LTECH

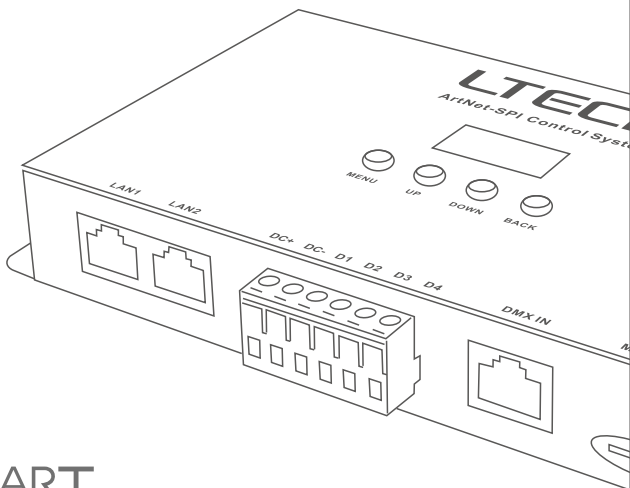## ArtNet-SPI Control System

Model: Artnet-SPI-4
Artnet-SPI-8

ART
NET
ETHERNET

Manual

Product Introduction

- Ethernet Control System based on the ArtNet protocol.

- Convert the ArtNet network data package into SPI data.

- Adopting high-speed ARM processor, stable and reliable.

- With RJ45 network and DMX512 interface, support DMX management.

- With OLED screen and 4 keys, very easy for setting operation.

- Support firmware update function.

- Support recording function, support multiple device offline sync playback function.

- Support offline timing and loop playback.

- Supports serial/parallel connection of network cables.

- Supports static/dynamic IP settings.

- Compatible with the light software based on ArtNet protocol.

- Used in LED dot matrix and DMX512 stage lighting control.

- Offline synchronized playback does not need to specify the master and slave.

- Suitable for TV station recorded scene, stage performances, entertainment, building lighting and so on.

Technical Specs
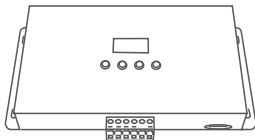
Artnet-SPI-4 / Artnet-SPI-8

Input voltage :	5~24Vdc	Screen:	OLED
Input signal:	Ethernet (ArtNet)	Isolation ethernet port:	Total isolation
Output signal:	SPI	Isolation power input:	Total isolation
SD card capability:	8G	Working temperature:	-30℃~55℃
DMX connection:	RJ45	Dimension:	L170×W90×H25mm
Network connection:	RJ45	Package size:	L192×W132×H50mm
Control:	Artnet-SPI-4: 680 pixels, 4 universe	Weight (G.W):	610g
	Artnet-SPI-8: 1360 pixels, 8 universe		

Compatible IC：TM1809/TM1804/TM1812/UCS1903/UCS1909/UCS1912/UCS2903/
UCS2912/WS2811/WS2812/SK6812/TM1803/TLS3001/KL590/KL592D/WS2821/TM1829LS
MBI6120/GW6205/GS8206(BGR)/SM16703/UCS2904/UCS8904B/SK6812(RGBW)
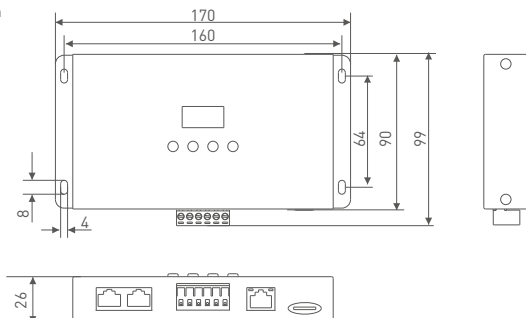
Package Contents
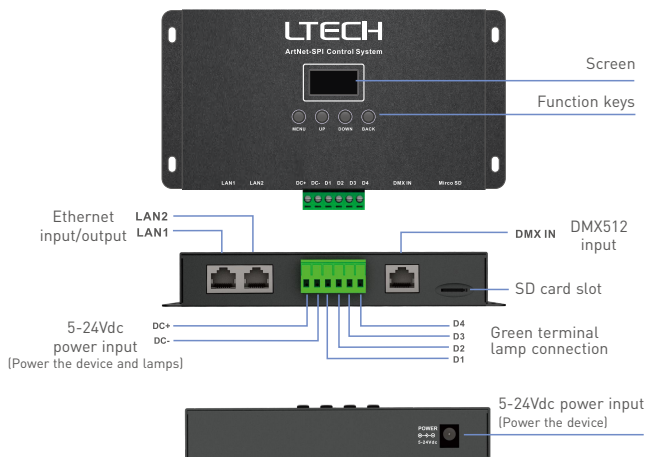
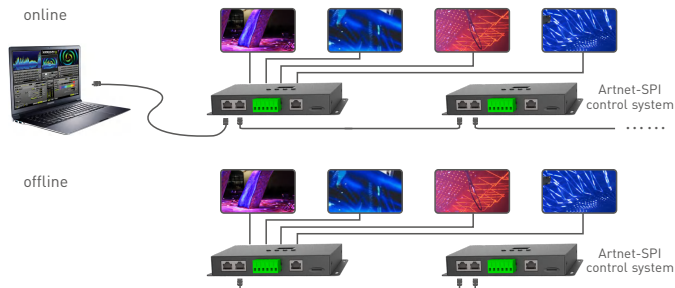Control system 1pcs

SD card (8G) 1pcs

Manual 1pcs

LTECH

Product Size

Unit: mm

Main Component Description

Screen

Function keys

Ethernet
input/output

LAN2
LAN1

DMX IN — DMX512
input

SD card slot

5-24Vdc
power input
(Power the device and lamps)

DC+
DC-

D4
D3
D2
D1

Green terminal
lamp connection

5-24Vdc power input
(Power the device)

Wiring Diagram

1. Connection in series

online

Artnet-SPI
control system

offline

Artnet-SPI
control system

＊ Offline synchronized playback no need to specify the master and slave.

2. Connection in parallel

online

Ethernet
Switch

Artnet-SPI
control system

offline

Ethernet
Switch

Artnet-SPI
control system
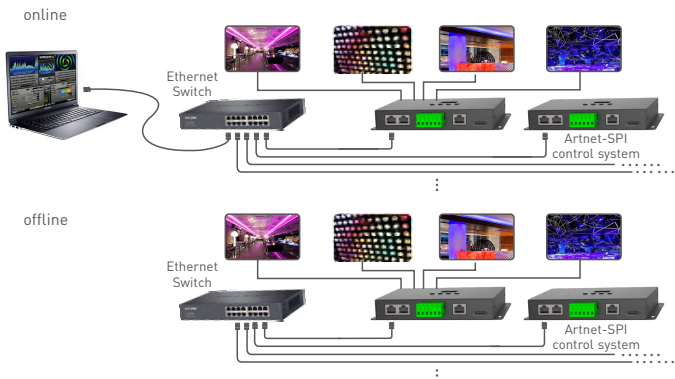
＊ Offline synchronized playback no need to specify the master and slave.

＊ Parallel connection is recommended for large number of devices.

Connect ArtNet Control System to Computer

This product is compatible with all the ArtNet software in the market, here take MADRIX as an example:

1. Install the Madrix 3 software in the computer, the icon on the desktop :

MADRIX 3

2. Use the equipped adapter to power ArtNet control system

3. Connect ArtNet control system to computer via the cable.

4. IP Setting: This control system is compatible with random network segment. According to the ArtNet protocol, 2.X.X.X or 10.X.X.X can be added in the computer (X means arbitrary value), methods as below:
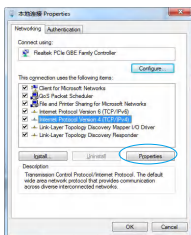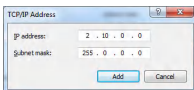
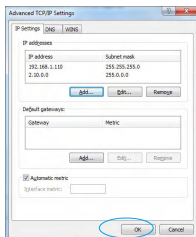4.1 Open the Network, click "Properties" button of the TCP/IPv4 protocol.
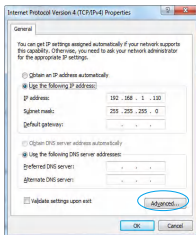
4.2 Click "Advanced".
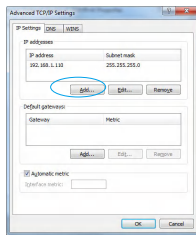
4.3 Click "Add".

4.4 Add the IP address 2.X.X.X or 10.X.X.X (X could be arbitrary value).

4.5 Interface of adding successful, click "OK" and exit.

L TECH

5. Open Madrix 3 software, choose "preferences">" device manager" from menu.

6. In "device manager" dialog, choose "ArtNet" tab, tick "enable" and click search . Artnet-SPI-4 / Artnet-SPI-8 will be searched.

7. Click the tab of "DMX devices", set port status to "ON" if connected successfully. Now, you can use computer to control lamps via Artnet-SPI-4 / Artnet-SPI-8.
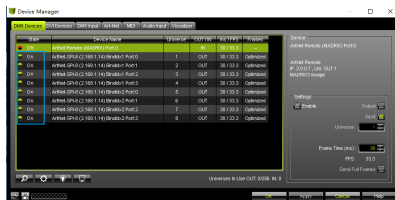
∗ MADRIX© is registered trademarks of Inoage GMbH Co., Inc. in Germany.
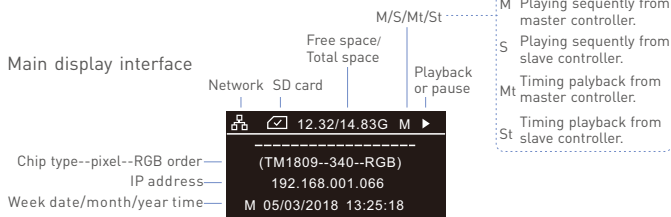
LTECH

LCD Screen Interface Diagram

Key function

MENU   UP   DOWN   BACK

Menu   Back

Parameter/Item switching

M/S/Mt/St

		Playing sequently from master controller.
M		Playing sequently from master controller.
S		Playing sequently from slave controller.
Mt		Timing palyback from master controller.
St		Timing playback from slave controller.

Main display interface

Free space/ Total space

Network SD card   Playback or pause

⊞ ☑ 12.32/14.83G M ▶

(TM1809--340--RGB)
192.168.001.066
M 05/03/2018 13:25:18

Chip type--pixel--RGB order
IP address
Week date/month/year time

Press "MENU" key to enter main menu.
Press "BACK" to playback/pause.

Main menu

Network SD card   Free space/ Total space

⊞ ☑   12.32/14.83G
Setting   Tool
Clock   Timer
Network   ArtNet
List   Record
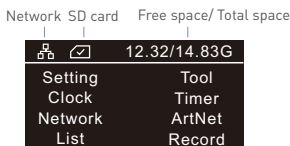
Press "UP" key or "DOWN" key to switch item.
Press MENU" key to enter submenu.

Clock

Clock		
Year	Mon	Day
2018	03	05
Hour	Min	Sec
14	09	33

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

Setting

Chip type —
RGB order —
Brightness of load lamp —
Address of the DMX —

Setting	
Chip:	TM1809
Order:	GRB
Bright:	254
DMX:	001

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

Tool

Screensaver —
Screen contrast —
Screen lock —

Tool	
Screen:	Never
Contrast:	60%
Lock:	OFF

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

Timer

Timer	
01. 2019/06/11~	☐
02. Unknown~	☐
03. Unknown~	☐
04. Unknown~	☐
05. Unknown~	☐

Press "MENU" key to switch item, Press "DOWN" key to enter submenu.
Press "UP" key start or stop the timer, tick ✓ in the box means start.
(only effective for timer which has been set).

Data submenu

Date	week
Sta:2018/03/05 14:43	
End:2018/03/05 14:43	↓
01.201707151556	☐
02.201707151656	☐
03.201712201556	☐

File name —

Week submenu

Date	week						
Mo	Tu	We	Th	Fr	Sa	Su	
☐	☐	☐	☐	☐	☐	☐	↓
01.201707151556							☐
02.201707151656							☐
03.201712201556							☐

File name —

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to select file, tick ✓ in the box means select it.

Network

DHCP ON: dynamic IP
DHCP OFF: static IP

Network
DHCP: ON
IP: 192.168.001.066
MK: 255.255.255.000
GW: 192.168.001.001

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

✳ Dynamic IP's parameters are automatically updated and cannot be changed manually.

List

File name ——

List
01.201707151556   □
02.201707151556   □
03.201707151556   □
04.201707151556   □
05.201707151556

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to tick ✓ in the box (means select this file).

Record

Record
File Name:
201903051458
File Time: ▶
00:00:00

Press"UP" key or "DOWN" key to switch ▶ ⏸ .
(▶ pause   ⏸ record)

ArtNet

ArtNet space parameters.

ArtNet
Universe:004
No: Uni/Total:08
Uni/Chan:02

Press"UP" key or "DOWN" key to adjust parameters.
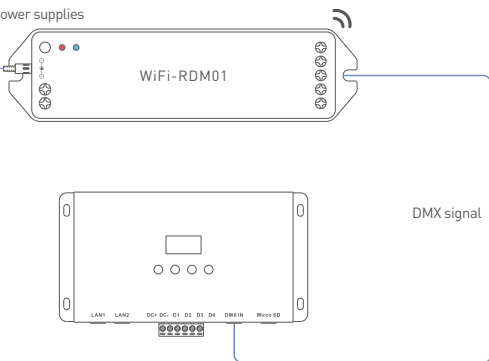
Work with the RDM Programmer

The ArtNet -SPI Control System can work with a DMX address programmer that follows the standard RDM protocol.
It is recommended to use LTECH RDM Programmer (Model: WiFi-RDM01), which allows remote browsing, parameter setting and DMX address setting.


Mobile App Interface for the RDM Programmer

Download the App with your mobile phone and connect the RDM Programmer successfully, then you are allowed to set parameters through the APP. Please refer to the WiFi-RDM01 manual for more details.

a. At the homepage, click "Add" of the device you are going to operate to edit the address,as shown below in the interface.

b. Click "ID" to get more details for devices.

c. Click "No" to issue an recognizing command.

d. Click " ✎ " to view/modify parameters, including modifying frequency, mode, curve, querying output power and modifying current.

e. Click " ⚙ " in the upper left corner to access the settings which allows you to test, edit DMX addresses, set WiFi for devices and upgrade firmware.

Home page

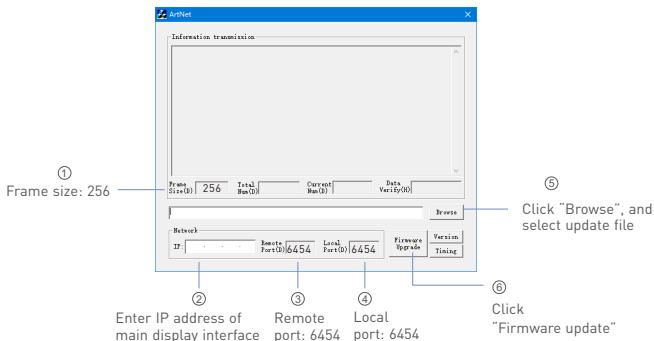Setting

Test

DMX address setting
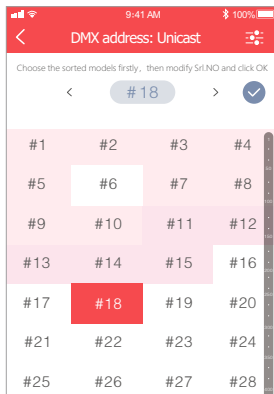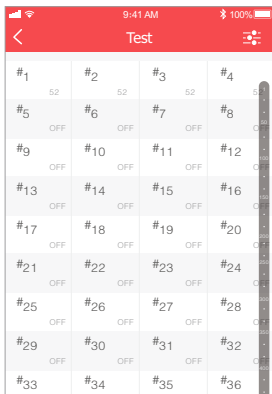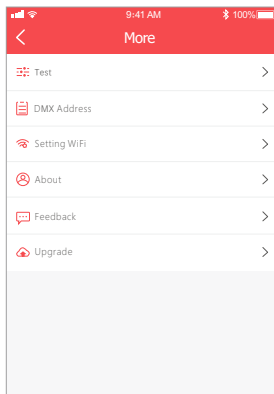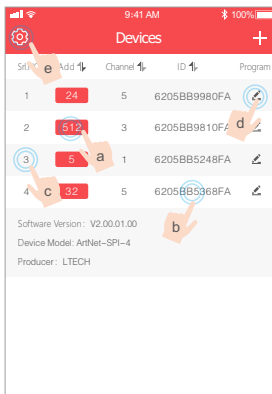
Firmware Update

Please connect ArtNet control system to computer, and copy update file to computer.

Method 1. Firmware update with software.

Open software ☐ in your computer, enter follow interface and update firmware.

① Frame size: 256

② Enter IP address of main display interface

③ Remote port: 6454

④ Local port: 6454

⑤ Click "Browse", and select update file

⑥ Click "Firmware update"

Method 2. Firmware update with explorer.

Open explorer, enter "http://192.168.1.14" in the address bar, "login" interface appeared, enter user name"LTECH", password "123456", then click "login" button.

Login

Enter User ID and Password:
User ID LTECH   Password 123456
Login

Enter the following interface, click "browse" button to select the update file, then click "upload" button to update, if "update done!" appeared means update successful.

Please specify a binary file to upload: [浏览...]
Upload
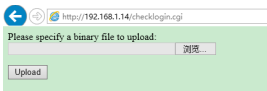
✳ For firmware update, please contact us for update software and documents.

LTECH

www.ltech-led.com