

Functional overview



I. SYSTEM FEATURES

1. Load lamp: 16 output ports, up to $900 \times 16 = 14,400$ pixels can be controlled, each port can control up to 900 points, support TTL lamps, breakpoint continuation, etc., RGB\RGBW\RGBCW multi-color channel lamps, 16 independent ports can support different channel sequence lamps at the same time.

2. Working mode: computer online, SD card offline master.

3. Online dot drawing, 3D layout, wireless network transmission through wireless router, and star structure wiring of switch.

4. It can be inserted into W, and the 3-channel program can be used to carry RGBW four-channel lamps.

5. Support online fixed parameters and firmware upgrade.

6. Long press OK button to fix the parameters (black dot on the display).

7. Dual network interface can be cascaded between controllers; the controller can intuitively display the connection status.

II. DESIGNERIES

1. Four-color independent algorithm: energy saving and environmental protection, pure color;

2. Synchronous cascade control: connected to the main controller for online playback.

3. Used for all kinds of domestic and foreign irregular screens, multi-screen, building screen, pixel light screen and other complex applications;

4. Cooperate with online and offline control software.

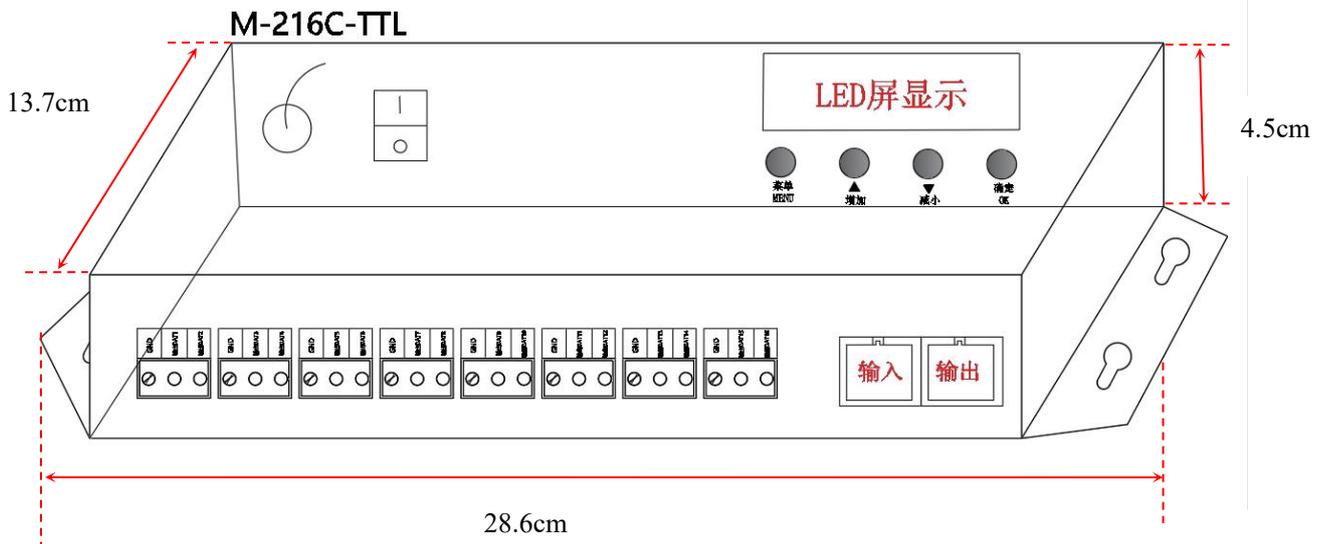
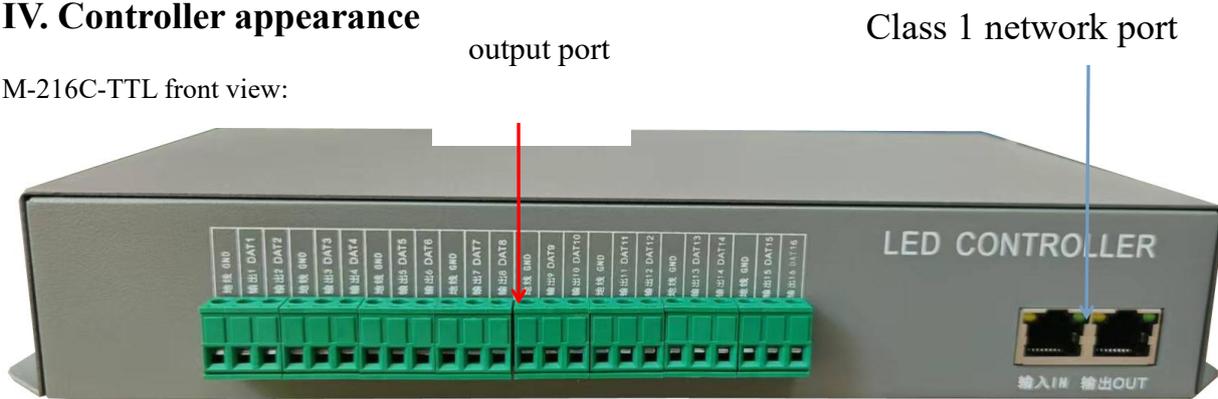
5. Support Windows mainstream 32-bit, 64-bit operating system: Windows system.

III. EXPANSIONALITY

1. Can play various formats of video and picture files both synchronous and asynchronous;
2. The playback software has sufficient interfaces to be compatible with other international protocols and supports customer personalized design needs;

IV. Controller appearance

M-216C-TTL front view:

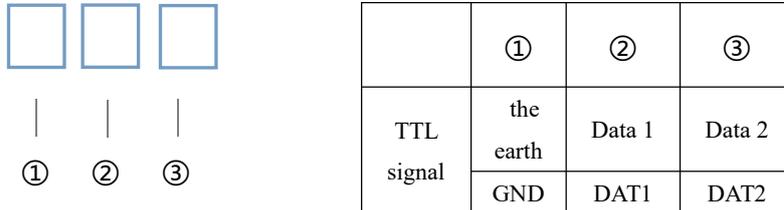


V. Parameter characteristics:

Port load	TTL signal: 900 x 16 = 14,400	
working voltage :	AC (alternating current) 85V-240V	
working temperature :	-20°C--75°C	
weight :	Weight: 1.25kg Net weight: 1.15kg 1.15kg	Weight: 1.25kg Net weight:
size :	Outer box: 27.3×17.3×5.4cm This machine: 25×15×4.5cm	

VI. Output port definition

The M-216C-TTL controller uses 83pin terminal interfaces to output signals. The 4Pin terminal is arranged from left to right as follows:



Note: The controller signal end only supports TTL signal, ② and ③ share a GND.

7、 Basic operation process: Configure the main controller M-C8 to use Long press the "Cycle OK" button for 3 seconds, and the controller displays a red dot to indicate the lock.

1、 ID number selection: must be changed when the controller is locked

Step 1: Press the "MENU" button to "d001" and the number flashes

Step 2: Press the "up and down" button to select the ID number

Step 3: Press the "Cycle OK" button to confirm

2、 chip select :

Step 1: Press the MENU button to "512H" and the number flashes

Step 2: Press the "up and down" button to select the chip model

Step 3: Press the "OK" button to confirm

Chip list:

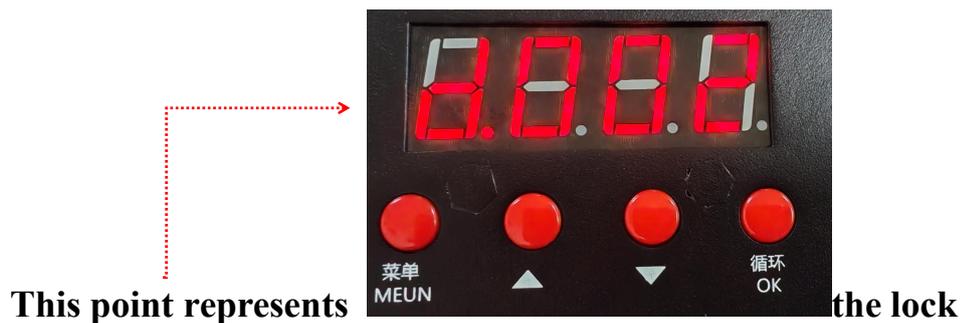
UCS1903	TM1934	512 800K	512 H (500K)	512 L (250K)
TM1814	UCS2904	TM1804	TM1914	GS8206
P9883	SM16703P	SK6812	WS2811	WS2812B
TM1923	UCS8903	UCS8904	HW1603	UCS5603
UCS8603				

3、 Fixed control parameters: (Note: The controller has a lock function. Press and hold the 'Loop OK' button until the left digital display lights up, indicating the lock is activated.)

Method 1: Automatic identification ID: M-216C-TTL All locks are removed, connected to the master controller M-C8, and the sub-controller automatically identifies the ID number and continues to extend the number. The chip automatically identifies the model of the master controller. This scheme is applicable to most occasions

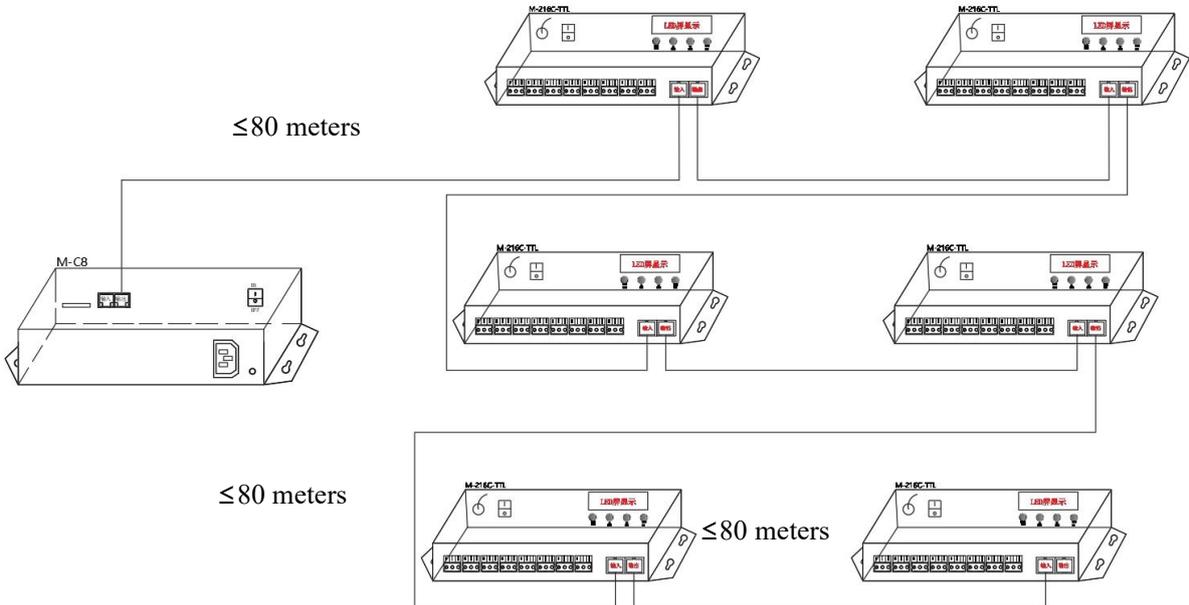
Method 2: Control a single fixed unit: In most cases, the main control is directly cascaded. The main control will automatically identify and assign ID numbers. If you need to set a single lamp or load multiple different models at the same time, disconnect the network cable. The specific operation of setting parameters for a single lamp is as follows:

- 1、 Locking and sub-control: Long press the "Cycle OK" button, and the left digit on the digital screen will light up to represent locking
- 2、 Modify parameters: such as modify ID number and chip model on the previous page
- 3、 Press the "OK" button to confirm and hold

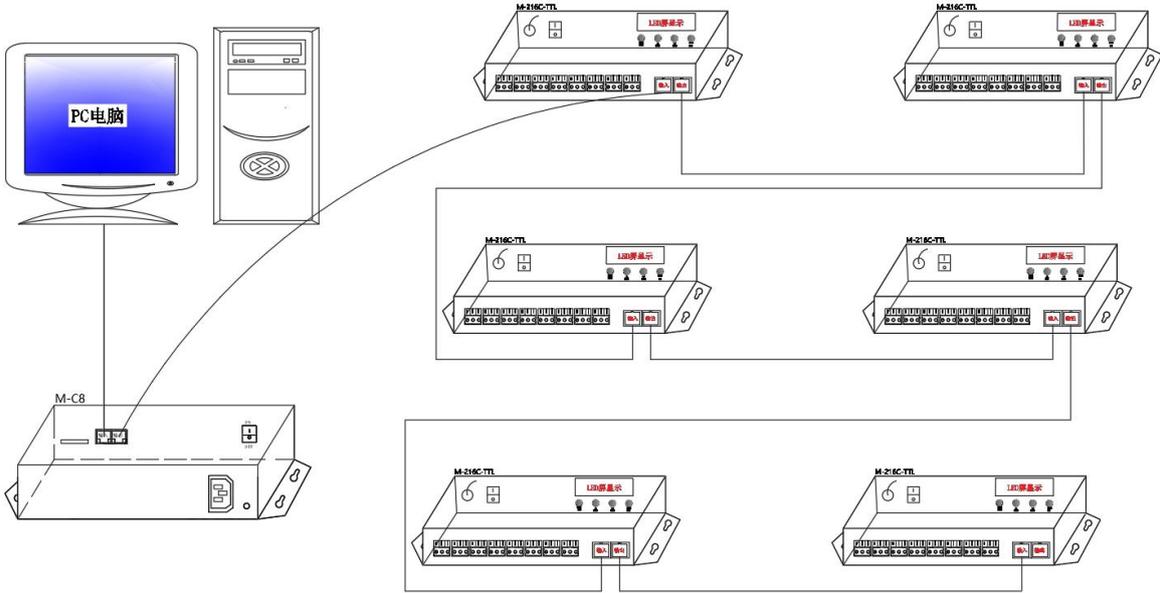


8, controller size diagram

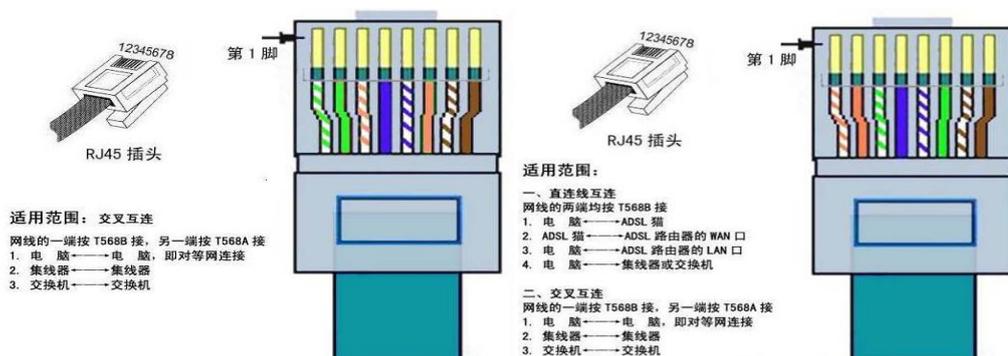
8.1. Main sub-control connection diagram:



8. Network diagram:



X. Network cable making process



Cable making: In practice, there are two methods of making (cross interconnection and straight line interconnection)

We use the "straight line interconnect" 568B, which means that both ends are made with the same wire order. The specific wire order is as follows:

- 1、Orange and white 2, Orange 3, Green and white 4 Blue 5, Blue and white 6, Green 7, Brown and white 8, Brown

11. Control distance of conventional signals reference table:(only for reference, everything is based on the actual)

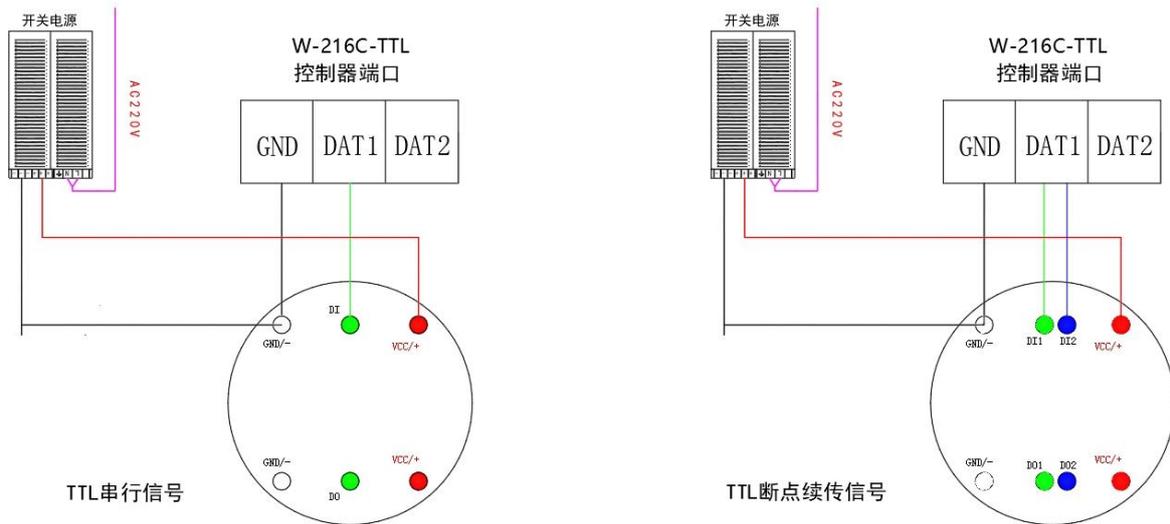
detailed information	TTL	4 lines 512	5 lines 512
Distance from controller port to light	15 meters	30 metres	80 meters
The distance between the controller and the last light		80 meters	120 metres
Distance between lights	3 metres	30 metres	30 metres
z			
Distance between amplifier and lamp	---	---	---
Distance between partitions and partitions	80 meters		
Distance between master and slave	80 meters		

Note: If the distance between the computer and the controller, between the master and the sub-control, or between the sub-control and the sub-control exceeds the specified distance, the signal will be interfered with and cannot be transmitted normally.

Rx :

- 1、 The distance of the signal amplifier can be extended to 300 meters
- 2、 Using optical fiber instead of network cable can extend the distance to 5 kilometers

XII. Wiring diagram



XIII. FAQ:

Is the controller working normally and the lamp not running properly?

Answer: a. Whether the chip selection is normal b. Whether the program is normal

2、 No signal when the network cable plug is inserted?

Answer: Check whether the wire sequence is normal and whether the network port is normal

3、 The signal is unstable and the lamp flickers?

Answer: a. Check whether the power supply has filtering function b. Check whether there is poor contact in the line c. Check whether the controller port is normal d. Check whether the signal line is shielded e. Check whether there is a high-power machine or magnetic field near the controller