ZENOPIX
smart solutions

Your Solution Partner in Lighting Control

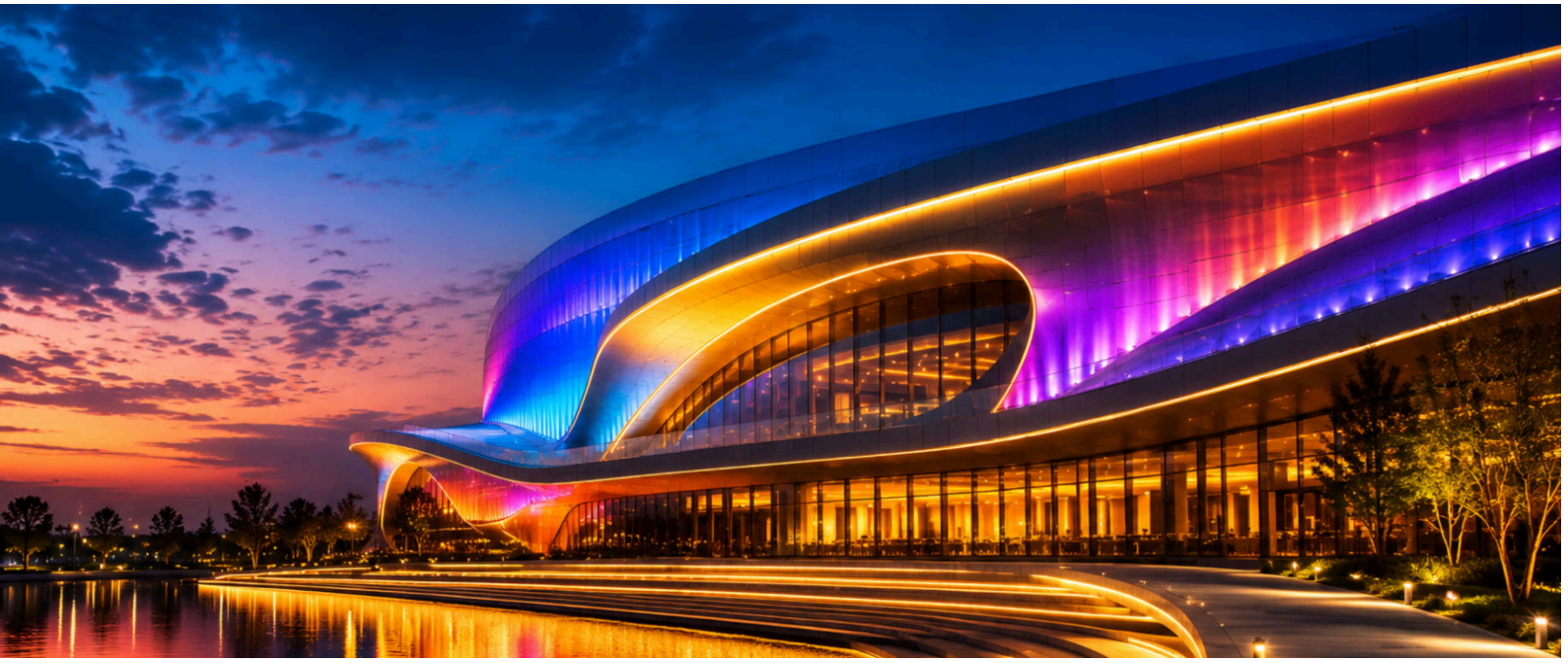
SOLUS

ART-NET MASTER CONTROLLER

USER MANUAL



zenopix.com



Thank you for choosing Zenopix SOLUS.

Please read this user manual before using the product. The user manual is available on our website. If you experience any technical problem, you can contact our company using the information below and receive technical support.

Company Information and Contact Address

ZENOPIX LIMITED COMPANY

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Safe Use

Use the device only in dry environments (indoors). The IP rating of the device is IP20. Do not use the device in humid environments and avoid contact with water or other liquids. Switch off the power if you will not use the device for a long time. The use of galvanic isolation is always recommended. Do not remove any part from the unit or connect it to an ungrounded circuit. Do not connect the unit to LEDs that are switched on. Connect the unit only to LEDs and controllers that are initially switched off. There are no user-serviceable parts inside or outside the interface. Repair service is the sole responsibility of the manufacturer. If the interface appears to be defective, please contact your dealer. After the warranty period has expired, you can contact your supplier or the manufacturer about having the unit repaired, if possible, for a service fee. This device must be used by professionals. The device is not designed to be operated by non-professionals or children.

Warranty Information

Zenopix SOLUS comes with a standard 2-year manufacturer's warranty, with an optional 3-year extension for a total of 5 years. Detailed information is available in the product warranty certificate or on our website.

Box Contents

1× Zenopix SOLUS

1× Power Adapter

1× SD card (Installed)

1× GPS Module (only for the built-in GPS module version)

1× Technical Document and Introduction Guide

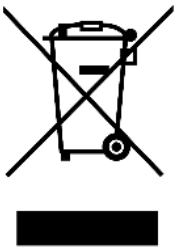
1× Warranty Certificate

1× Device Test Report

NOTE: After opening the package, check the contents of the package and the condition of the interface! If anything is missing or damaged, contact your supplier. Do not use the device if it appears damaged!

Information on Human and Environmental Health

If the information in the User Manual is fully followed, this device poses no risk to human health or the environment. The device must not be disposed of with household waste; it must be delivered to an electrical and electronic equipment recycling center. It must be recycled or disposed of without harming nature or human health.



Introduction

Zenopix Solus is a standalone Art-Net Master controller designed to provide reliable and smooth control of Art-Net DMX lighting systems without requiring a computer during operation. By storing and playing lighting animations directly from the device, Solus delivers fluid and highly precise synchronization for architectural, entertainment and stage lighting applications.

With two models supporting 64 and 128 Art-Net universes, Solus offers stable performance, simplified installation and reliable playback, making it an ideal solution for both permanent installations and professional lighting projects.

- Controls Art-Net devices on site in standalone mode, without a computer.
- Provides control of up to 64 or 128 universes in total and up to 1024 channels per universe (Solus64 and Solus128 models).
- Device configuration and animation upload can be done over an Ethernet connection.
- Thanks to its large memory, as many animations as needed can be played.
- Provides real-time animation scheduling with the calendar feature.
- Enables easy control from different locations with external remote connection devices. For example, you can manage independent Zenopix ELEA devices in each building or external Art-Net controller devices.

- On-site troubleshooting tools and a simplified commissioning process help speed up deployment.

Safety Instructions

To prevent misuse of the device, damage or personal injury, please follow the instructions below:

⚠️	This device operates at low voltage (12-24VDC). Do not use lower or higher voltages.
⚠️	External USB Power Supplies: Using unapproved units may pose a risk. Please do not use the USB port on the device to supply power to external devices.
⚠️	Any external power supply to be connected to the device must be fused according to its output power and/or protected against short circuits.
⚠️	It is the user's responsibility to protect the device against lightning, electric shock and high-voltage surges. Make sure that all necessary electrical surge protection measures have been taken at the installation site.

Technical Specifications

CPU	H3 Quad-core Cortex-A7 H.265/HEVC 1080P
Memory (SDRAM)	256MB DDR3 SDRAM
GPU	Mali400MP2 GPU @600MHz
Input Voltage Range	12-24VDC (Adapter or Terminal)
Power Consumption	<10 W (during normal operation)
Network Protocol	Art-Net (UDP)
Number of Art-Net Universes	64 and 128 Universes (Solus64 and Solus128)
Ethernet	1x RJ45, 10/100Mbit/s
Software Update	Via the internet through the interface.
LED Indicators	2 (power and status)
Enclosure	DIN rail-mount plastic enclosure
Dimensions (Rail Type)	105.14 x 103.12 x 57.04 mm (W x D x H)
Weight	160g
Operating Temperature	0°C ~ 60°C
Operating Humidity	20 ~ 70% RH, Non-Condensing
Storage Temperature and Humidity	-10°C ~ 70°C, 0 ~ 70% RH, Non-Condensing
Protection	IP20
Certificates	CE, RoHS

Status LED Codes

Power LED: This LED stays on continuously when power is connected to the device.

Status LED: Blinks green during normal operation. If an error occurs, it lights yellow, blue or red.

Resetting to Factory Default Settings

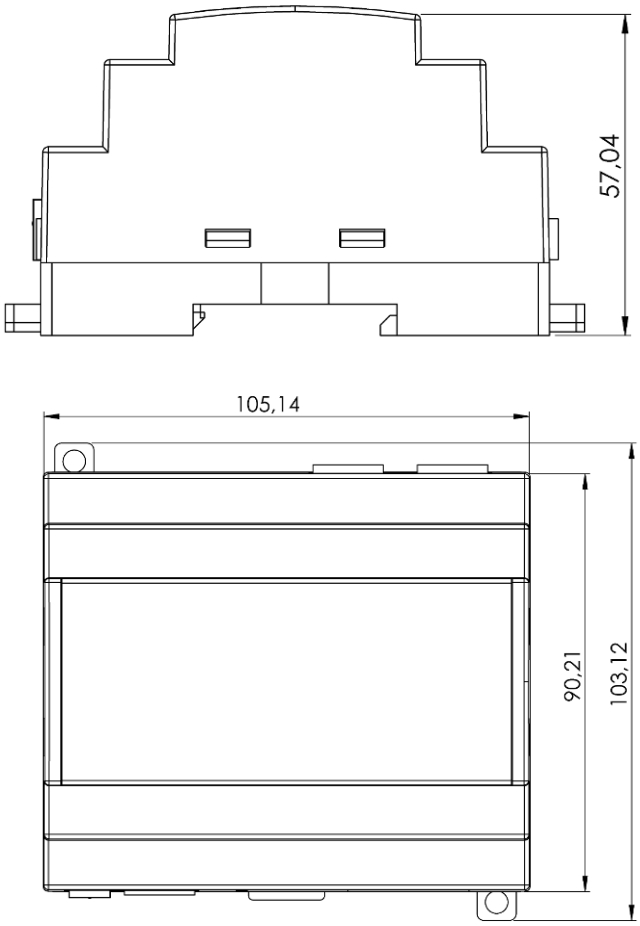
- Find a suitable tool to press the reset button located on the front of the device.
- Press and hold the reset button for 10 seconds.
- Release the button after all status LEDs on the front of the device have blinked.
- If the process fails, repeat the steps.

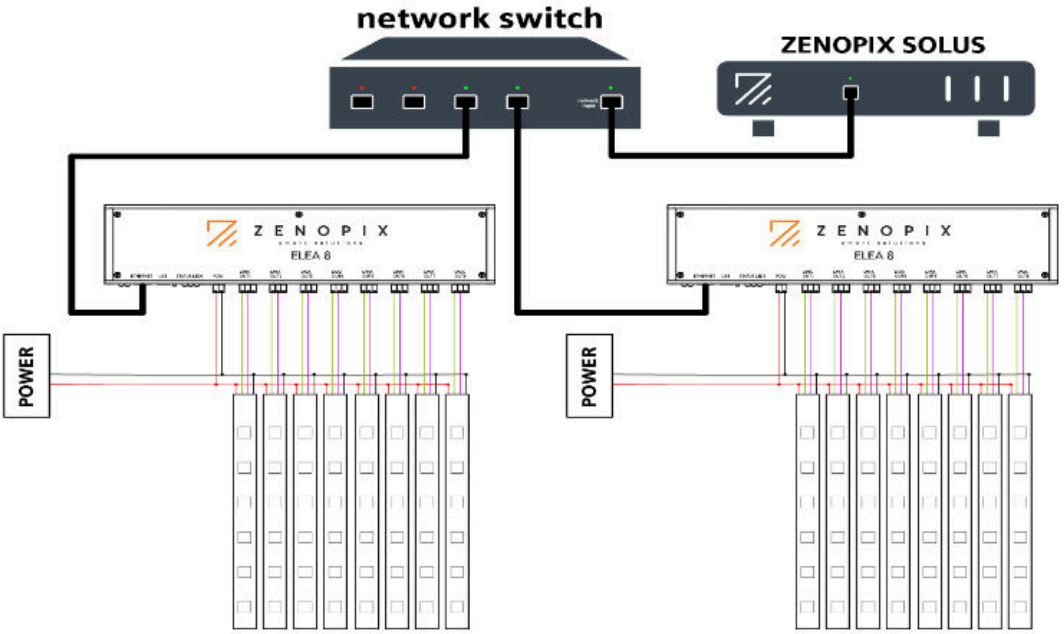
IP Address and Device Information

- Device serial number
- Device Model
- Default IP address

You can find the above information on the device.

Device Dimensions




network switch
ZENOPIX SOLUS
ZENOPIX
ELEA 8
ZENOPIX
ELEA 8
POWER
POWER

Device Connections

Ethernet Connection

Connect the device with a standard RJ45 Ethernet cable to the same local network as the devices you will control.

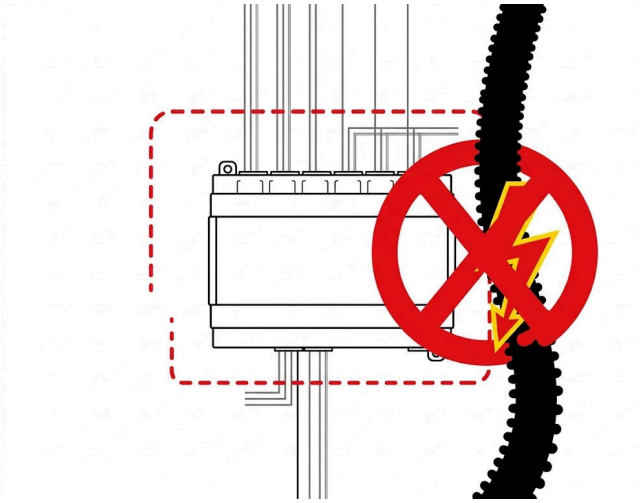
Device power:

The device can operate at 12-24VDC. The device has reverse-polarity protection, but make sure the polarity is correct during installation.

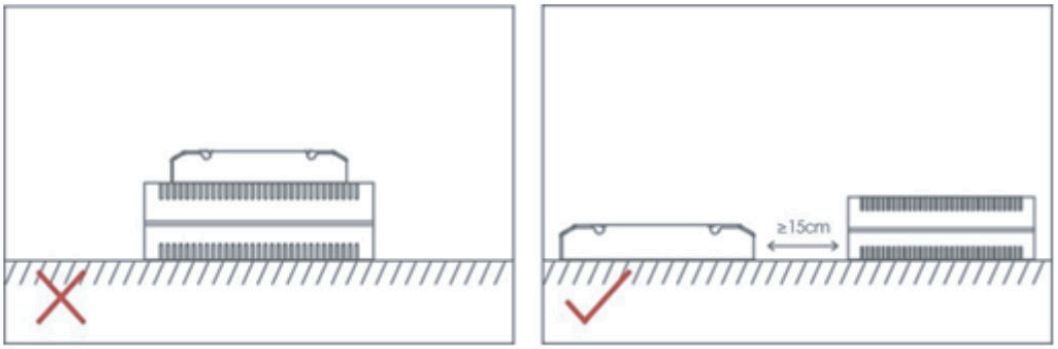
The device has two power inputs: a 2.1mm barrel jack and a 5.08mm terminal block. Do not power the device from both at the same time; one connection is sufficient. Use an adapter of at least 12W (for example, 24V >=0.5A).

Recommendation: For panel/rail applications, if you do not want to use the adapter supplied in the box, the following power supplies are recommended: MeanWell HDR-15-24, DRC-24V015W1RZ or Omron S8VK-G01524

Installation and Precautions



Isolation of the signal lines is critical for stable operation of the Zenopix Solus device. Routing high-current/high-voltage cables near the device body or cables may cause fluctuations in the output signals or permanent damage to the hardware. Isolate the device from high-current and high-voltage cables.



Please do not place the products on top of LED drivers. Leave **at least 15 cm** between the product and the driver to ensure proper heat dissipation and to prevent shortening the service life of the devices.

GPS Antenna (GPS version only)



Solus GPS allows Solus devices on different networks to operate synchronously. This way, different buildings with no network connection between them can be controlled with the same animation. Position the GPS antenna with a direct view of the sky. Do not place the GPS antenna indoors. Make sure there are no obstacles between it and the sky. Never cover the antenna with metal or any material that blocks the signal. Make sure the installation prevents water and moisture from reaching the device through the antenna cable.

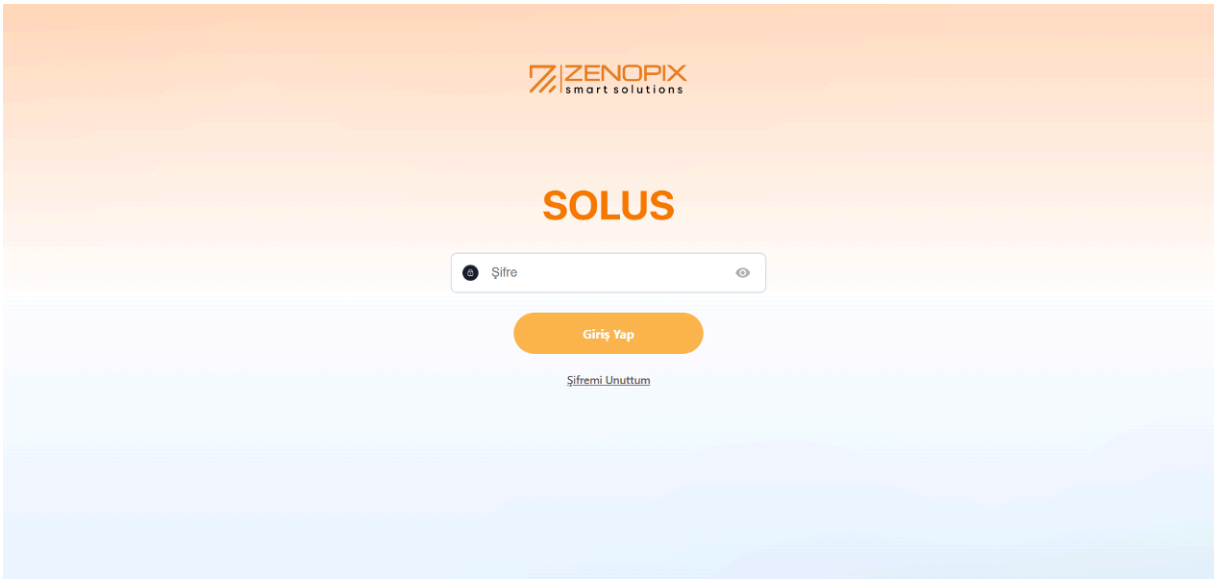
1.Configuration via Web Browser

When you connect Zenopix SOLUS via Ethernet, you can easily configure it using the built-in web configuration interface. For this, SOLUS and your computer must be on the same network.

Follow the steps below to configure the device:

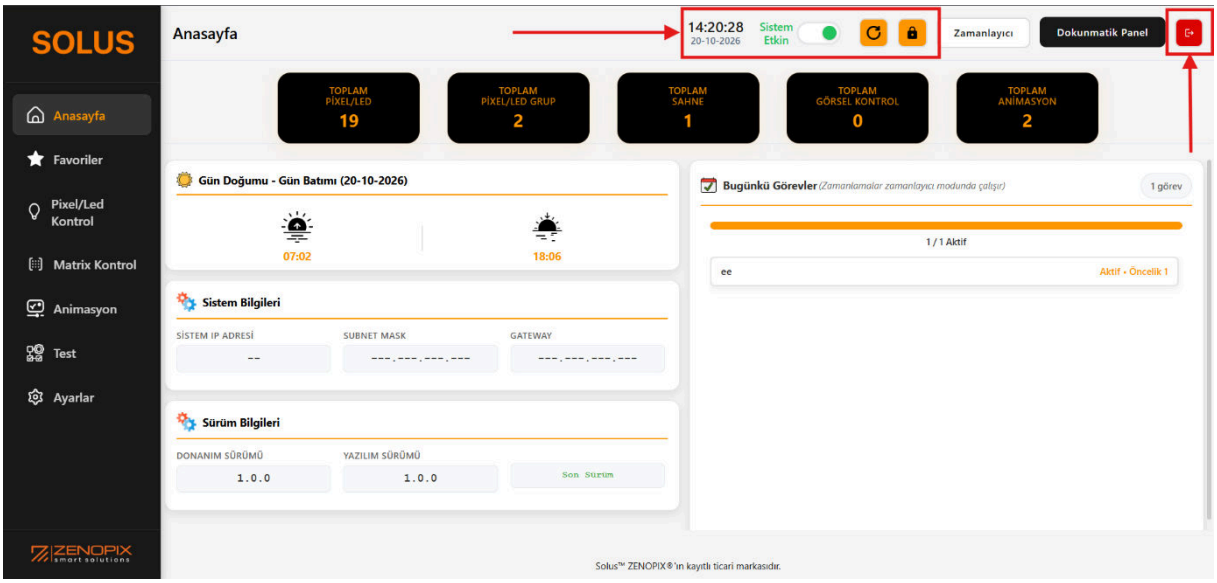
- Connect Zenopix SOLUS and your computer to the same network.
- Assign the correct network settings to the PC.

Set your computer's IP address to the 192.168.1.X block (e.g. IP: 192.168.1.20, Subnet Mask: 255.255.0.0). Open your web browser and go to **192.168.1.222**, the default IP address of Zenopix SOLUS.



Enter your password and click the login button (Default Password: **111111**).

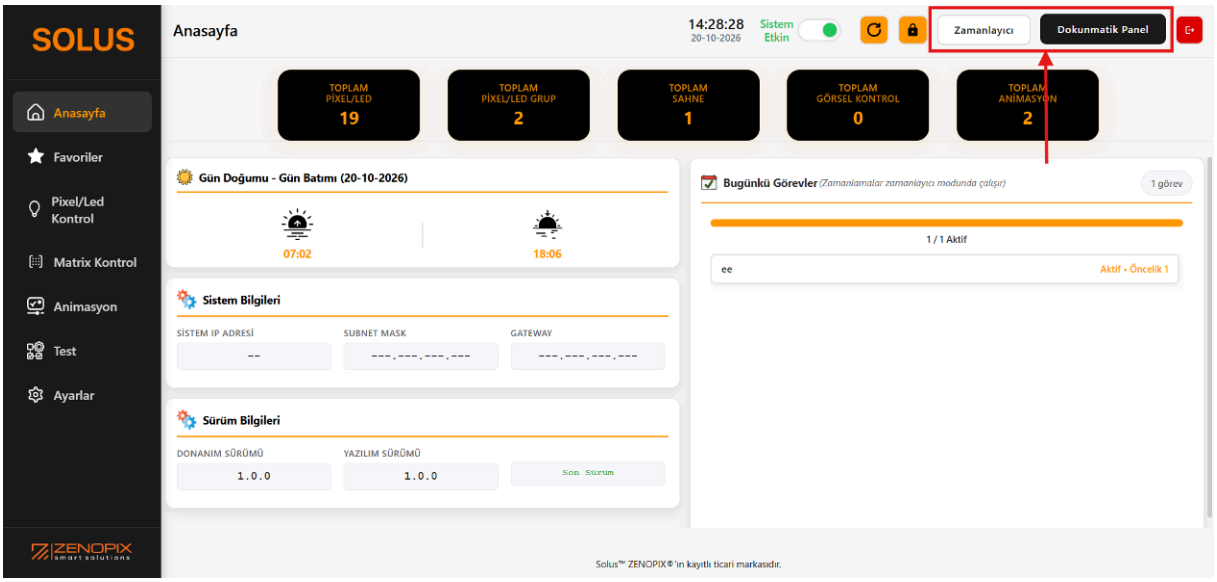
2.Home Page and Top Control Bar



The first screen that greets the user after logging in is the Home page.

The marked area at the top of the screen contains:

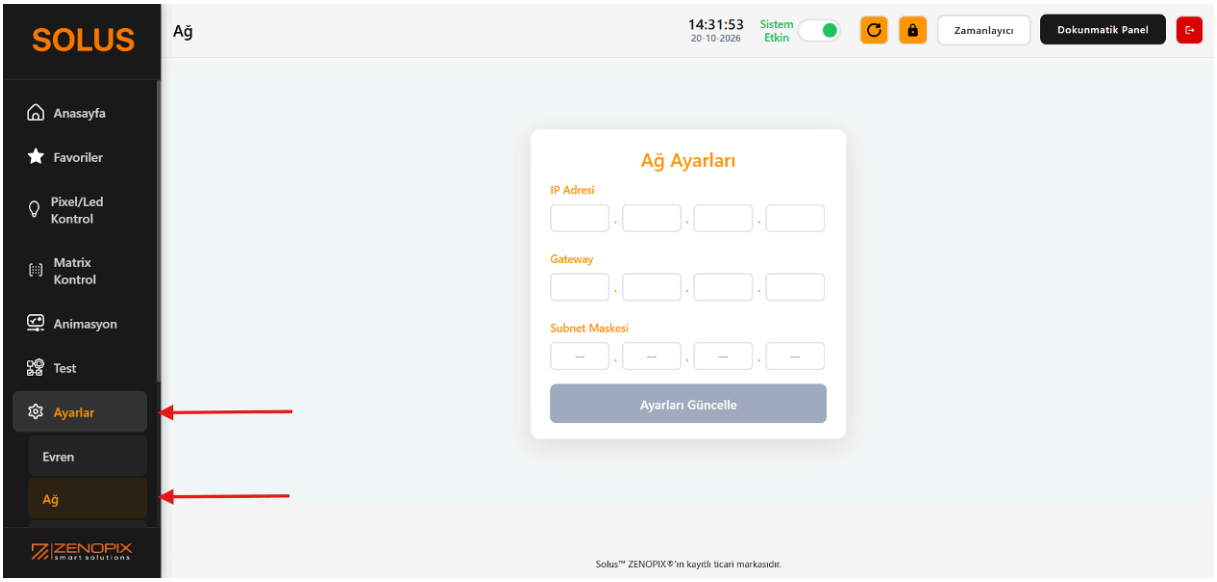
- The current date and time used for system synchronization, and the System Active/Inactive switch
- Screen refresh button
- Screen lock, which locks the panel to prevent unauthorized interventions and accidental touches when you leave the device
- Logout button, which safely ends the session and returns to the login screen.



The Timer and Touch Panel buttons in the top control bar determine the logic by which the SOLUS system manages lighting scenarios.

- Timer mode is the mode in which the system runs fully automatically. While this mode is active, the system automatically starts and stops scenes and animations according to pre-planned hourly, weekly or GPS-assisted sunrise and sunset rules, without any user intervention.
- Touch Panel mode, on the other hand, provides control by instant manual intervention instead of automatic rules. Use this mode during live events or whenever you need to change colors on the fly. From the interface, you can trigger a device, group or scene directly and adjust color and brightness in real time.

3.Configuring Network Settings



First, the network settings of the Solus device must be set according to the network used.

In the **Settings › Network menu**, check the device's IP address, gateway and subnet mask on the local network.

Configure Solus to use the same subnet as the devices it will control.

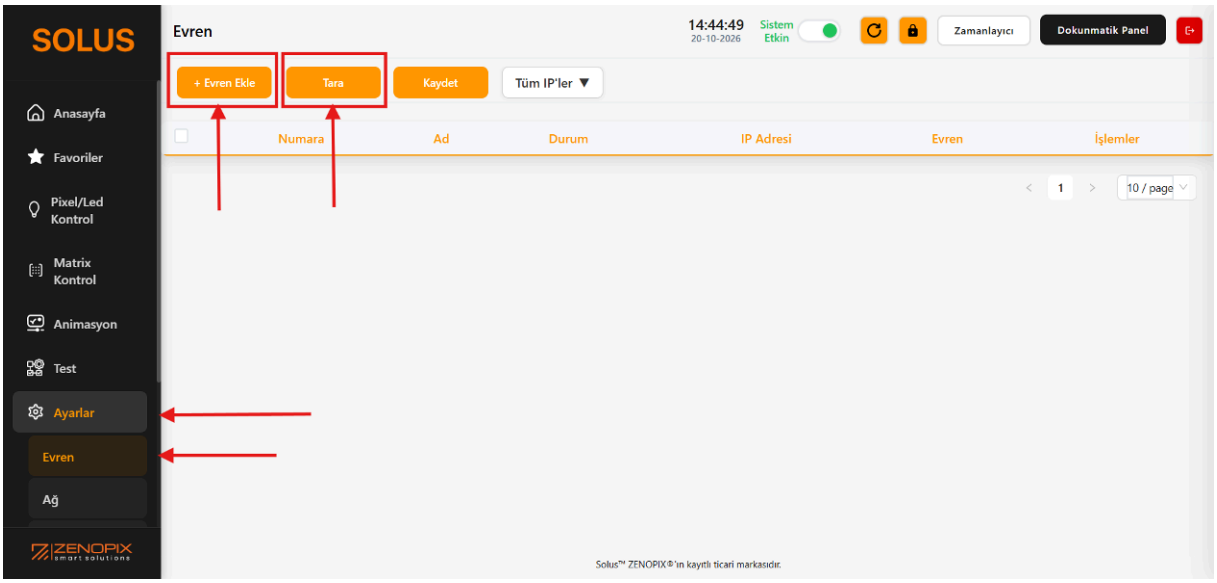
To view your computer's network settings, run **ipconfig** in a terminal.

```
Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::a344:6320:e5c3:3b46%17
   IPv4 Address. . . . . . . . . . . : 192.167.0.20
   Subnet Mask . . . . . . . . . . . : 255.255.254.0
   Default Gateway . . . . . . . . . : 192.167.0.1
```

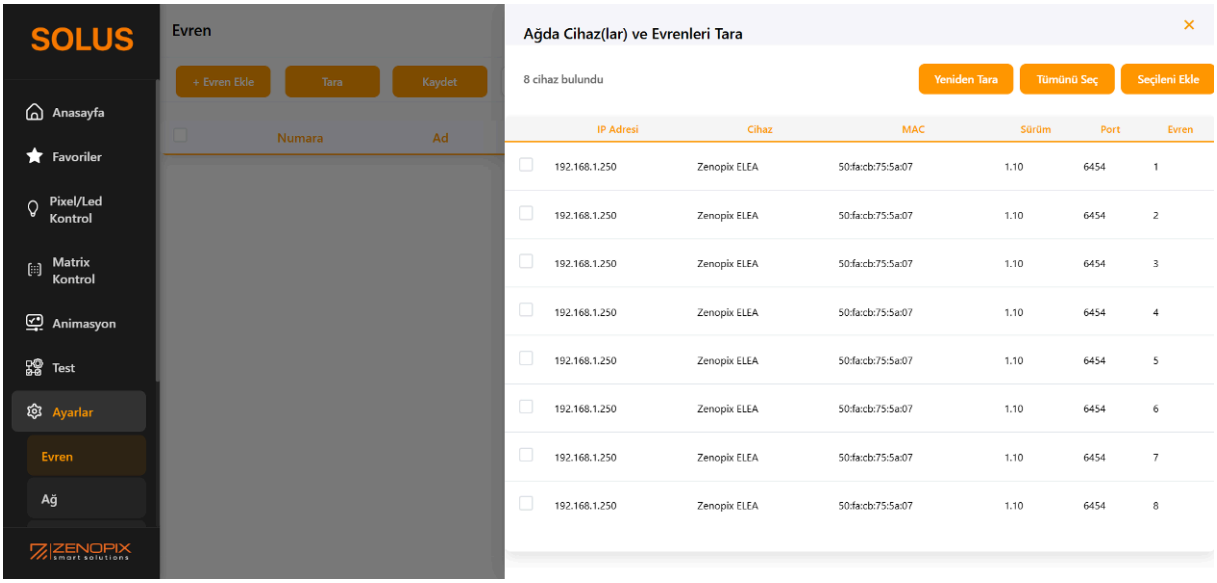
Solus cannot find or manage devices that are not on the same subnet.

4.Configuring Universe Settings

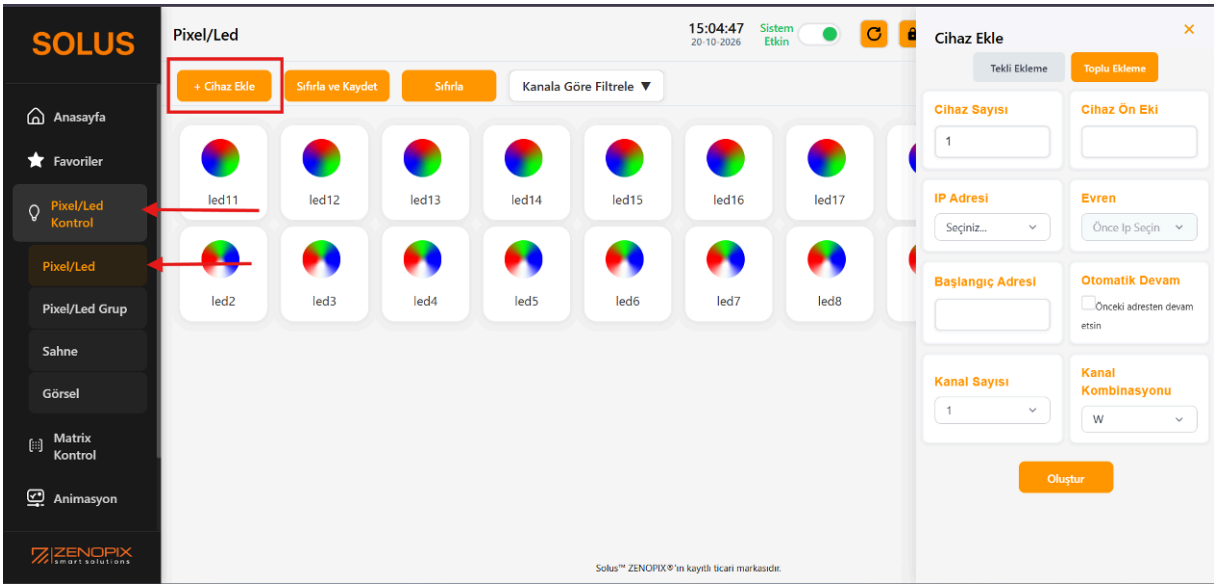


For SOLUS to control the Art-Net controllers in the field, the controllers must be added.

- You can add them manually with the Add Universe button.
- With the Scan button, you can automatically find and add Art-Net control devices that comply with the global standard.



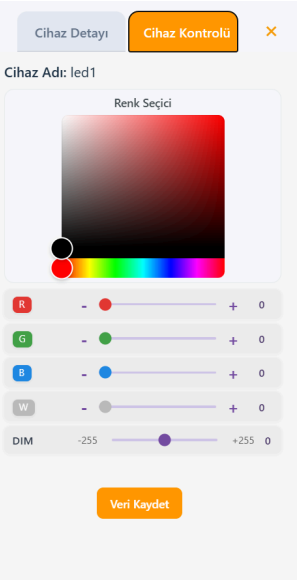
5.Pixel/LED Management and Control



This screen is used to define the pixels/LEDs on the lighting lines:

- **Add Device** button: Click to define single or multiple devices.

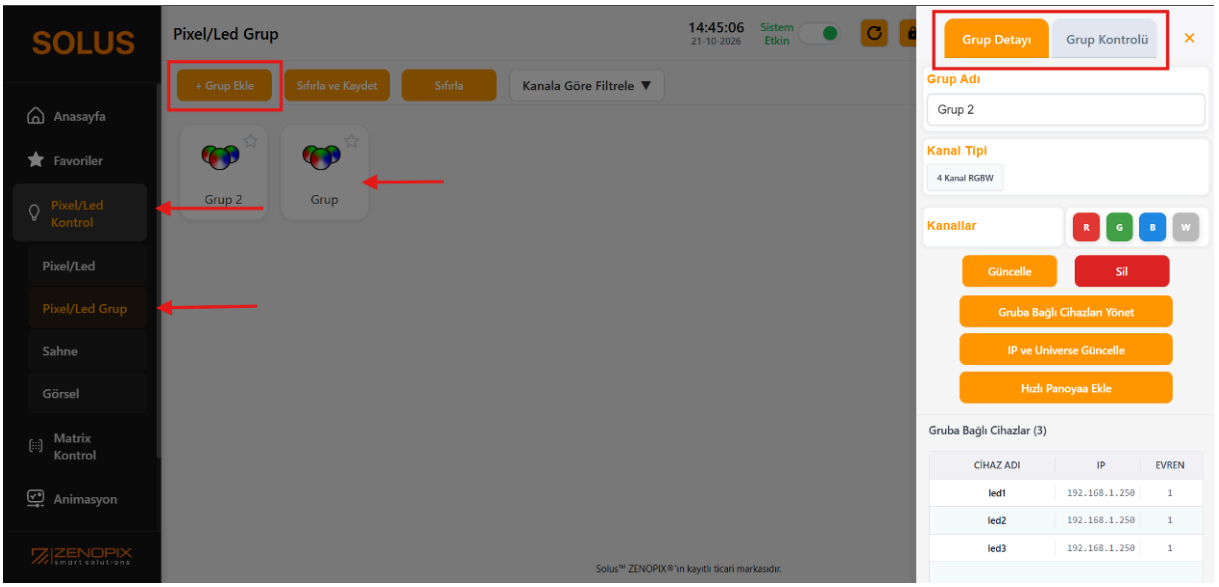




- **Device Details** tab: Device information can be updated here.

- **Device Control** tab: Light and color tests can be performed on the relevant fixtures.

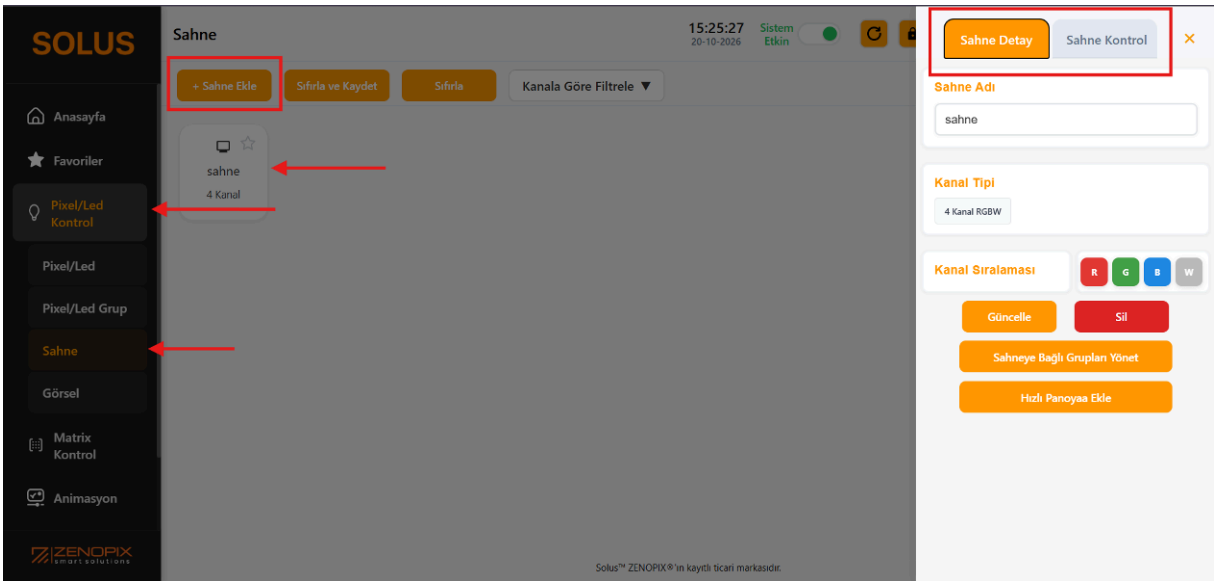
6.Pixel/LED Group Management



Used to bring different pixels together and manage them collectively:

- **Add Group** button: Creates a new group.
- Click a created group to manage the pixels/LEDs connected to it in the **Group Details** tab and add the group to favorites (with the star button) for quick access.
- **Group Control** tab: The color and brightness of all pixels/devices in the group can be changed collectively.

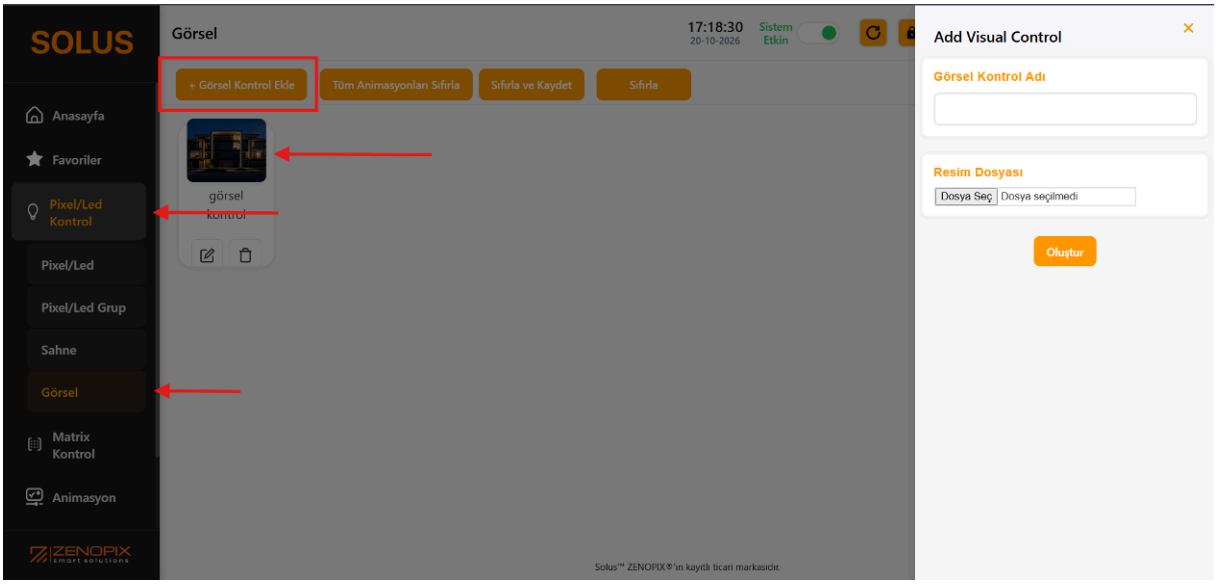
7.Scene Management and Control



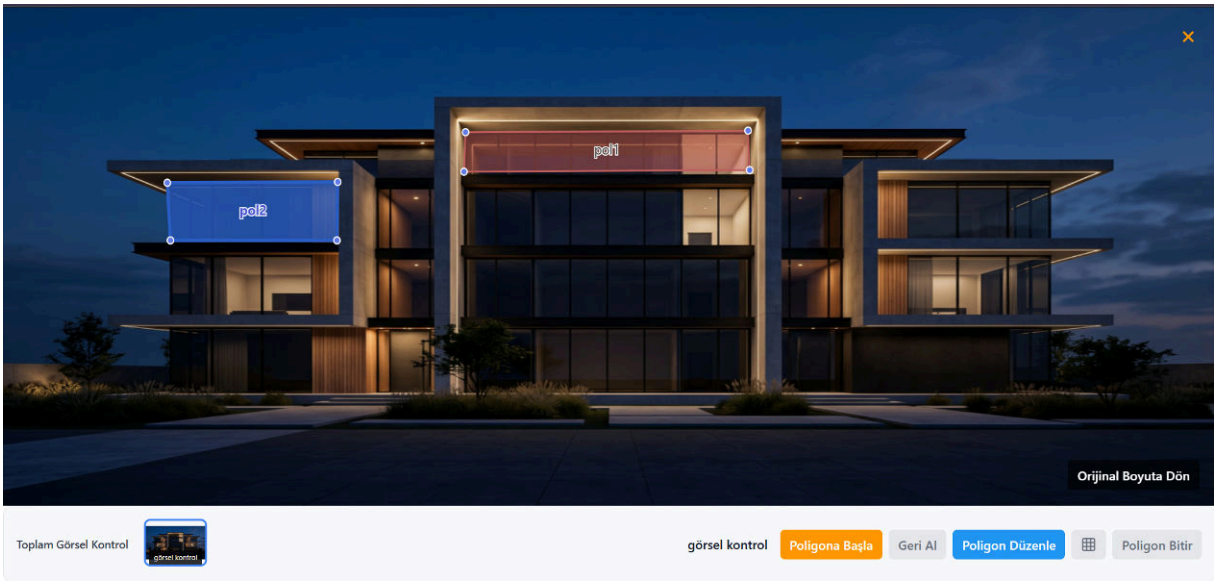
Scenes are created to combine multiple groups under a single scenario and control them at the same time:

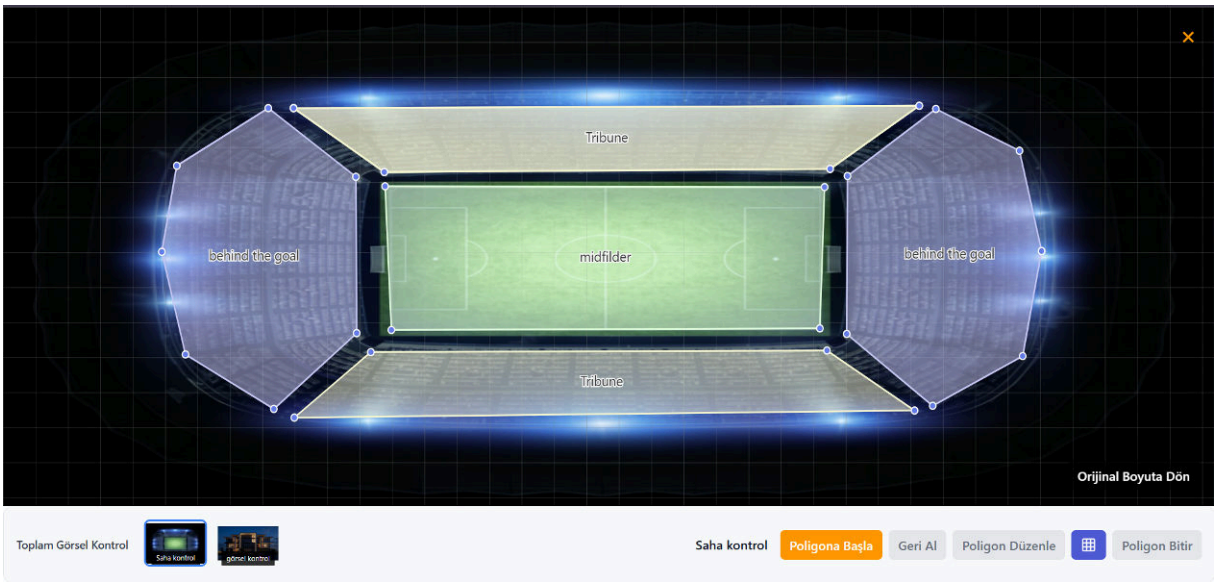
- **Add Scene** button: Creates a new scene.
- Click a scene; in the **Scene Details** tab, use the Manage Scene Groups button to select the groups to include in the scene. You can also add the scene to favorites.
- **Scene Control** tab: The color transitions and lighting scenarios of all groups assigned to the scene are controlled collectively.

8.Visual Control



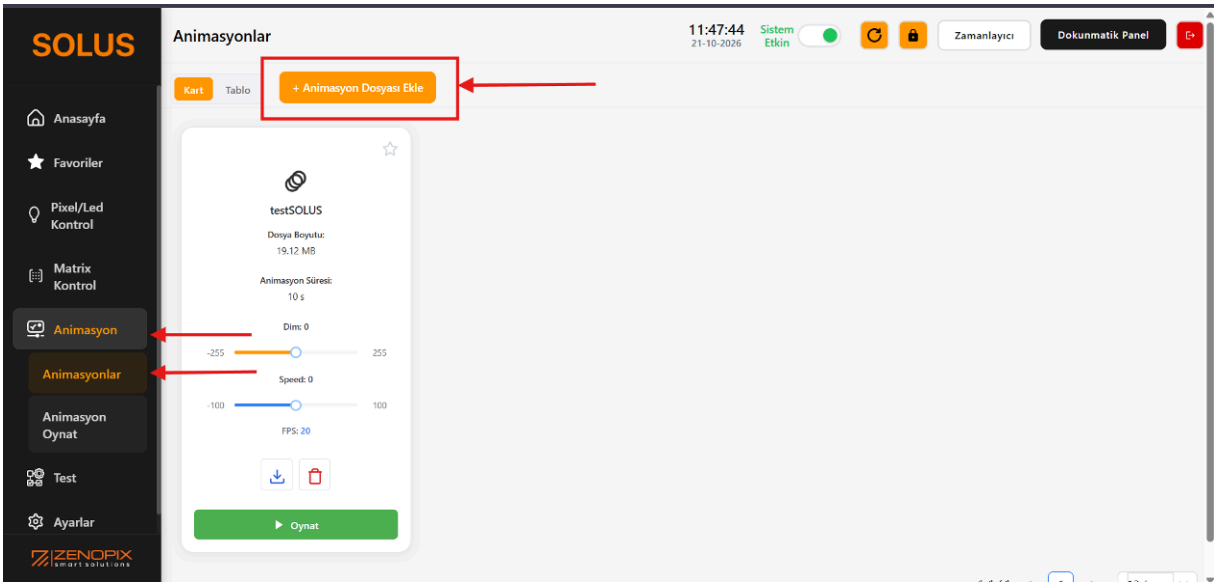
- **Add Image** button: Click to upload a layout plan/photo to the system and name it.
- Click the uploaded image to switch to the polygon drawing area.





- **Start Polygon** button: Click to outline the area to be lit on the image. Assign a scene to the polygon to control that area's color directly from the image.

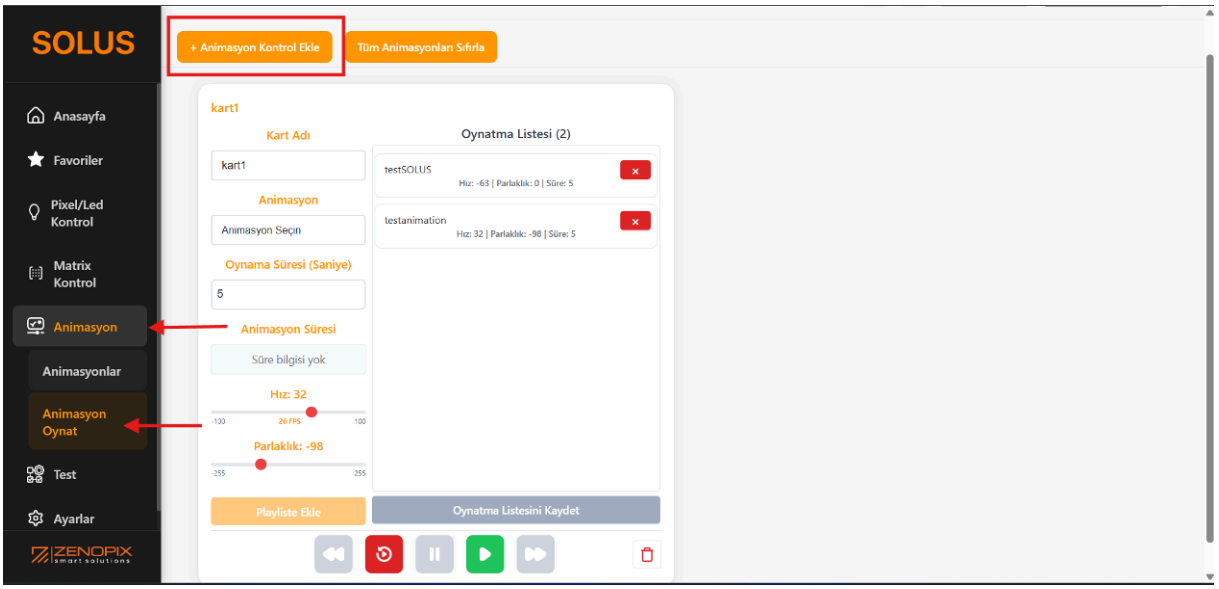
9.Uploading Animation Files and Playing Animations



This is the section where the animation files to be played in the system are uploaded and managed:

- **Add Animation File** button: Click to upload animation files recorded with Zenopix NEO.
- Uploaded animations can be played manually with speed and brightness settings.

10.Animation List Management

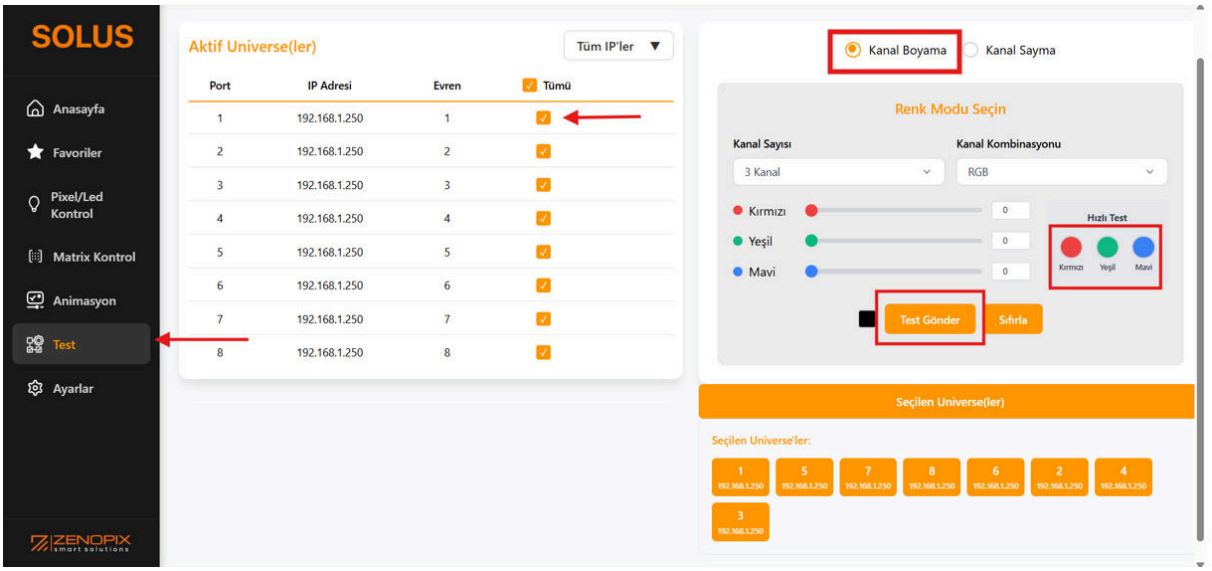


- **Play Animation** tab: You can create custom playlists by adding playlist cards with duration, speed and brightness settings.
- The created lists can be run in a loop.

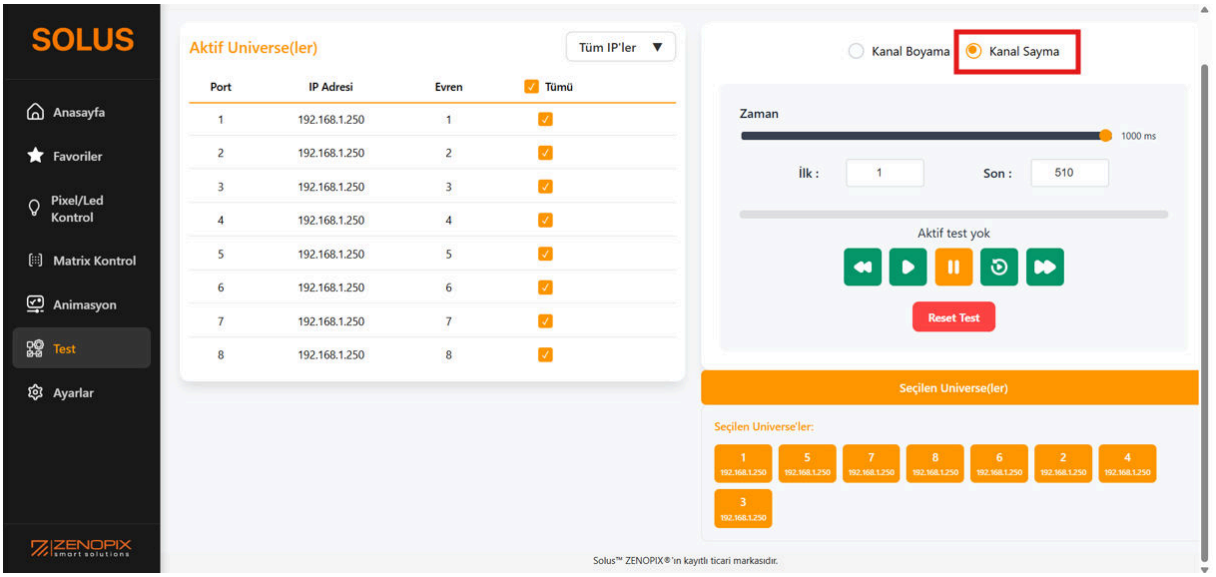
11.Test Operations / Channel Control

Use this screen for on-site testing. Select the universes you want to test:

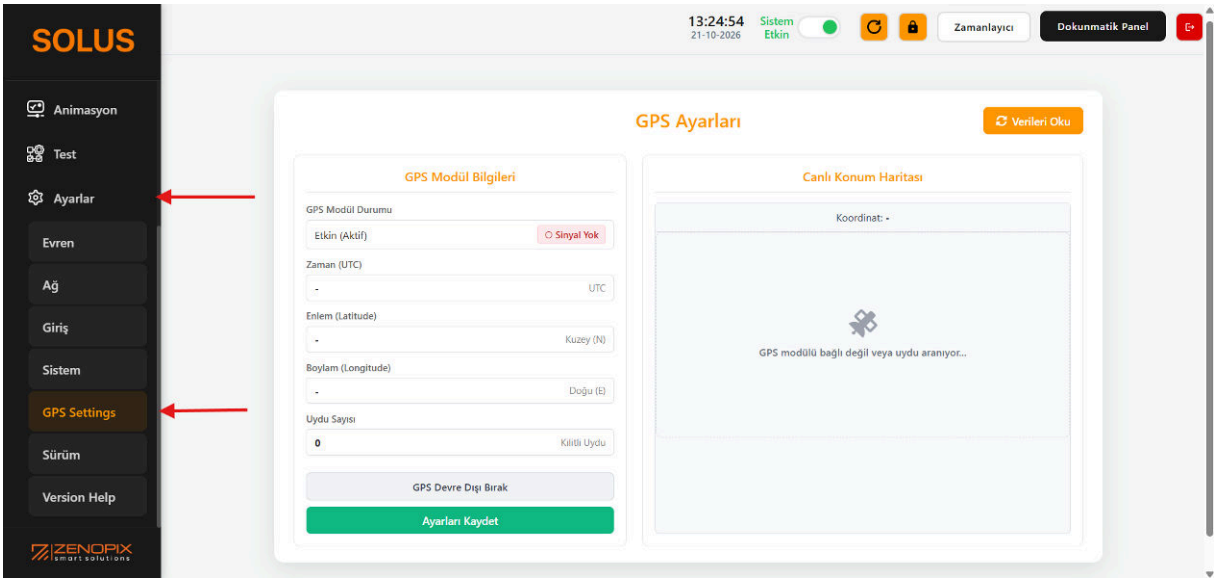
- **Channel Painting:** Choose a color from the quick palette or enter color values manually, then click **Send Test** to test the pixels/LEDs.



- **Channel Counting:** Channels are checked one by one between the set start and end channels, either automatically at the set speed or manually with the forward/back buttons.

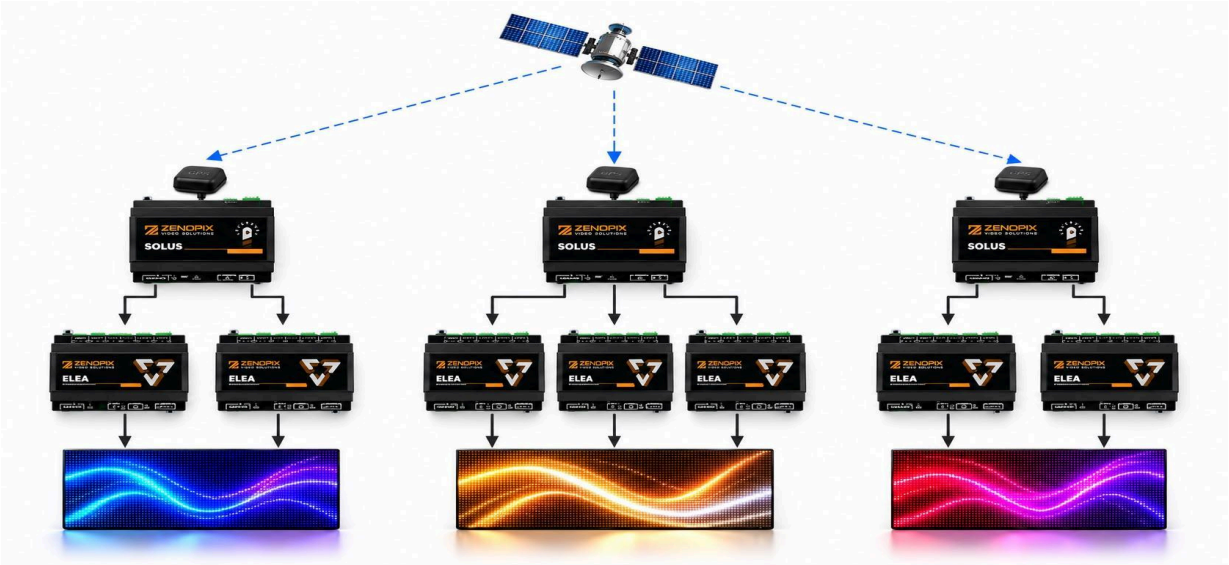


12.GPS Settings (GPS Version Only)

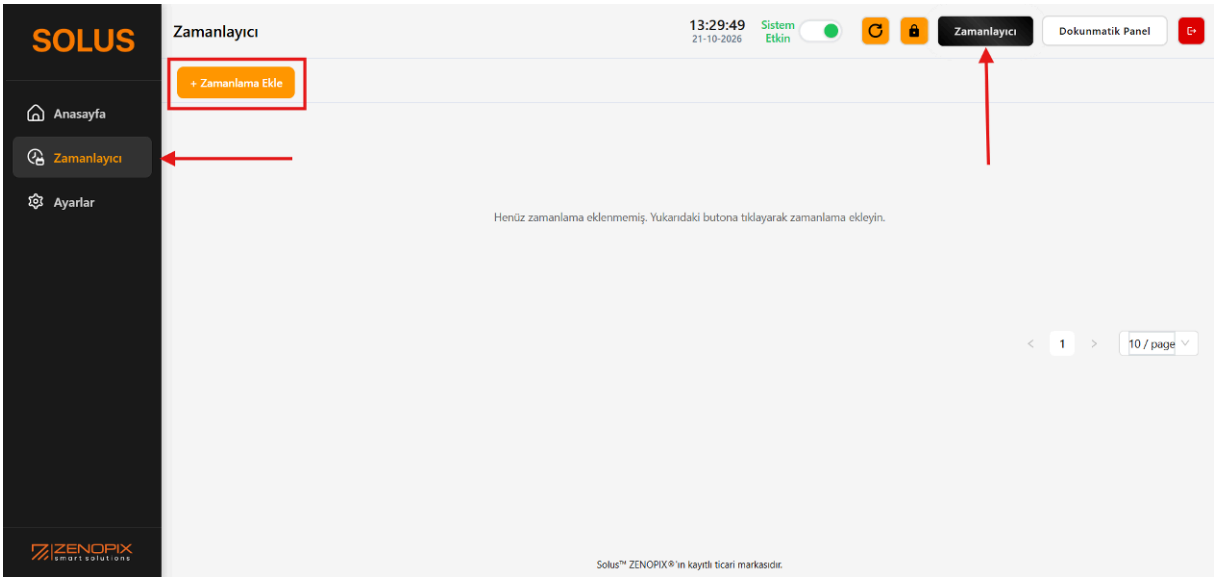


Enables the device to receive precise time and location data via satellite signals:

- Keeps the system clock up to date without needing an internet connection.
- Enables multiple control devices or animations to run in full synchronization with microsecond precision.
- Displays the geographic location of the device on a live map.
- With the GPS module, you can play animations in different independent buildings/stages.



13. Timer (Automatic Task Scheduling)

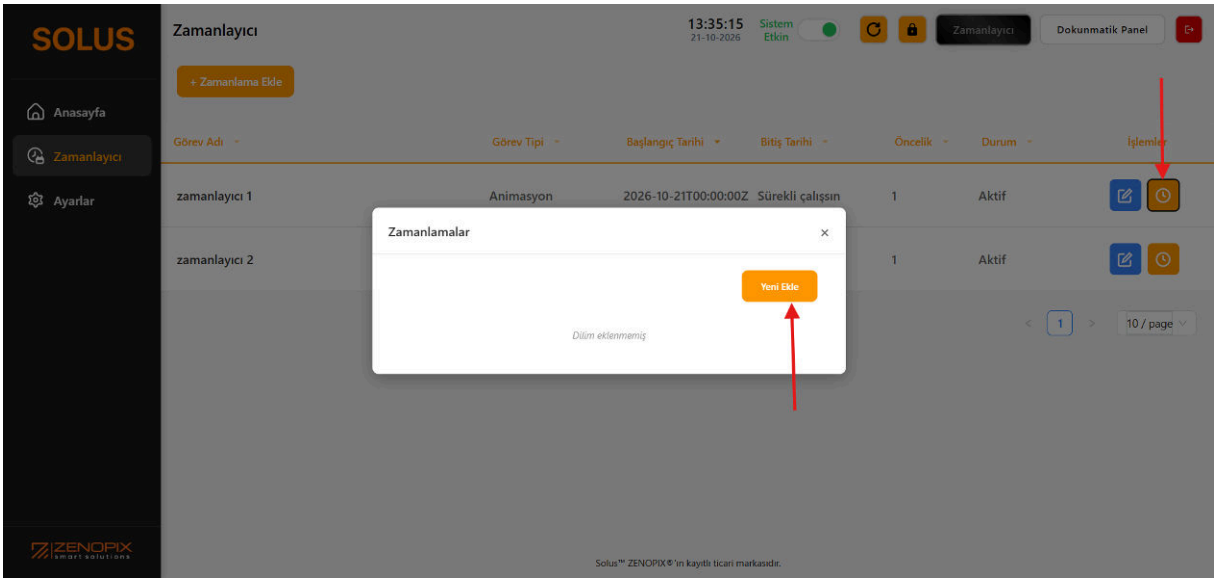


Enables lighting scenarios to run automatically according to the calendar and time:

- To create a new schedule, click the **+ Add Schedule** button at the top left.
- In the form that opens, enter the task name and type, set a date range or leave the schedule open-ended, and specify the priority and excluded days.

- For automatic animation playback, select Animation as the task type. To send a fixed color to your LEDs or pixels, choose group, scene, matrix or matrix group.

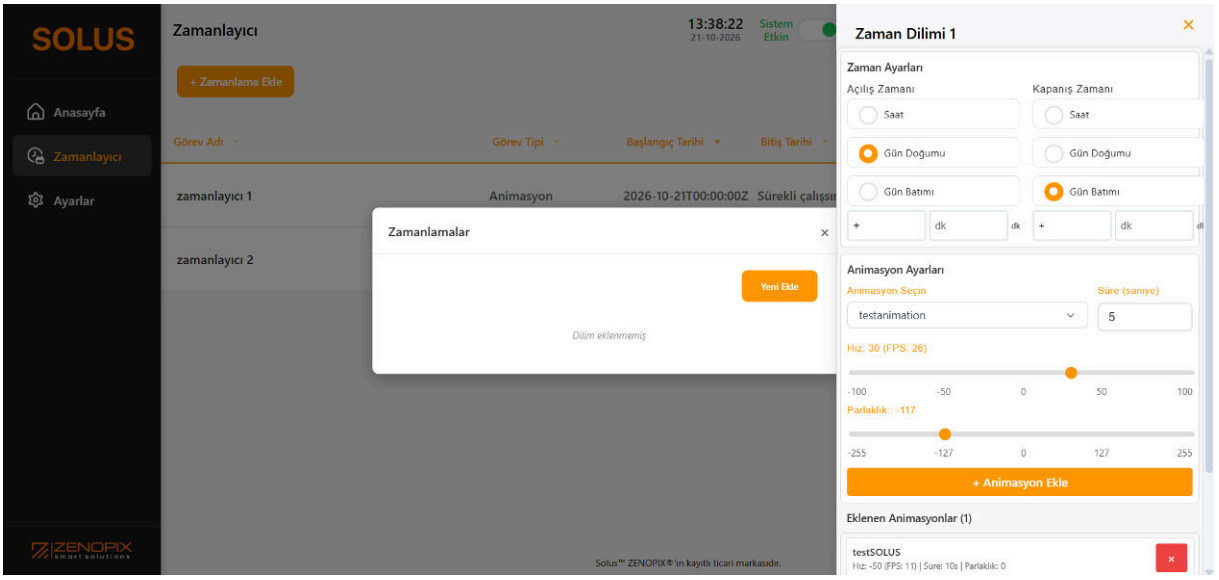
13.1. Assigning Tasks and Time Slots



Click the **clock icon** next to the relevant timer in the list, then click **Add New**.

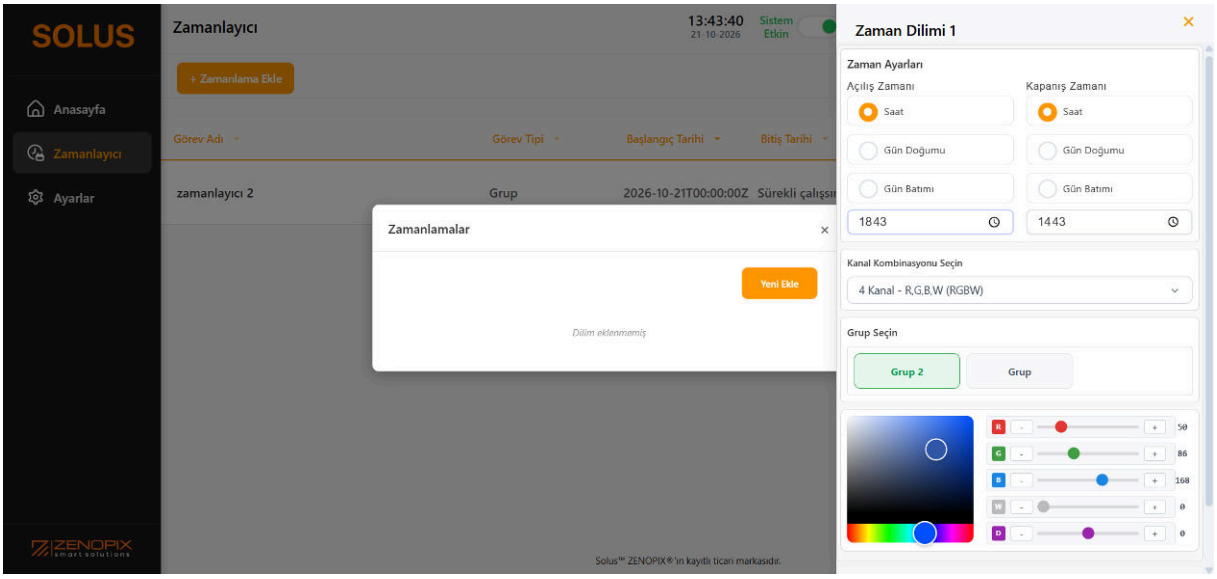
Set the start and end times during which the task will be active.

Animation Type Schedule:



If the timer type is set to animation, add the animations that will run in this time slot to the list, set the duration, speed and brightness, and save.

Fixed Color Schedule:



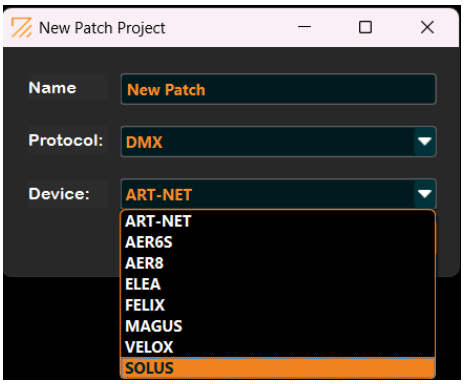
If the timer type is set to fixed color, select the relevant groups or scenes and set their color and brightness for the specified time slot.

Recording Animations for Solus with Zenopix NEO

Zenopix NEO is a desktop application for broadcasting Art-Net to your devices. It is tailored to all online and offline Zenopix devices, especially Solus.

NEO can manage up to 128 DMX universes for Solus devices on a single network, supporting large-scale projects with many channels.

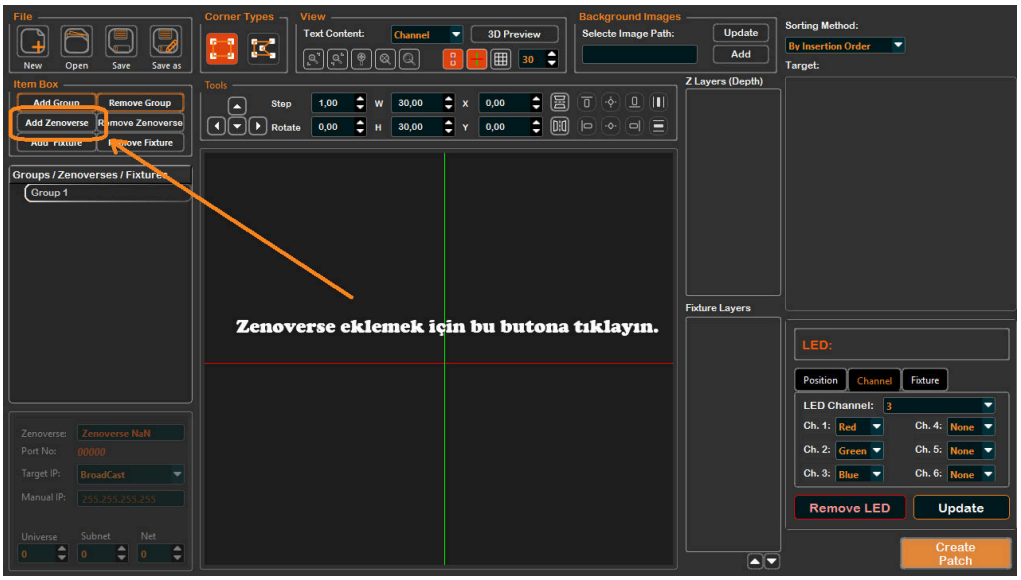
To create a Solus project in NEO, select Patch->New Patch from the main screen menu and choose the SOLUS device as the project parameter.



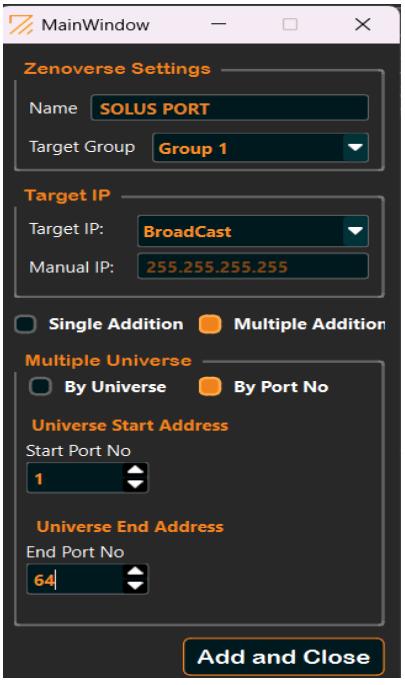
Then set the recording parameters for your configured SOLUS device on the Patch screen. The basic information you need here is:

- DMX channel range and universes to record
- Recording target or group settings

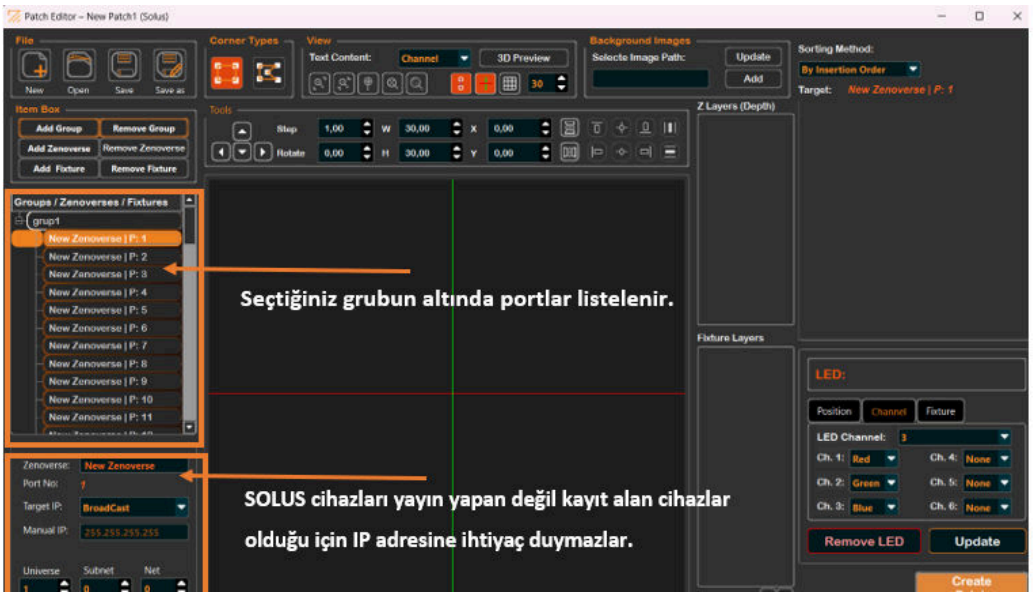
On the Patch screen, click “Add Zenoverse” or the appropriate option for adding a recording or group. Select the target recording group to finish configuring your device.



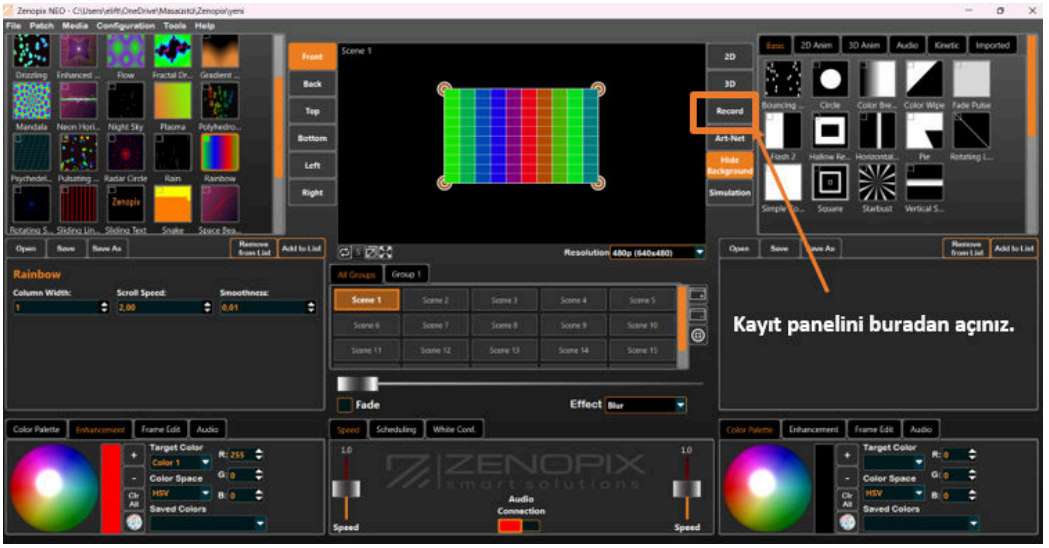
"Single Addition" is the default option, but with the "Multiple Addition" option you can add all ports at once. You only need to know the start and end Universe numbers.



After configuration, when you add the Zenoverses, you should see the port outputs appear on the Patch screen. Here you can change all parameters of the ports individually if you wish.



The recording infrastructure of your SOLUS controller is now set up. Once the project design is ready and the animations are selected, open the **"Record"** panel on the main screen to start recording.



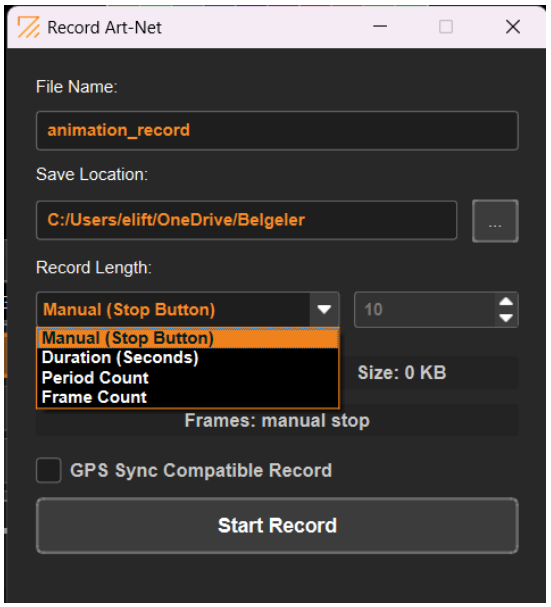
In the Record Art-Net window that opens, you can configure the recording settings as follows:

- File Name: Specify the name of the file to be saved (the default is *animation_record*).

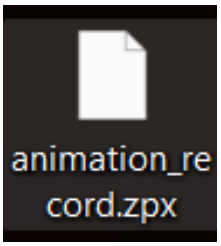
- Save Location: Select the folder on your computer where the recording will be saved. You can change the target directory by clicking the three-dot (...) button next to it.
- Record Length: The mode that determines the duration or end criterion of the recording.

You can choose from the following options in the drop-down menu:

- Manual (Stop Button): Continues recording until you stop it.
- Duration (Seconds): Records for the number of seconds you specify.
- Period Count: Records for a specific number of periods. (Applies to single-group Patch designs.)
- Count: Ends the recording when the specified number of frames is reached.
- GPS Sync Compatible Record: If you are recording for a SOLUS device with GPS, you can enable this option.



After completing all these settings, click the “Start Record” button to start recording the Art-Net broadcasts for your Solus device.



When recording is complete, a recording file with the .zpx extension is created in the selected directory. You can upload this file to your SOLUS device via the SOLUS interface and play your recording.

Warnings

1. The products must be installed by qualified professionals.

2. Zenopix products are not waterproof (except for special models). Protect the products from direct sunlight and rain. For outdoor installations, mount each product in a waterproof enclosure. Good heat dissipation will extend the service life of the products. Please ensure good ventilation.

3. Make sure the operating voltage meets the product specifications.

4. This manual is subject to change without prior notice. If you have any questions, please do not hesitate to contact us.

Technical Support

If you have further questions about the use of Zenopix Solus or technical problems, use the following resources for troubleshooting:

- Read the Zenopix Solus user manual
- Contact your supplier or sales representative.
- Check the latest information on our website
- For any technical problem, you can contact us directly at info@zenopix.com.

Frequently Asked Questions (FAQ)

What do the blinking LEDs on the front of the device mean?

-Please refer to the "Status LED Codes" section of the manual.

Which devices are compatible with Zenopix Solus?

-You can use Zenopix Solus with control devices that support the Art-Net protocol. For your DMX applications, you can check out our Zenopix Elea, for RDM applications our Zenopix Magus, and for SPI applications our Zenopix Velox devices.

I cannot access the web interface (Web GUI). How can I restore the device to factory settings (Factory Reset)?

-Please refer to the "Resetting to Factory Default Settings" section of the manual.

Order Code

PRODUCT CODE	SOLUS	64	RM	X
Capacity				
64 Universes		64		
128 Universes		128		
Enclosure Type				
DIN Rail Mount			RM	
GPS Option				
Not Available				X
Available				G

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