LED DMX512 Controller
P/N: DMXSC

CELEX LED

Controller Model and Appearance

DMXSC synchronous controller and non-synchronous controller are industry type with casing and 8 output ports. The actually controlled pixel points could reach 1360(Max 170/port).
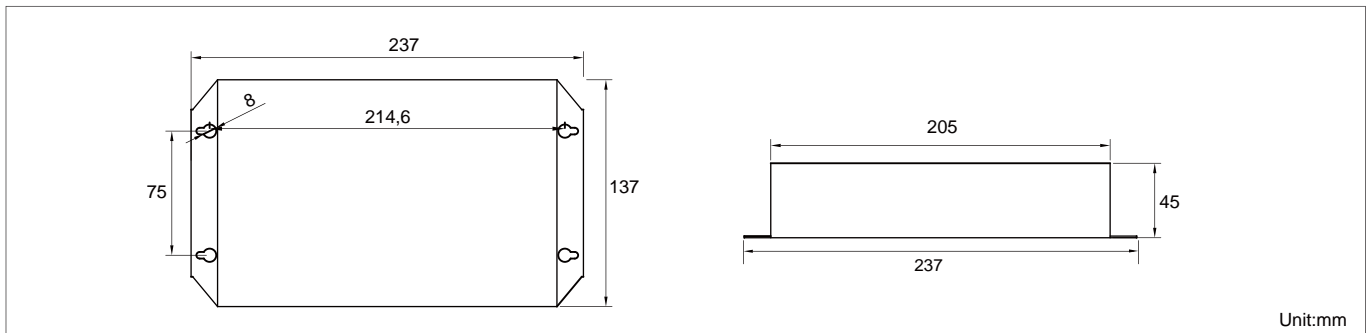
● **DMXSC View:**

Front View

Back View

①Power Supply Switch ②Display ③Power Supply Indicator ④ Busy Indicator

⑤⑥Network Interface ⑦Infrared Indicator ⑧Output Port ⑨Power Supply Socket

● **DMXSC Product Dimensions:**

Unit:mm

● **Basic Parameters List of the Controller**

Input Power Supply	AC 100~240V	Humidity	0~90%
Rated Current	500mA	Length	23.5CM
Rated Capacity	2.5W	Width	13.5CM
Output Port	8	Height	4.5CM
Control Qty	170 Pixel / Point	Fixed Hole Pitch	7.5CM;22CM
Working Temperature	-20°C~70°C	Weight (N.W)	1kg

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Brief Introduction of Controller Function

I. Property of Products
1. 32-65536 level gray level control so that the image color and details could be truly reproduced.
2. 512 level three primary colors independent brightness control so that the accurate adjustment of white balance becomes more simple and effective.
3. Hardware gamma correction function which is adjustable according to human physiological visual characteristics.
4. 100Hz refresh rate to ensure the stableness of frames.
5. Ethernet interface and UDP networking protocol are applied. The maximum transmission range is 100m(CAT-5E Cable).
6. The display module timely displays the controller parameters and status.
7. Controller output includes both TTL and difference dual model.
8. Various chips control is integrated. Through software setting, parameters such as type of controller chip, clock frequency, OE cycle, duty ratio, gray level, etc.
9. Dual network interface so that the cascade between the controllers could be realized.

II. Design Cocept
1. Synchronic control mode. Offline player could be added externally to realize offline play. This could be chosen according to user's needs.
2. Video editing, displaying and wiring design software Easy Player (the company owns the proprietary intellectual property rights) is applicable to various non-conventional type screen, multiple screen, text screen, pixel light screen etc..
3. The function of the software system is highly open and integrated. The display content and wiring design could be independently finished by the user.
4. The operation of display software is easy to learn. The end user could self-design the display contents.
5. The data is directly received from the network card of the computers and the mode of dedicated display card + Master control + Branch control is abandoned. In this case, the installation becomes much easier and the cost will be much lower.
6. 3X and 4X virtual resolution is supported, which will improve the display effect enormously, or reduce the product cost under the same display effect.

III. Expansibility
1. Videos and pictures with variable formats could be displayed synchronously or non-synchronously.
2. All fonts supported by Windows XP or Windows 7-32bit operating system could be displayed.
3. All LED driven chips with serial data interface are supported, such as MBI5026, MBI5024, MBI6020, MBI6024, MBI6030, DM135, DM13C, 74HC595, 6B595, SC16722, ZQL9712, LPD6803, TM1803, TLS3001, MY9221,MY9231etc.
4. DMX512 lighting board could be connected to optional switch card, highly compatible with stage lighting system.
5. Pixel light with no drive circuit itself could be controlled through expanded drive board.
6. IP grouping function is supported to ensure the stability of several controllers in larger works.
7. DMX512 protocol is supported, with 8 output ports.
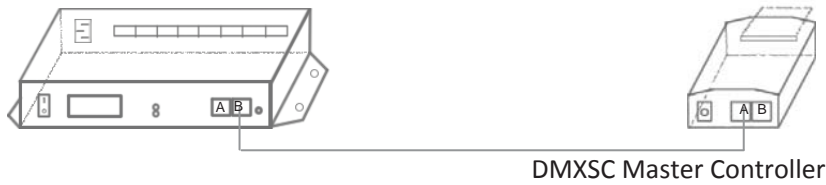
Controller Installation Instructions

I. Method for Connection with the Upper Part of the Machine (synchronous/online mode)

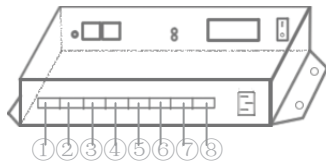Directly connect to the computer network port

Computer
Windows XP
Windows 7-32bit

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II. Offline Mode

Connect to the offline player

DMXSC Master Controller

III. Order of lines at the output interface

5P terminals from left to right, signals from left to right

DMXSC output interface include 8 5P ports, from 1 to 8 (shown as above)

| Mode		1	2	3	4	5
DMXSC	DMXSC TTL Output	GND	DATA	LE	CLK	OE
	DMXSC 485Output	GND	A1	A2	B1	B2
DMXSC MX		GND	A	B		

VI. Simple Sample Installation Instructions and Schematic Diagram

In the following, 16mX6m rectangle display laid by 16 segment digital tubes is taken as the sample for introducing the connection lines of DMXSC as shown in the diagram below.

160 rows, 6 tubes in each row laid vertically. Each interface of the controller controls 5 rows of tubes (480 pixel points). A total of 32 SPI ports are needed.
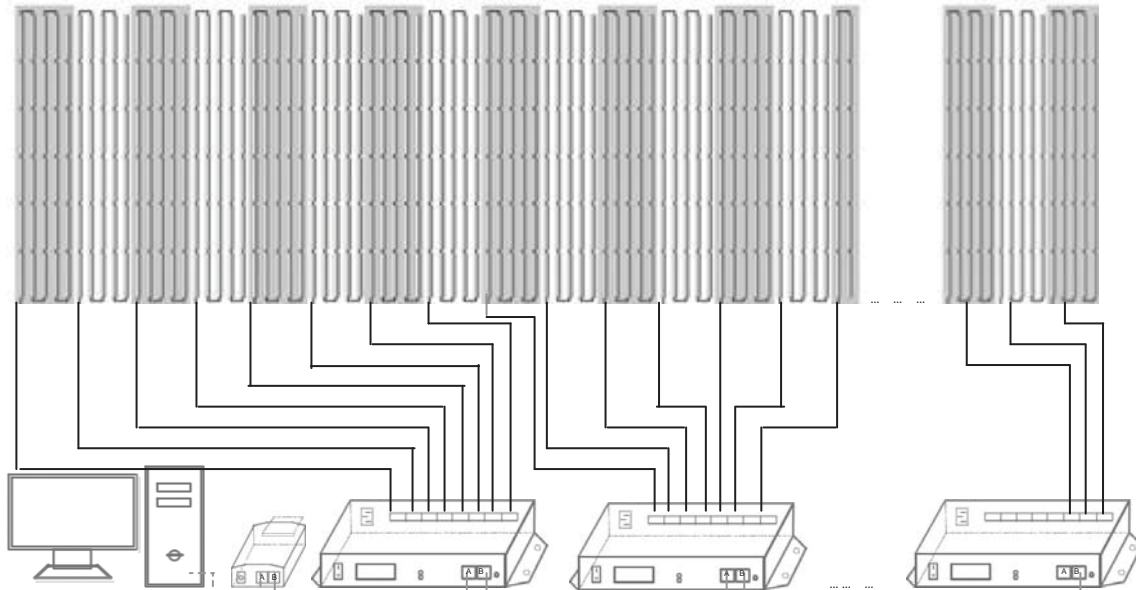
Computer Windows XP Windows 7-32bit (On-line PC Controll)

DMXMC(Optional) (Off-line Controll)

DMXSC

DMXSC

DMXSC

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Attentions:Connection In Controllers(Master or Sub)

Order of Network Cables---CAT 5E Cables

568A Male   568B Male
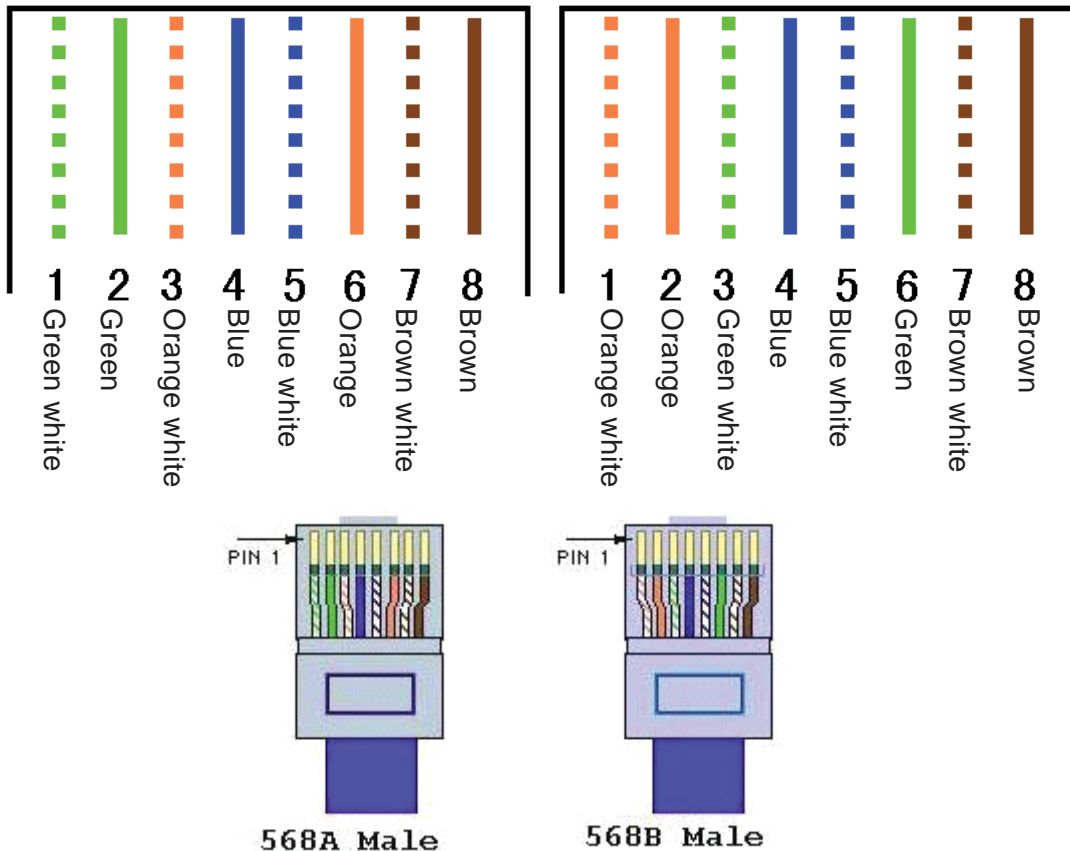
- **The controller, offline player and switch should be connected by cross ruling, i.e., one end is 568A and the other end is 568B.**
- **Straight through line should be adopted for any of the above equipment and the computer, i.e. both sides are 568A or 568B. It is forbidden to self-define the order of straight through line.**

Lines from the controller to the lamps & lanterns and connection method

1.DMXSC TTL output, it is suggested to choose category V line or above as the signal line. The best way of connection to the signal line of lamps & lanterns is as below:

Orange——Data Green——Clock Blue——Lock Brown——OE All other colored lines are connected to GND of the signal line.

It is forbidden to use two winded up line to connect the signal at the same time, e.g. connect Orange and Orange white to Data as the same time.

2.DMXSC difference output. This mode is only applicable to double signal or single signal lamps & lanterns, i.e. the ones with only Data or with Data and Clock.

It is suggested to choose category V line or above as the signal line. The best way of connection to the lamps & lanterns or difference converter plate is as below:

Using two winded up lines, one is A and the other is B, e.g. Orange is A and Orange white is B.

3. Shielded twisted pair is generally used for DMXSC MX. The signal line should be grounded. At the end of each signal line, i.e. between A and B, a 120R terminal resistance should be added.