# ArtNet-SPI-1
# ArtNet-SPI Converter

FC  CE  RoHS  (warranty 5 years)  ISO9001:2008

ArtNet-SPI converter is the Ethernet Control System based on the ArtNet protocol, used to convert the ArtNet network data package into SPI(TTL) digital signal, adopting high-speed processor, stable and reliable working. Following ArtNet standard protocol, it supports RJ45 network interface and green terminal output interface.

ArtNet-SPI-1 can control LED lighting with compatible driving IC, such as TM1804/1809, D705, LPD6803/1101, UCS1903/1909/1912/2903/2909/2912/6909/6912, WS2811/2812/2801/2803, P9813, etc.

It is compatible with all the effects lighting control software which support ArtNet protocol, widely used in the LED dot matrix and the stage lighting.
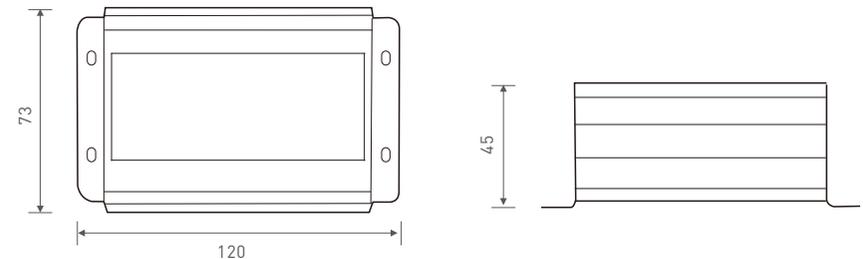
## 1. Technical specs

ArtNet-SPI-1

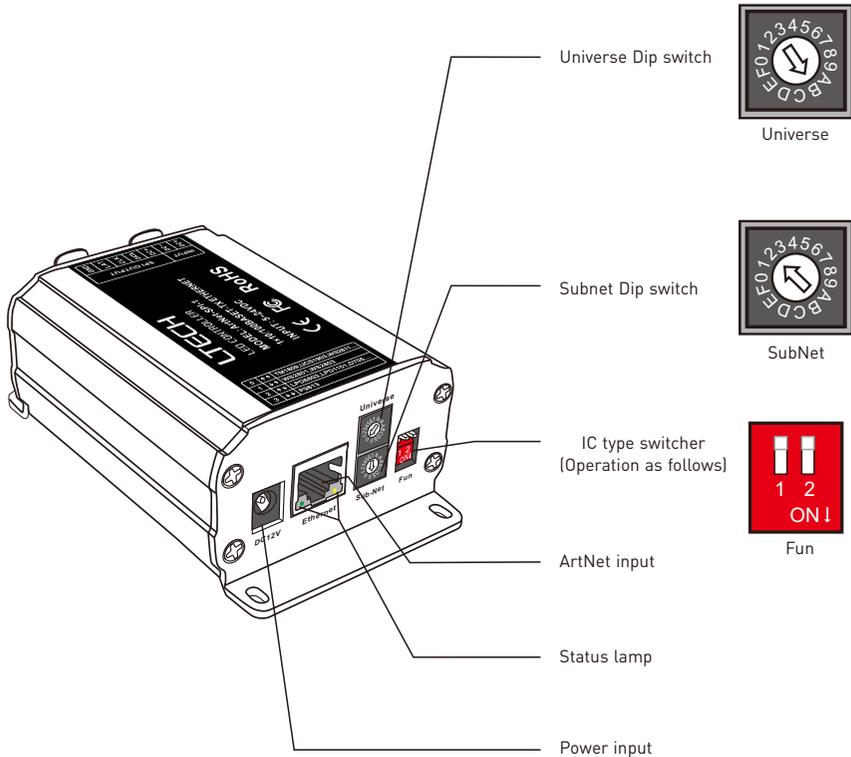| | | | |
|---|---|---|---|
| Power input: | 12Vdc (with a power adaptor) | IP: | Indoor use only |
| Input signal: | ArtNet | Working temp.: | -30°C~65°C |
| Output signal: | SPI(TTL) digital signal | Dimension: | L120×W73×H45mm |
| Current: | 30mA@12Vdc | Package size: | L198×W78×H50mm |
| Network connection: | RJ45 | Weight (G.W): | 360g |
| Isolation Ethernet port: | Total isolation | | |
| Isolation power input: | Total isolation | | |

## 2. Performance features

2.1 Based on ArtNet protocol network data communication, accept network DMX data, output one set SPI data.

2.2 IP address is bound to SubNet, no need to reset, plug and play.

2.3 Manage ArtNet on broadcast mode or unicast mode.

2.4 Compatible with the light software based on ArtNet protocol, control LED lighting.

2.5 Connect up to 256 DMX universes to one network.

2.6 10/100Mb/s Ethernet port.

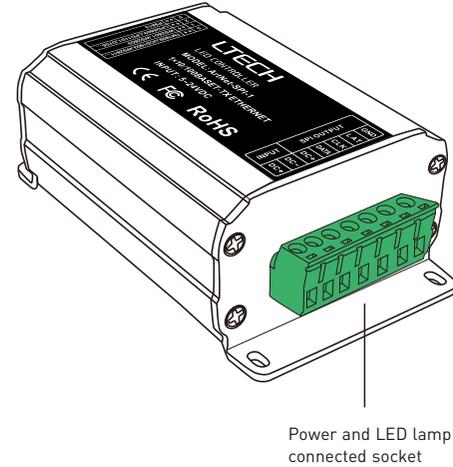2.7 Firmware can be updated via the network.

## 3. Product dimension:

## 4.  Interface instruction:



Universe Dip switch

Universe

Subnet Dip switch

SubNet

IC type switcher
(Operation as follows)

1  2

ON↓

Fun

ArtNet input

Status lamp

Power input

Power and LED lamp
connected socket

Switching IC type operation instruction:

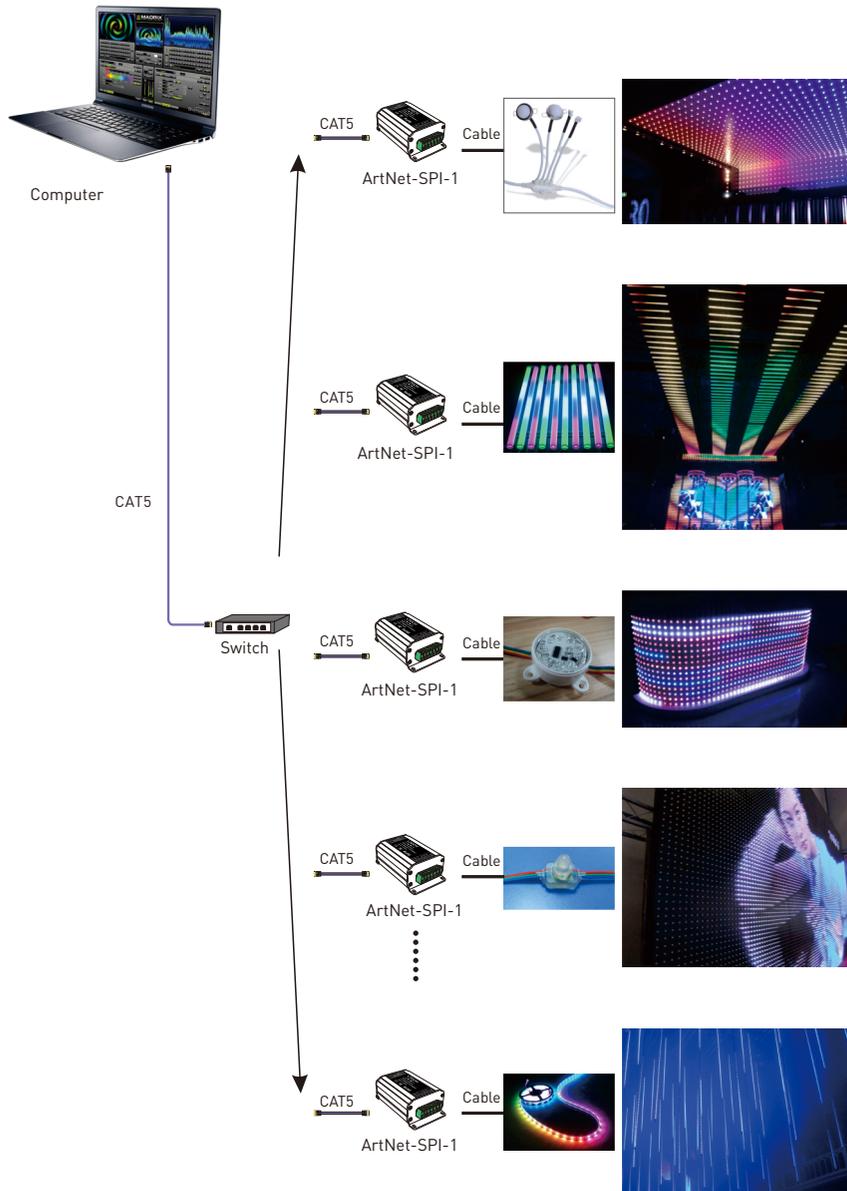| 1 | 2 | Diagrams | IC type |
|---|---|---|---|
| OFF | OFF | | TM1804/TM1809/UCS1903/UCS1909/UCS1912/UCS2903/UCS2909/UCS2912 WS2811/WS2812/GS8206(BGR)/SM16703 |
| OFF | ON | | LPD6803/1101, D705, UCS6909/6912 |
| ON | OFF | | WS2801,WS2803 |
| ON | ON | | P9813 |

Address setting instruction:

| Universe/SubNet Dip switch | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Value | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Calculating method:
Group address = Subnet×16 + Universe, IP Address = 2.xx.xx.group address,
MAC address = 44-4d-58-2d-31-group address (xx is the random number generated by the factory)

For example:
Subnet: 2, universe: B, group address = 2×16 + 11 = 43, so the DMX output group address is 43,
corresponding IP address is 2.xx.xx.43, MAC address is 44-4d-58-2d-31-43.

## 5. Conjunction diagram



Computer

CAT5

Switch

CAT5 — ArtNet-SPI-1 — Cable

CAT5 — ArtNet-SPI-1 — Cable

CAT5 — ArtNet-SPI-1 — Cable

CAT5 — ArtNet-SPI-1 — Cable

CAT5 — ArtNet-SPI-1 — Cable
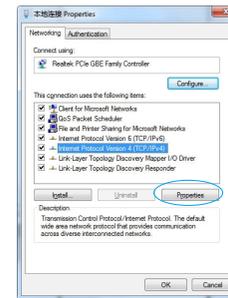
## 6. Connect ArtNet-SPI-1 to the computer

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

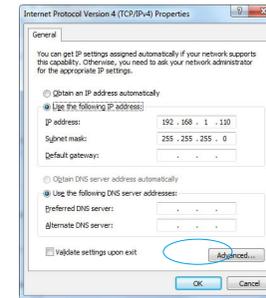6.1  Install the Madrix 3 software in the computer, the icon on the desktop :

MADRIX 3

6.2  Use the equipped adapter to power ArtNet-SPI-1.

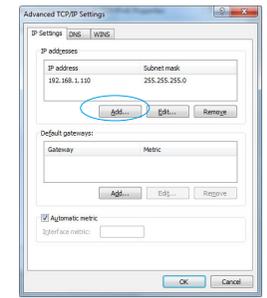6.3  Connect ArtNet-SPI-1 and computer via the cable.

6.4  IP setting: this control system is compatible with random network segment. According to the ArtNet protocol, 2.X.X.X can be added in the computer ( X means arbitrary value), methods as below:



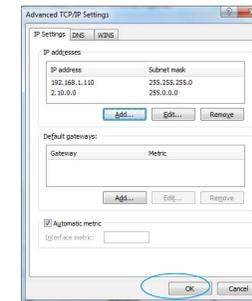6.4.1 Open the Network, click "Properties" button of the TCP/IPv4 protocol.

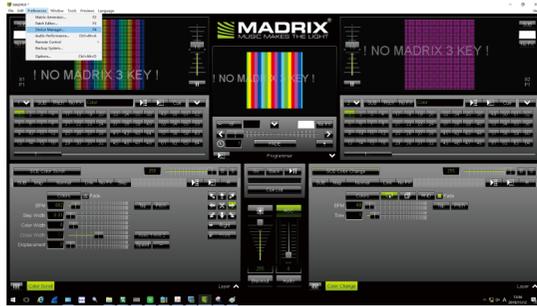6.4.2 Click " Advanced".

6.4.3 Click " Add".

6.4.4 Add the IP address 2.X.X.X (X could be arbitrary value).

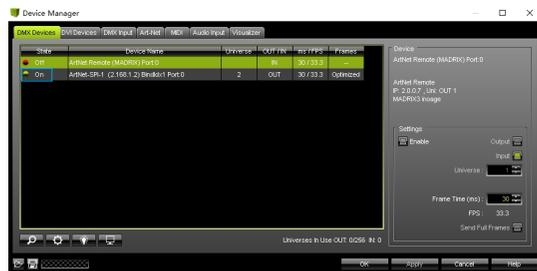6.4.5 Interface of adding successful, click "OK" and exit.

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

6.6 In "device manager" dialog, choose "ArtNet" tab, tick "enable" and click search 🔍 . Artnet-SPI-1 will be searched.

6.7 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-1.

✳ MADRIX® is registered trademarks of Inoage GMbH Co., Inc. in Germany.

## 7. Attention

7.1 The product shall be installed and serviced by the qualified person.

7.2 This product is non-waterproof. Please avoid the sun and rain. When installed outdoors, please ensure it is mounted in a water proof enclosure.

7.3 Good heat dissipation will prolong the working life of the controller. Please ensure good ventilation.

7.4 Please check if the output voltage of the LED power supply used comply with the working voltage of the product.

7.5 Please ensure that adequate sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.

7.6 Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.

7.7 If a fault occurs please return the product to your supplier. Do not attempt to fix this product by yourself.

## 8. Warranty agreement

8.1 We provide lifelong technical assistance with this product:

- A 5-year warranty is given from the date of purchase. The warranty is for free repair or replacement if cover manufacturing faults only.
- For faults beyond the 5-year warranty, we reserve the right to charge for time and parts.

8.2 Warranty exclusions below:

- Any man-made damages caused from improper operation, or connecting to excess voltage and overloading.
- The product appears to have excessive physical damage.
- Damage due to natural disasters and force majeure.
- Warranty label, fragile label and unique barcode label have been damaged.
- The product has been replaced by a brand new product.

8.3 Repair or replacement as provided under this warranty is the exclusive remedy to the customer. We shall not be liable for any incidental or consequential damages for breach of any stipulation in this warranty.

8.4 Any amendment or adjustment to this warranty must be approved in writing by our company only.

✳ No further notice if any changes in the manual.
Product function depends on the goods.
Please feel free to contact your supplier if any question.