menu” button、“▲” button、“▼” button ，“Menu” is the function selection key。 Press “Menu” for 3 seconds to enter function select ，
p
ress “Menu”select DMX address、brightness、speed、mode、IP address。
“▲”and“▼”Increase or decrease parameter values 。
In normal operation, the LCD screen
displays a startup screen, and the button is invalid. Long press the Menu” button to enter the function selection.

DMX address setting



In the DMX address setting interface，press “▲” or “▼” can seting DMX512 trigger Address ，After setting, the controller saves automatically.

Brightness setting



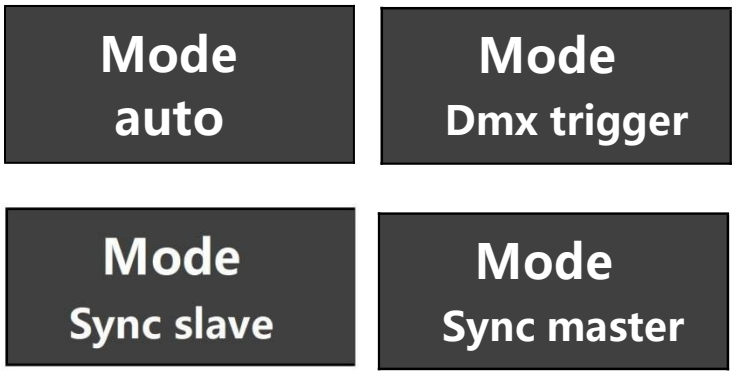
In Brightness setting interface ，press “▲” or “▼” can seting LED lamps brightness ,After setting, the controller saves automatically.

Speed setting



In Speed setting interface，press “▲” or “▼” can seting speed，After setting, the controller saves automatically.

Mode setting



1. In “auto” mode, the controller automatically plays all scene files in SD and automatically cycles from small to large according to the file serial number.
2. In “Dmx trigger” mode, Receive DMX512 data from console and Execute these instructions.
3. In “Sync master” mode, When multiple GC-6612 controllers need to be synchronized, This controller acts as the master,It will issue a synchronization instructions。
4. In “Sync slave” mode, When multiple GC-6612 controllers need to be synchronized, It receives synchronization instructions from Master controller。

IP address setting



In the IP address setting interface ， press “▲” or “▼” can setting IP Address of The
controller ， After setting, the controller saves automatically,The default value is 192.168.1.10,The user can modify only the fourth byte.

Start Universe seting



In the ARTNET application, user must specify the port starting address(universe), default is one.

Port Universe length seting

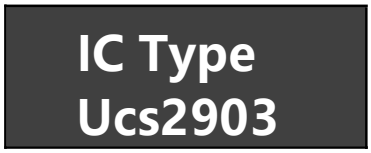


This setting item is the number of lights that can be carried per port,
Value in pixels:

1- 170 pixels (RGB)
2- 340 pixels (RGB)
3- 510 pixels (RGB)
4- 680pixels (RGB) 5-
850pixels (RGB) 6-
1020pixels (RGB) 7-
1190pixels (RGB) 8-
1360pixels (RGB)

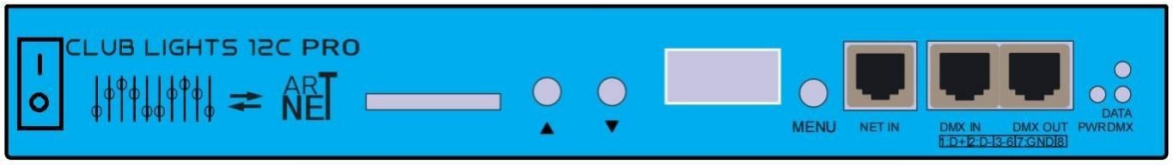
If the pixel composition is RGBW, The load will be reduced a little, 1->128pixels (RGBW).default is six.

Port Universe length seting



Conventional LED lights with SPI and TTL are available in the USC2903 option。

DMX trigger Instruction:

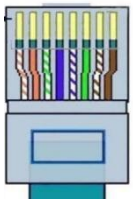


Console, central control, sound control box

The external trigger command is a standard DMX512 signal, which is connected to an external DMX512 console and KTV intelligent lighting control box.

1	2	3	4	5	6	7	8
D+	D-	NC	NC	NC	NC	GND	NC

Pin1----------Pin8



DMX512 trigger channel description:

Trigger address	Value range	Function Description
Add+1	0~255	Total brightness
Add+2	0~255	Red LED adjustment
Add+3	0~255	Green LED adjustment
Add+4	0~255	Blue LED adjustment
Add+5	0~255	White LED adjustment（Only valid for RGBW lamps）
Add+6	0~255	Scene selection，4 values correspond to a scene。 0-3 Corresponding scene 1 4-7 Corresponding scene 2 8-11 Corresponding scene 3 12-15 Corresponding scene 4 And so on..... Total support 64 scenes
Add+7	0~255	Play speed，0 is the slowest，1 to 255 continuously adjustable
Add+8	0~255	Strobe，0 invalid，1 to 255 flashing frequency continuously adjustable

Add+9	0~255	Mix color control: 0-31: Not enabled (Insert background is not enabled) 32-63: Enable , Replace black pixels with background 64-95: Enable,Black pixels are kept, others are replaced with background 69-127: Background and original content or logical operation 128-255: Reserve(Not enabled)
Add+10	0~255	Mix red
Add+11	0~255	Mix green
Add+12	0~255	Mix blue
Add+13	0~255	Grouping function 0: Not enabled 1-15: open Single port，The value corresponds to the port number. 16-31: open odd-numbered ports（1、3、5、7、9、11） 32-47: open Even-numbered ports（2、4、6、8、10、12） 48-63: 1 to 12 ports, open one by one. 64-79: 12 to 1 ports, open one by one. 80-95: From 1 to 12 Zipper opening. 96-111: From 12 to 1 Zipper opening. 112-127: Open from the middle to both sides. 128-143: Open from both sides to the middle. 144-159: Close from both sides to the middle. 160-175: Close from the middle to both sides. 176-255: Reserve(Not enabled)

Add --User set by button in the“DMX address setting”。

Scene file description:

File format:

XXXXXXXX - XX . rgb

(1) (2) (3)

（1）.The default is two characters “SC”, user can also define other characters, note that the maximum is eight characters。（No special need, modification is not recommended）.

（2）Reserve, The default is “-”,User cannot modify.

（3）.The default: 01、02、03 etc，scene serial number, when the controller is in auto mode, it will play in sequence according to this value,Users can modify as needed, it is recommended to copy to SD after modification on PC,

Note: It is recommended to format the SD card before copying the card.