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SACN



EasyNode ARS2048B

User Manual

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1. Overview

Welcome to the Easynode ARS2048B, a bidirectional 4-channel DMX network controller that supports Artnet, sACN, and RDM protocols.

Bidirectional communication: Unlike most DMX controllers that only convert network signals into DMX signals, the Easynode ARS2048B can also convert 4-channel DMX signals into network signals.

RDM support: Our Windows software allows you to modify RDM lighting properties with ease.

Artnet, sACN support: Including the latest Artnet 4 protocol and sACN, which is highly recommended by many professional lighting control software.

Cost-effective design: With an all-aluminum body, compact size, powerful functionality, and USB Type-C power supply, the Easynode ARS2048B offers excellent value for your lighting control needs.

Most importantly, the Easynode ARS2048B comes equipped with 4 DMX interfaces, saving you money and providing greater flexibility in your lighting setup.

1.1 Hardware

The Easynode ARS2048B is a compact and portable device that features 4 DMX interfaces with either 3-pin or 5-pin connectors, as well as a Type-C wired interface for power supply and an Ethernet port for network communication.

On the front panel of the device, you can adjust the working mode and restore factory settings using a mode function button and an LED indicator light.

1.2 Software Applications

Pknight ARS2048B provides a software that can only be used on Windows. With this software, he can greatly expand the functionality of the device. Use Google Lens to scan the QR code below and get the app.



2. Customer Support:

Pknight Products, LLC provides toll-free customer support to assist with setup and answer any questions that may arise during your initial use of our products. We value your feedback and invite you to visit us at www.pknightpro.com to share comments or suggestions.

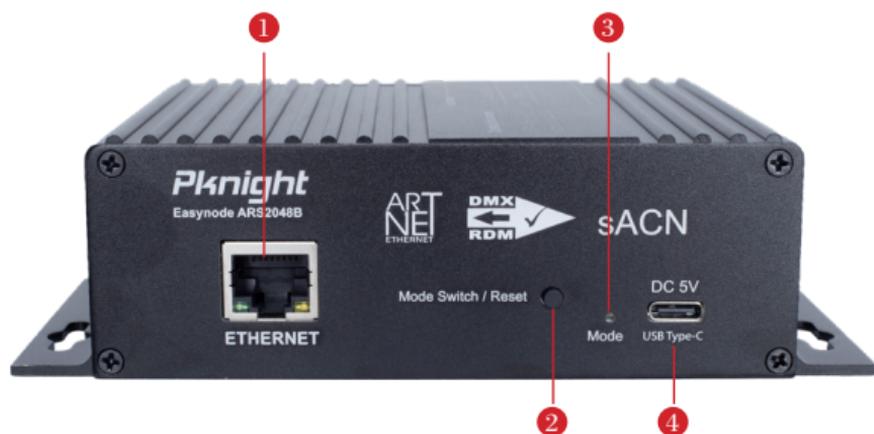
If you have any inquiries or require further assistance, please do not hesitate to contact us via email at **info@pknightpro.com**. Our team is committed to responding within 24 hours and ensuring that you receive the help you need.

Thank you for choosing Pknight Products. We are dedicated to providing exceptional service and enhancing your user experience.

3. Technical Specs

Power input:	5Vdc / 500ma
supported signals or protocols:	RDM / DMX512 ArtNet4 / sACN
DMX channels:	4 universe / 2048 channels
DMX connection:	3-pin XLR female
Operating modes:	DmxOut & RDM Mode DmxOut Mode DmxIn Mode
Network Speed:	100M
Working temperature:	-30 °C ~65 °C
Product Dimension :	L146×W100×H40mm L5.75×W3.94×H1.57inch
Package size:	L153×W72×H60mm L6.02×W2.83×H2.36inch
Weight (G.W):	360g 12.7oz

4. Front Panel



① RJ45 Port

② Mode Switch / Reset

- Short press this button, and the controller will change the operating mode.
- Restore factory setting:turn off the power, then press and hold the "RESET" button, turn on the power, and wait for 3 seconds the box will restore the factory setting.

③ Mode Indicator

-Blue:

- Blnks fast: operating in DmxOut&RDM mode and detected network signal input.

-Green:

- Blnks fast: operating in DmxOut mode and detected network signal input.

-Red:

- Blnks fast: operating in DmxIn mode and detected dmx signal input.

④ Type-c power Port

5. Rear Panel



⑤ 4 * XLR Female Ports

6. Modes

6.1 DmxOut & RDM Mode

Indicator light color: Blue

In DmxOut & RDM mode, the Easynode ARS2048B not only converts network signals (Artnet or sACN) into DMX signals, but also sends RDM signals to fixtures or systems that support RDM functionality.

6.2 DmxOut Mode

Indicator light color: Green

In DmxOut mode, the Easynode ARS2048B only converts network signals into DMX signals and does not send RDM signals. This helps to avoid potential interference caused by fixtures or systems that do not support RDM functionality receiving RDM signals.

6.3 DmxIn Mode

Indicator light color: Red

In DmxIn mode, the Easynode ARS2048B converts DMX signals into Artnet signals. Graphic software on a computer (such as WYSIWYG, Capture, etc.) can receive Artnet signals and output simulated lighting effects.

7. Default Network Configuration

IP Address: 2.0.0.10

Subnet Mask:255.0.0.0

8. Web Configuration

The default IP address of the Easynode ARS2048B is 2.0.0.10, and the subnet mask is 255.0.0.0. To configure the network settings of the Easynode ARS2048B, you can use a web browser and enter the device's IP address in the same local area network (LAN).

Once you have entered the correct IP address, you should see a configuration page similar to the one shown below:

ArtNet & sACN & DMX & RDM

Firmware: 1.0

MAC Address: FC:0F:E7:32:43:56

DHCP: Enable

IP Address: 2.0.0.10

Subnet Mask: 255.0.0.0

Gateway Address: 2.0.0.1

DMX Frame Rate: 30Hz

DMX A Universe: 0

DMX B Universe: 1

DMX C Universe: 2

DMX D Universe: 3

Save&Reboot

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- DHCP can be enabled in the network settings.
- When DHCP is not enabled, you can manually customize the IP address, subnet mask, and gateway address. This is usually used for devices that require a fixed IP address.
- The available DMX refresh rate options are specifically 25Hz, 30Hz, and 35Hz.
- The 4 DMX interfaces can be customized with their own universe values.

9. Application guide

9.1 Network Configure

The screenshot displays the 'EasyNode ARS2048B configurator' window. At the top, there are buttons for 'Find Node', 'Discovery(RDM)', and 'Clean'. Below these, the 'Connect IP' field is set to '012.0.0.10', and the 'Device MAC' is '00000 00001 00002 00004'. A 'Language' dropdown menu is set to 'English'. The main configuration area includes fields for 'Device MAC' (No. 1-F-C-0F-E7-32-43-56), 'IP Type' (Static IP address), 'IP Address' (2.0.0.10), 'Mask' (255.0.0.0), and 'Gateway' (2.0.0.1). Below these fields are 'Read IP' and 'Write IP' buttons. A terminal window at the bottom shows the following output:

```
->IP 2.255.255.255 At-Net Poll Length:18
<-IP 2.0.0.10 OpPollReply PKNIGHTARS2048B 00000 00001 00002 00003
MAC:FC:0F:E7:32:43:56
->IP 2.0.0.10 OpPollReply PKNIGHTARS2048B 00000 00001 00002 00003
MAC:FC:0F:E7:32:43:56
012.0.0.10PKNIGHTARS2048B 00000 00001 00002 00003
->IP 2.0.0.10 At-Net OpPoll Length:34
MAC:FC:0F:E7:32:43:56
->IP 2.0.0.10 OpPollReply:
->IP 2.255.255.255 At-Net Poll Length:18
<-IP 2.0.0.10 OpPollReply PKNIGHTARS2048B 00000 00001 00002 00003
MAC:FC:0F:E7:32:43:56
Search for device Discover...
<-IP 2.0.0.10 Universe: 0 OpTrodData: 0
Search for device Discover...
<-IP 2.0.0.10 Universe: 0 OpTrodData: 0
```

9.2 RDM Configure

Find Node
Discovery(RDM)
Clean

Connected IP: 192.255.255.255

Art-Net
RDM
DMX
VIEW

Port: A

Device Name:

Device MODEL:

Manufacturer:

Category:

DMX Footprint:

Personality:

DMX Address:

Read

Write

```

->IP:2.255.255.255
->GETE120_Personality_DESCRIPTION
->No.1:0x515275647112 Un:0

```

9.3 DMX Console

Esynode ARS2048B Configurator

Find Node Discovery(RDM) Clean

Connect If: 2, 255, 255, 255

012.0.0.10|PKMNGHT_ARS2048B 000000 00001 00002 0000

Art-Net RDM DMX VIEW

Language: English

Fade(ms): 1000

Hold(ms): 1000

Scene	Fade	Hold
No.1	1000	100
No.2	100	500
No.3	500	500

Universe: 0 Clean Uf Add Delete Run

```

->IP:2,255,255,255
->GETE120. Personality_DESCRIPTION
->No.1:0x515275647112 Uln:0
->IP:2,255,255,255
->GETE120. Personality_DESCRIPTION
->No.1:0x515275647112 Uln:0
->IP:2,255,255,255
->GETE120. Personality_DESCRIPTION
->IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0090
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0082
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0081
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0080
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1
<IP2:0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1

```

9.4 DMX Live Viewer and recorder

EasyMode ARS2048B Configurator
Find Node
Discovery(RDM)
Clean

Connect IP: 2.255.255.255
012.0.0.10|PKNIGHT_ARS2048B 000000 00001 00002 0000

Art-Net
RDM
DMX
VIEW

REC
Play

Universe:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0
193	0	0	0	0	0	0	0	0	0	0	0	0	0	0
209	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```

->IP:2.255.255.255
->GETE120_Personality_DESCRIPTION
->No.1:0x515275647112 Uni:0
->IP:2.255.255.255
->GETE120_Personality_DESCRIPTION
->No.1:0x515275647112 Uni:0
->IP:2.255.255.255
->GETE120_Personality_DESCRIPTION
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0080
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0082
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0081
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x0080
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1
->IP2.0.0.10 RDM_GET_COMMAND_RESPONSE PID:0x00E1
    
```

language: 中/English

9.5 Tutorial for using the application



10. Troubleshooting

• Enable DHCP ?

Yes, the Easynode ARS2048B supports DHCP. However, in order to use this feature, you will need to first configure it on the web page, as the product is set to use a static IP address by default.

• How to use web page configuration ?

We recommend connecting the product to your computer directly with an Ethernet cable. You can set your computer's IP address to 2.0.0.11 and subnet mask to 255.0.0.0. This is because the product's default static IP address is 2.0.0.10 and subnet mask is also 255.0.0.0, which puts your computer and the product on the same network segment. Then, enter the product's IP address in the web browser, and you will be able to see clearly where to set up DHCP options.

- where to download the application ?

We recommend scanning the QR code on page 4 of the user manual or visiting <https://qrco.de/Apps-for-Easynode-ARS2048B> to download the app.

- why I can not find the node in app

If you have confirmed that your computer and Easynode ARS2048B are located on the same local area network (LAN), but still cannot find the node in the app, it may be necessary to select the appropriate network interface in the "Network" options. This will enable the app to establish proper communication with the device and successfully locate the node.

- Why can't I find the connected RDM-enabled fixtures?

If the fixtures are properly connected but cannot be found, it is highly likely that the RDM functionality of the device has not been activated. It is important to note that RDM functionality can only be used in DmxOut & RDM mode, so make sure that the mode indicator light is blue.

- What is the difference between DmxOut & RDM and DmxOut mode?

If you only need to output DMX signals, we suggest using the DmxOut mode. If you use the DmxOut & RDM mode, it will output both DMX and RDM signals simultaneously. However, if your lighting fixtures do not support RDM functionality, they may experience interference from receiving RDM signals.

- How to restore factory setting?

1. Turn off the power
2. Press and hold the "RESET" button
3. Turn on the power, and wait for 3 seconds
4. the box will restore the factory setting