

# ArtNet-SPI Control System

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





### 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.

# ( € FC RoHS ☆ □ ® ● ※



# 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





### Product Size



## Main Component Description





# Wiring Diagram

1. Connection in series



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

#### 2. Connection in parallel



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

\* Parallel connection is recommended for large number of devices.

# LTECH

# 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 :



- 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:

Setvolving Authenti-	cation
Connect using:	
Peatek PCle	GBE Family Controller
	Configure
This ogniection uses	the following items:
Clert for No	crosoft Networks
M Backet	t Scheduler
Se	the Oracles for Manager Materials
cel genne and me	on analytic Pictoria Internation
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Gegene and new     Generat Prot	Incel Viewon 6 (TCP-/PHG) Techcicy Discovery Meager LD Driver Topology Discovery Meager LD Driver Topology Discovery Meager LD Driver Topology Discovery Meager LD Driver Topology Discovery Meager LD Driver Pagestein Stream Protocol. The default protocol That provide communication scorenected networks.

4.1 Open the Network, click "Properties" button of the TCP/IPv4 protocol.

IP/IP Address			-		-	-		8
IP address:	2		10		0		0	
Subnet mask:	255		0		0		0	
		ſ	-	A	dd		ì	Cancel

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

eneral	
You can get IP settings assigne this capability. Otherwise, your for the appropriate IP settings.	d automatically if your network supports need to ask your network administrator
🕘 gbtein an IP address auto	matcaly
@ Use the following IP addre	5%
P address:	192 .168 . 1 .110
Sybnet mask:	255 .255 .255 . 0
Default gateway:	
Olgtain DNS server address	s automatically
Use the following DNS services	ver addresses:
Breferred DNS server:	
Alternate DNS servers	
Vajdate settings upon est	t Adjanced

4.2 Click "Advanced".

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P addyesses	
IP address	Subnet mask
192, 168. L 113	255.255.255.0
Default gatewaysi Gateway	Metric
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Theorem and the	

4.3 Click "Add".

10 - 44	fi fan de ser de
1- 900.620	SUCHECINGS
2, 10, 0, 0	255.0.0.0
	dd [gdt Remoge
Default gateways:	
Gateway	Metric
	dd Edg Regove
Automatic metric	
Ighteface metric:	

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



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



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

		Statement Street Street				-
R LEVICEL DVILLENCE	Concept Acres	961 70301	p2 visualit	_	-	
Devicehore	dourts/194	University	P Address (MAC Address	-		
ketilet Remote			2.0.0.7 / BD102/FESB/FIEBO (Receive Only Fran 2.0.0.7)		-	=
						a
ANNA-SPI-8			21681347007/5927828.0E (Binddx1 (Send Only To 2.958.1.14)			
			Wottows - stockd 10		*	

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.

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	Artifiet Renote (MADROK) Port/O			38/33.3	-	Added Renote (MA2#32) Fort0
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	Artist SPL9 (2:199.1.14) Binakkit Port1					Attact Reside
	Artikel-SPE0 (2.190.1.14) Bindid:1 Port 2				Optimized	MADPICS inonge
	Artiket-SPI-8 (2.155.1.14) Bindid:1 Port:3					
	Artiset-5758 (2.155.1.14) Bridde 2 Port 0				Optimized	
	Arthet-SPL8 (2.193.1.14) Binikik/2 Port1					
					Optimized	
	Artikel-SPE0 (2:190.1.14) Bindid: 2 Port: 2				Optimized	rest i
						Universe :
						Frane Time (ma) : 34 🔀
						PPS: 33.3
						Send Dat Darras 9

\* MADRIX<sup>®</sup> is registered trademarks of Inoage GMbH Co., Inc. in Germany.



## LCD Screen Interface Diagram



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

Main menu	
	Network SD card Free space/ lotal space
	品 🕢 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.

Press "UP" key or "DOWN" key to select file, tick v in the box means select it.

File

name

#### Setting

Chip type Chip: TM1809 RGB order Order: GRB Brightness of load lamp Briaht: 254 DMX: 001 Address of the DMX -

Press "MENU" key to switch item.

Press "UP" key or "DOWN" key to adjust parameter.

Tool

Setting

Tool

Screensaver -Never Screen: Contrast: 60% Screen contrast -OFF Lock. Screen lock -

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

> Timer 01.2019/06/11~ 02. Unknown~ 03. Unknown~ 04. Unknown~ 05. Unknown~

Timer

File

name

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).

Press "MENU" key to switch item.

Data submenu

Dateweek Sta:2018/03/05 14:43

End:2018/03/05 14:43

01.201707151556

02.201707151656

03.201712201556



01.201707151556

02.201707151656

201712201556

03

 $\Box$ 







Network

Netwo<u>rk</u>

DHCP ON: dynamic IP DHCP OFF:static IP

	Hotwork
DHC	P: 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

	List	
File name —	01.201707151556 02.201707151556 03.201707151556 04.201707151556 05.201707151556	

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

Record

ArtNet



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 "③ " in the upper left corner to access the settings which allows you to test, edit DMX addresses, set WiFi for devices and upgrade firmware.





<b>. dl</b> 🗇	9:41 AM	\$ 100%
	More	
📑 Test		>
DMX Address		>
🕱 Setting WiFi		>
🙁 About		>
Feedback		>
🕢 Upgrade		>

Setting

#### ae

ad 🗢	9:41	AM	\$ 100% 💻
	DMX addres	s: Unicast	
Choose the so	rted models firstly,	then modify Srl.N	O and click OK
<	# -	18	> 📀
#1	#2	#3	#4
#5	#6	#7	#8
#9	#10	#11	#12
#13	#14	#15	#16
#17	#18	#19	#20
#21	#22	#23	#24
#25	#26	#27	#28

#### DMX address setting

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- 🖘		9:41 AM		\$ 100%			
<			Te	st		Ξ	
#1	52	#2	52	#3	52	#4	52
#5	OFF	#6	OFF	#7	OFF	#8	
#9	OFF	#10	OFF	#11	OFF	#12	• •••
#13	OFF	#14	OFF	#15	OFF	#16	190
#17	OFF	#18	OFF	#19	OFF	#20	
#21	OFF	#22	OFF	#23	OFF	# <sub>24</sub>	250
#25	OFF	#26	OFF	#27	OFF	#28	200 • •
#29	OFF	#30	OFF	#31	OFF	#32	•
#33		# <sub>34</sub>		# <sub>35</sub>		#36	•





### 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.

	😹 AntNet 🛛 🕹	
① Frame size: 256	Infrastine transituita           Infrastine transituita	S Click "Browse", and select undate file
	2 3 3 Enter IP address of Remote Local main display interface port: 6454	- ® 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.

C 🛞 🥖 http://192.168.1.14/	
Login	
Bater User ID and Password: User ID LTECH Password 12 Login	3456

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.

	cgi
Please specify a binary file to upload:	
	浏览
Upload	

\* For firmware update, please contact us for update software and documents.





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