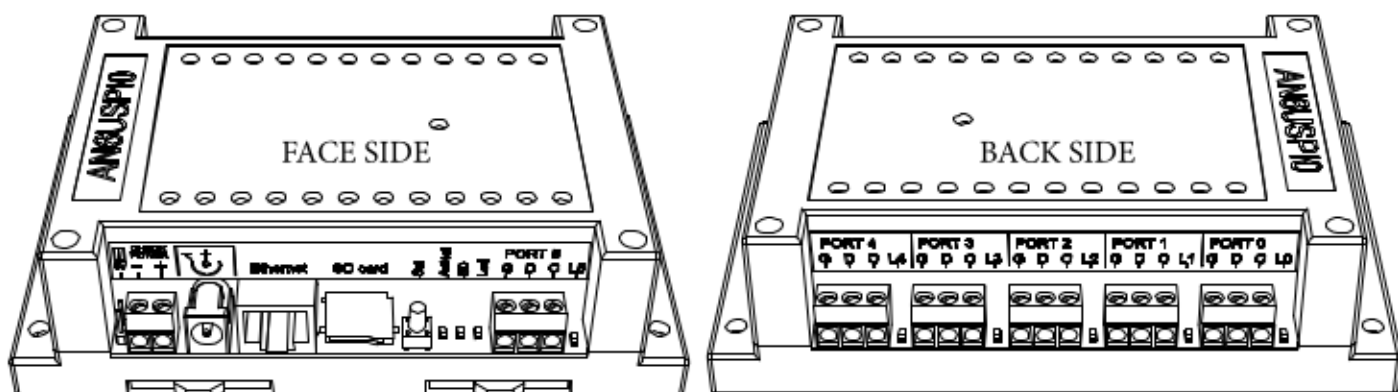




Components on board:

- Two connectors for power supply
- 10/100 Ethernet
- SDmicro flash card
- Control button «Set»
- Art-Net LED activity («Art-Net»)
- File system LED activity («SD»)
- Port LED activity («L0»...«L5»)
- Power LED («Led»)
- Six connectors for SPI output

Mechanical:

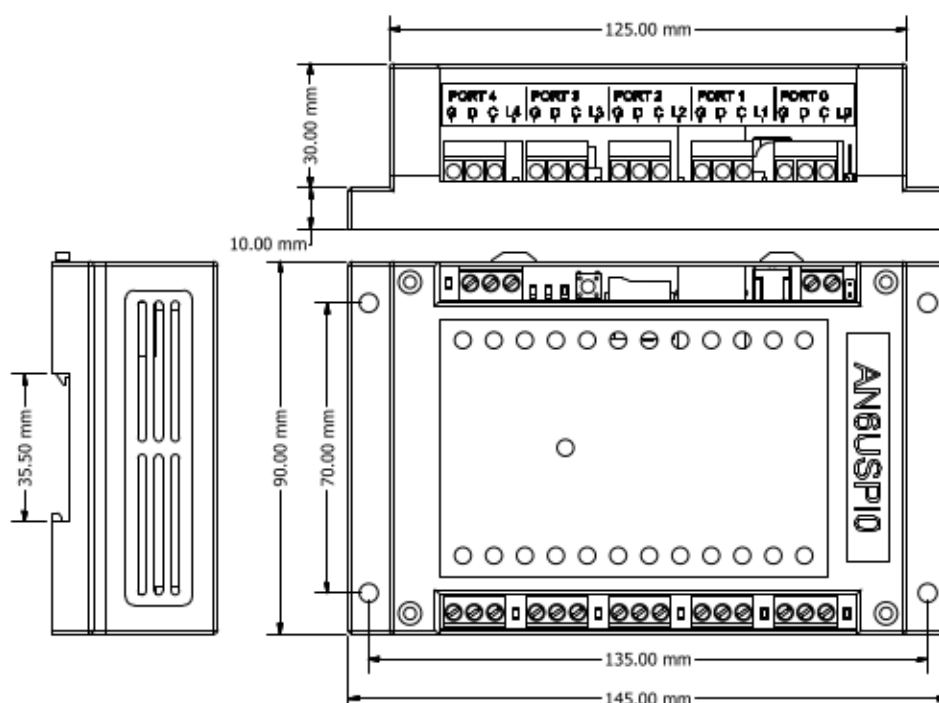
Weight: 170 grams. Installation on DIN rail 35 mm.

Electrical:

- Supply voltage 7V - 24V
- Supply 5V
- Supply current of the controller 500 mA
- SPI lines have overload protection
- Operation Range -40°C to +70°C

Features of firmware:

- Support led chip: WS2801, WS2811, WS2812, TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, UCS2903.
- Ethernet protocol Art-Net III
- Up to six ports output. Up to 170 pixels per port.
- Web server for configuration net and Art-Net
- 50 fps. for video applications on every universe
- 8K buffer for receiving UDP packets
- 4K buffer for each universe.



1. Connect the power supply 7 - 24V and Ethernet



1.1 Power:

Power connection may be with any connectors. DC adapter should have output current 500mA. minimum. The supply voltage must be 7V - 24V. All connected devices must be grounded.

1.1.1 Power 5V:

If you need to use controller with 5V, you must close the switch. The controller will be burn if voltage is higher than 5 volts. We recommend to close the switch after checking the power supply's voltage.



1.2 Configure network:

These is the defaults settings:

IP: 2.0.0.2
 MASK: 255.0.0.0
 MAC: 12:45:78:98:34:76
 Gateway IP: 192.168.0.1

These settings can be changed via the web server, or Art-Net software ([Art-Net test Software](#)).

IP: 2.0.0.2
 MASK: 255.0.0.0

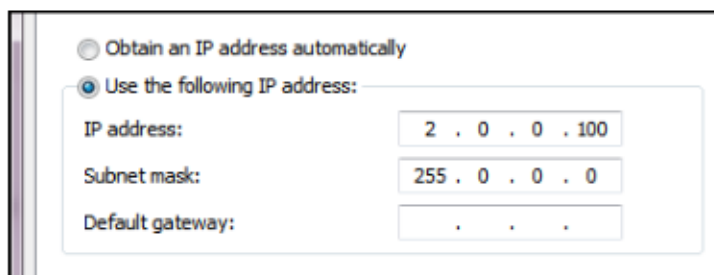
These settings can be changed only via the web server.

MAC: 12:45:78:98:34:76
 Gateway IP: 192.168.0.1

1.3 Setup network default procedure:

- Disable controller's power supply.
- Push button «Set». Hold down the button.
- Enable controller's power supply.
- Wait two seconds.
- Release the button «Set»

1.4 Example of network settings for the connected PC:



☐ Obtain an IP address automatically
☒ Use the following IP address:

IP address: 2 . 0 . 0 . 100
 Subnet mask: 255 . 0 . 0 . 0
 Default gateway: . . .

2. SDmicro card

2.1 Function:

- a. Card necessary to store files of the web server and configuration.
The card format is: FAT16/32.
- b. The directory structure is:



This structure you can not change. Not permitted to modify the files in WEB directory: «INDEX.HTM», «DEVCTR.HTM», «ARTP0B.HTM». Directory «CFG» file contains «AN_6_20.CFG». This file contains all the settings of the controller.

- c. All the attributes of the files must be in the off position.
- d. Replace a file «AN_6_20.GFG» on the base, makes the configuration as a default.

3. Control button «Set»

3.1 This button is used: [Setup network default procedure](#)

3.2 Start firmware upgrade.

- a. Disable controller power supply.
- b. Unpack and copy file «an6_00.img» to miniSD card, in the main directory . Insert the miniSD card to miniSD slot.
- c. Push button «Set». Hold down the button.
- d. Enable controller's power supply.
- e. Wait for downloading of the image.
- f. Delete «an6_00.img» file from the flash.

4. Art-Net LED activity

- 4.1 Displays the reception of the packets Art-Net and sACN.
- 4.2 Displays the flash memory operations of the processor.

5. File system LED activity

- 5.1 Displays the file system requests.
- 5.2 Displays errors of the image loading.

6. Port LED activity

6.1 Shows sendind port data.

6.2 Indicates the receiving data of the universe.

7. Device configuration

7.1 To enter you need to dial in your browser: <http://2.0.0.2> (if address as default). Click on the button «Device control».

7.2 «ShortName» and «LongName» - uses in Art-Net mode.

7.3 «Source IP» - the main address of the controller. All Art-Net packets must be sent to this address.

7.4 «Gateway IP» in the LAN does not use.

7.5 «Subnet Mask»

7.6 «MAC address» - need to select a different address for different controllers.

7.7 «Virtual IP» - look «9. Port 5 and 6 configuration».

7.8 «Art-Net» and «sACN» - choose a protocol.

7.9 «Save configuration» -saving changes. Changes will be applied after a reset (button «Reboot») or power Off->On.

7.10 If you use ArtNet and you have more then 12 universes, you must configure the software for sending your data as UNICAST (to main IP of controllers).



Home page **Device control** Port 0 Port 1 Port 2 Port 3 Port 4 Port 5

Network name configuration

ShortName:

LongName:

Network configuration

Source IP	2.0.0.2	
Gateway IP	192.168.0.1	
Subnet Mask	255.0.0.0	
MAC Address	42:45:78:98:05:6C	
Virtual IP	2.0.0.3	Univers 5 and 6

Protocol configuration

☒ Art-Net
 ☐ sACN(E1.31)

8. Port configuration

8.1 The upper switch is used to select the type of the chip.

8.2 In Art-Net mode, 0 - 255 combinations «Subnet/Universes»

8.3 In sACN mode you should not set Subnet/Universe as 0, only 1- 255 combinations.

8.4 Each port can operate in its different «net».



The screenshot shows the 'Port 0' configuration page for Art-Net mode. At the top, there is a navigation bar with tabs: 'Home page', 'Device control', 'Port 0' (selected), 'Port 1', 'Port 2', 'Port 3', 'Port 4', and 'Port 5'. Below the navigation bar, the title 'Art-Net port mode(requires a reboot)' is displayed. The main configuration area includes a radio button selector for 'UCS1903/WS2811' (selected) and 'WS2801'. Below this is a 'Net' dropdown menu set to '0(00)'. The 'Subnet/Universe' dropdown menu is also set to '0(00)'. The 'Channel to start' input field contains the value '0'. At the bottom of the configuration area, there are two buttons: 'Save configuration' and 'Reboot'.

(c) Electron-design firmware ArtNet to Serial 6 2.0.00, web server V 2.0



The screenshot shows the 'Port 0' configuration page for sACN mode. The navigation bar is identical to the previous screenshot. The title is 'sACN(E1.31) port mode(requires a reboot)'. The radio button selector is the same, with 'UCS1903/WS2811' selected. The 'Net' dropdown menu is set to '0(00)'. The 'Subnet/Universe' dropdown menu is also set to '0(00)'. The 'Channel to start' input field contains the value '0'. At the bottom, there are 'Save configuration' and 'Reboot' buttons.

(c) Electron-design firmware ArtNet to Serial 6 2.0.00, web server V 2.0

9. Port 5 and 6 configuration

9.1 Art-Net protocol has a single IP address for 4 ports. Ports 5 and 6 have a virtual IP address. This address is required for the automatic detection of ports 5 and 6.

9.2 Ports 5 and 6 always get messages to the IP address of the controller (to the main address). If there are more than one controller in the system, then necessary a UNICAST data transmission. In this case, you must configure the port 5 and 6 manually.

10. Firmware updates.

10.1 [Download the latest firmware.](#)

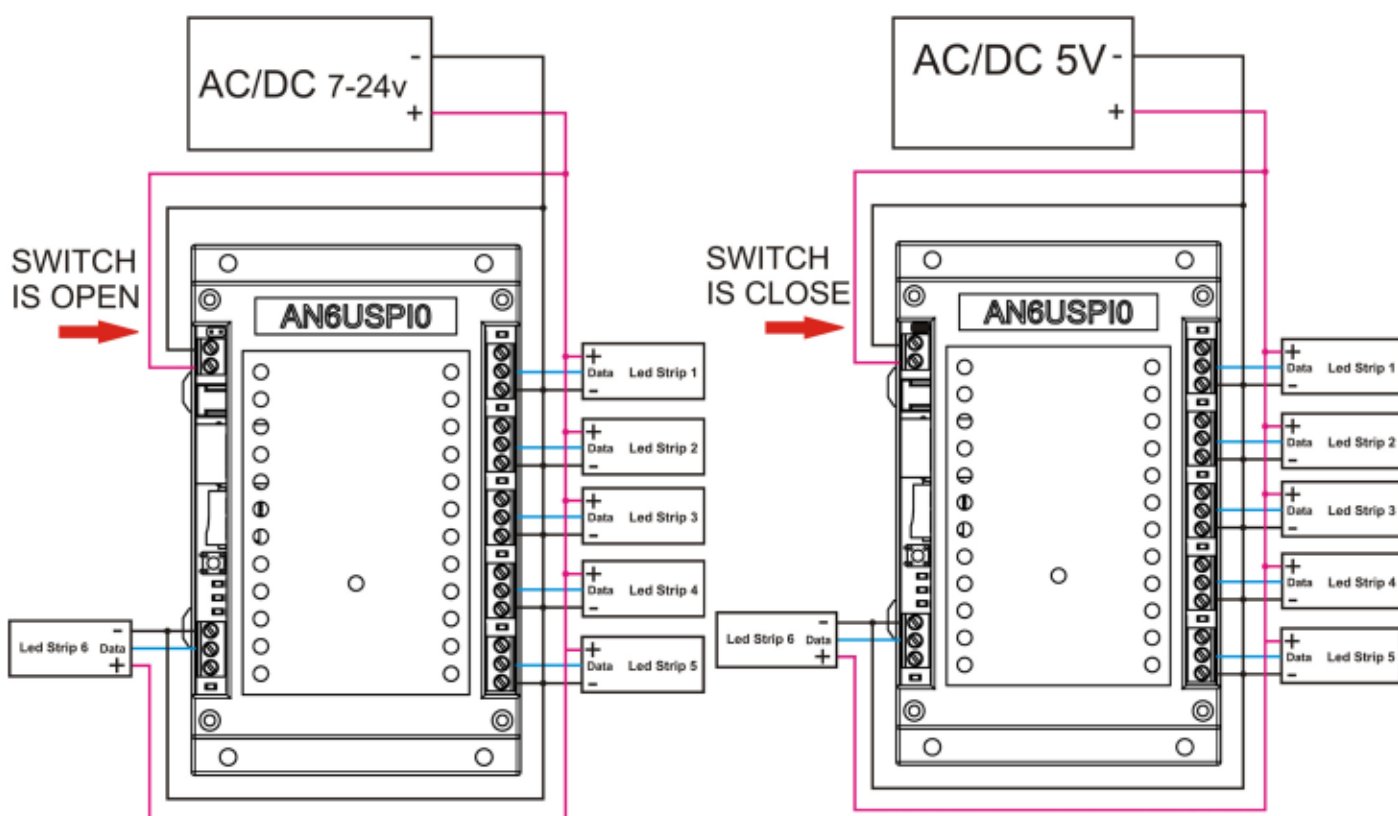
11. Universes and network. Multicontroller mode.

11.1 The maximum 12 of universes transmitted over the network as BROADCAST.

11.2 The maximum 400 of universes transmitted over the 100 Mbit network as UNICAST (Ar-Net III).

11.3 In the mode sACN, the number of universes in the network limited by the the network.

12. Connecting the power supply.

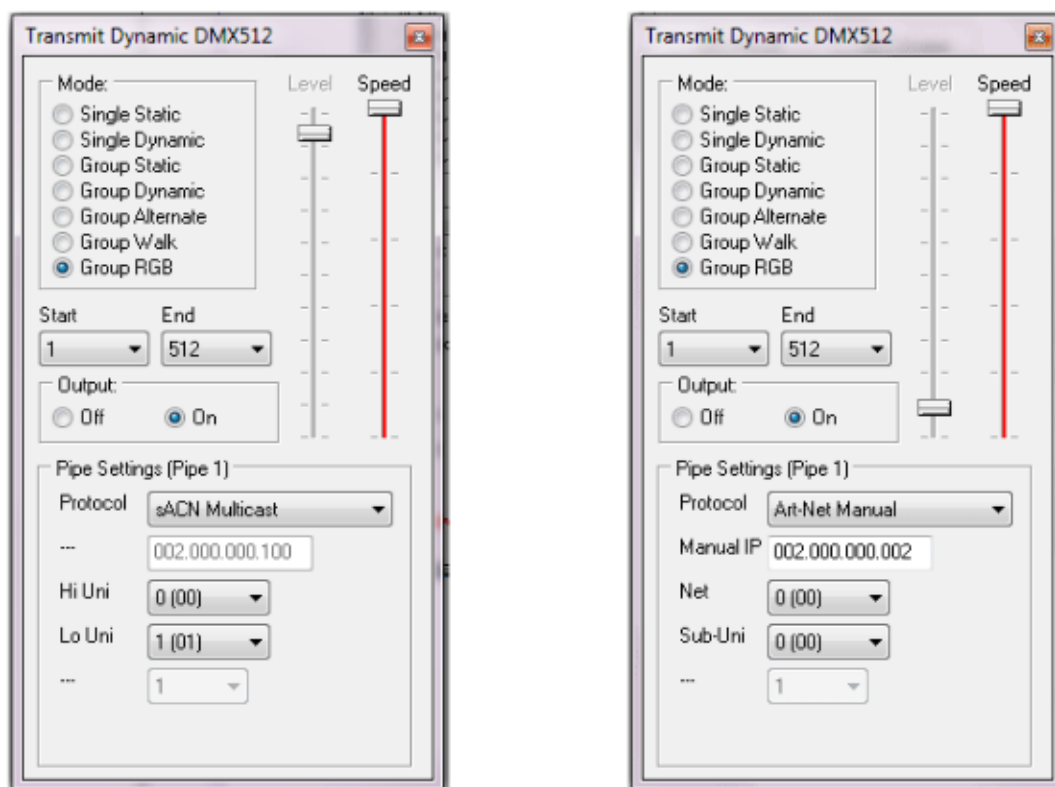


13. SPI port connectors.

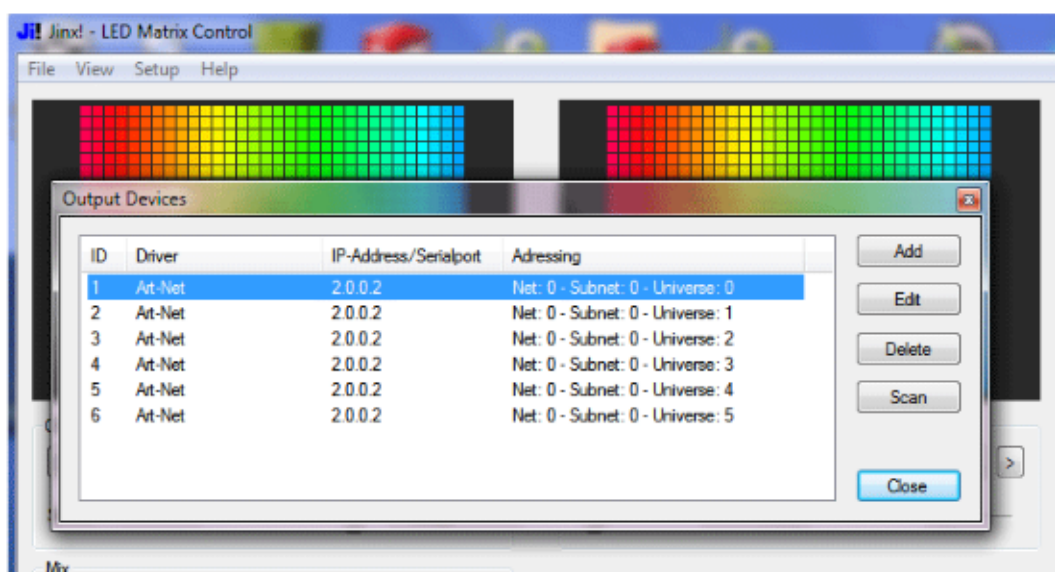
13.1 Wires DATA or CLOCK must have a length less than 4.5 meters.

13.2 On PCB installed 33 ohm resistors for wires DATA and CLOCK.

14. DMX-Workshop



15. jinx configuration



16. Soft configuration

16.1 Madrix patch.

16.2 Freestyler connect.



Links:

[FreeStyler](#)

[Madrix](#)

[Jinx](#)