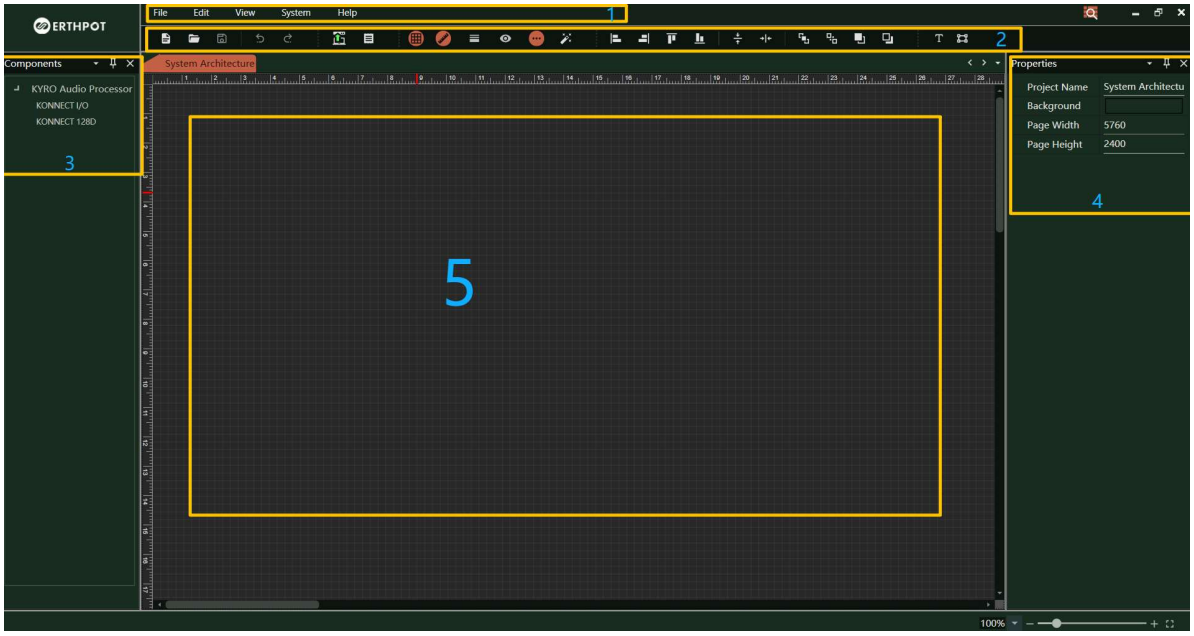
ERTHPOT Kyro Konnect

Software Operating Instructions

CATALOG

1 Introduction to The Software

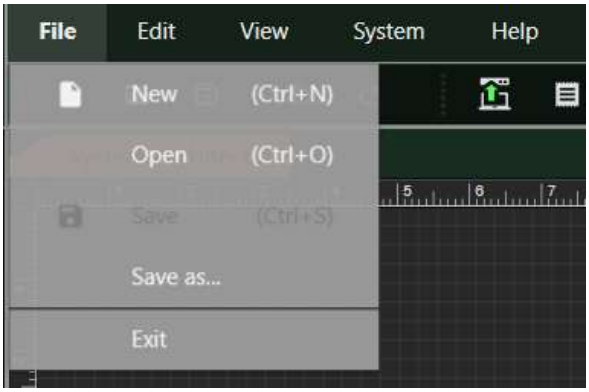


The software is divided into five areas, 1-corresponding to menu bar, 2-for toolbar, 3-for device and component bar, 4-for properties bar, and 5-for editing area.

1.1 Menu Bar

There are 5 options in the menu bar, corresponding to File, Edit, View, System, and Help.

A. File

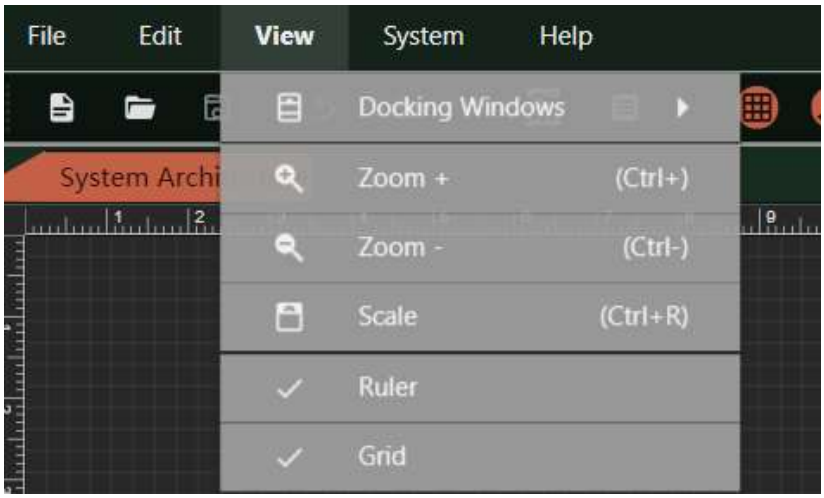


- **New:** click to create a new project and prompt whether the unsaved project needs to be saved;
- **Open:** click to select a project from the path to open;
- **Save:** click to save the project to the default path;
- **Save as:** click to save the project to the specified path.

B. Edit

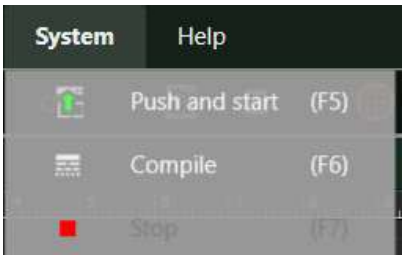
- **Undo:** withdraw the previous operation, the shortcut key "Ctrl + Z";
- **Redo:** Restore the previous operation, the shortcut key "Ctrl + Y";
- **Delete:** Delete, the shortcut key "Delete".

C. View



- **Docking Windows:** Docking the window, can check the function on the right side to be displayed on the software interface;
- **Zoom +:** zoom in on the edit area viewport (400%), shortcut "Ctrl +" or "Ctrl with mouse wheel" to zoom in;
- **Zoom -:** narrow the edit area viewport (minimum 50%), shortcut key "Ctrl -" or hold "Ctrl with mouse wheel" to shrink;
- **Scale:** restore the viewport ratio to 100%, the shortcut key "Ctrl + R";
- **Ruler:** Edit the interface scale display switch;
- **Grid:** Edit the interface screen grid display switch.

D. System

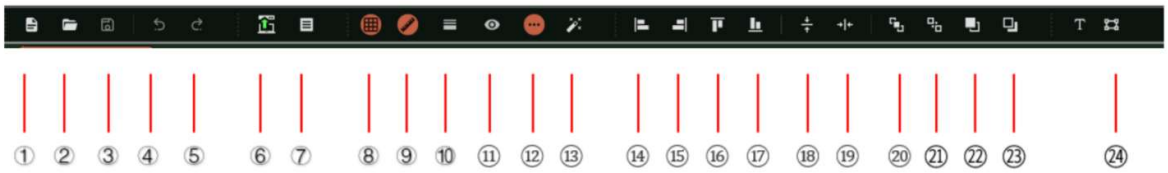


- **Push and start:** Upload and run the program, the shortcut key "F5";
- **Compile:** Compile the program to simulate, the shortcut key "F6";
- **Stop:** Stop running the program, the shortcut key "F7".

E. Help

- **User Interface:** User interface editor, which is used to create GUI for monitoring and control purposes;
- **About:** display the software information, version.

1.2 Tool Bar



① **New project:** Click to create a new project and prompt whether the unsaved project needs to be saved;

② **Open the project:** Click to select a project from the path to open;

③ **Save the project:** Click to save the project to the default path;

④ **Undo:** Withdraw the previous operation, the shortcut key "Ctrl + Z";

⑤ **Recovery:** Restore the previous operation, the shortcut key "Ctrl + Y";

⑥ **Push archive:** Upload and run the program, the shortcut key "F5";

⑦ **Compile:** Compile program, shortcut key "F6";

⑧ **Grid switch:** The interface grid display switch;

⑨ **Scale switch:** The interface ruler display switch;

⑩ **Output window:** Display the output related information;

⑪ **Aerial view switch:** Display the aerial view on the interface;

⑫ **Signal path:** After opening, selecting any line in any area will show the line associated with this line from beginning to end;

⑬ **Automatic connection:** After selecting multiple modules, clicking on the automatic connection will automatically correspond to the connection channel;

⑭ **Left alignment:** Align the selected modules to the left;

⑮ **Right alignment:** Align the selected module to the right;

⑯ **Top alignment:** Top alignment of the selected modules;

⑰ **Bottom alignment:** Align the selected modules at the bottom;

⑱ **Vertical arrangement:** Bring the selected modules vertically close;

⑲ **Horizontal arrangement:** Bring the selected module horizontally closer;

⑳ **Bring forward:** Move the layer corresponding to the selected module up by one layer;

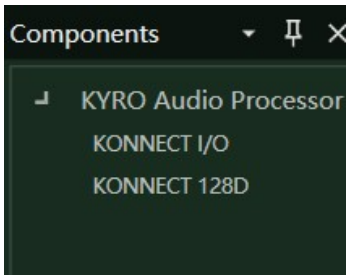
㉑ **Send to back:** Move the layer corresponding to the selected module down by one layer;

㉒ **Bring top:** Move the corresponding layer of the selected module to the top layer;

㉓ **Send to bottom:** Move the layer corresponding to the selected module to the bottom level;

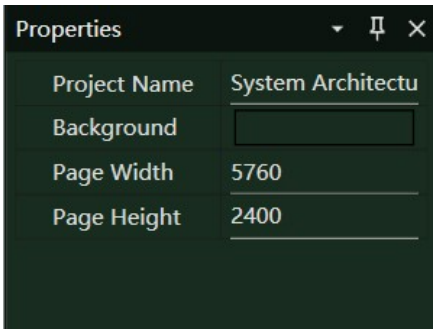
㉔ **Text:** Add text can be used for remarks.

1.3 Equipment Bar



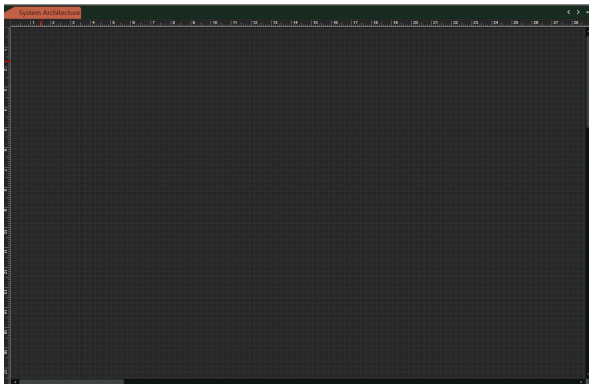
All options in the equipment bar are all types of devices supported by the software. Drag the device's corresponding model to the editing area.

1.4 Properties Bar



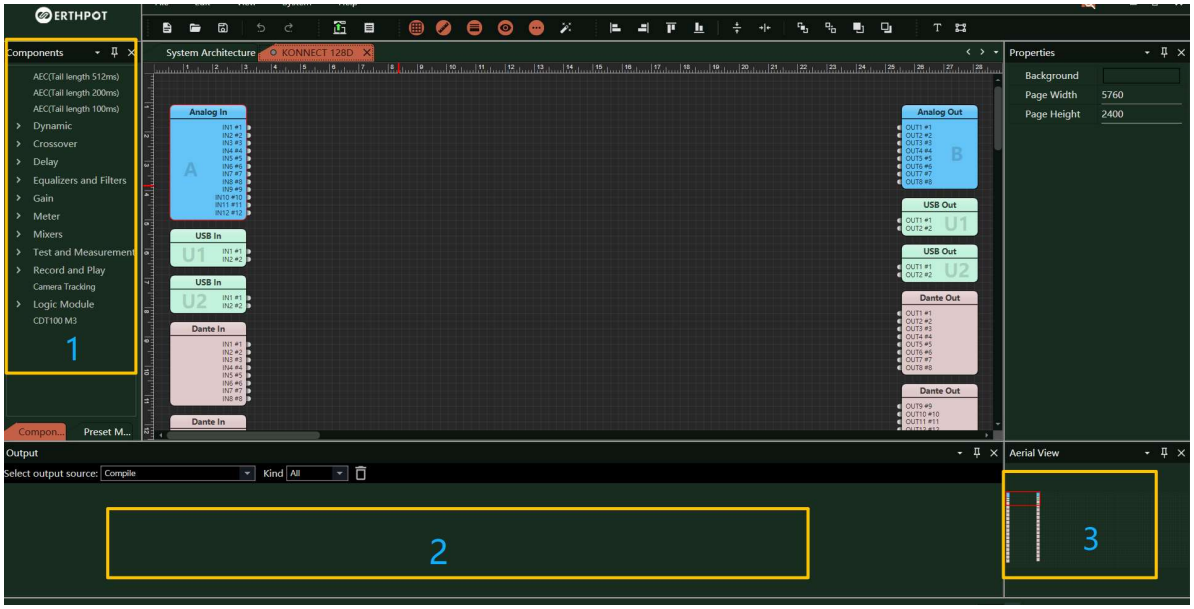
After selecting the different modules, you can edit the parameters about the module in the properties bar.

1.5 Editing Area



It’s a project editing area, where the configuration connections for all modules are made.

1.6 Other Pages (after double-click enter the device)



1）The preset management and component library area, can be switched at the bottom, the preset management contains the addition, call and deletion of preset bits, the module library, according to the actual situation of the field to the editing area dual-click open module for configuring;

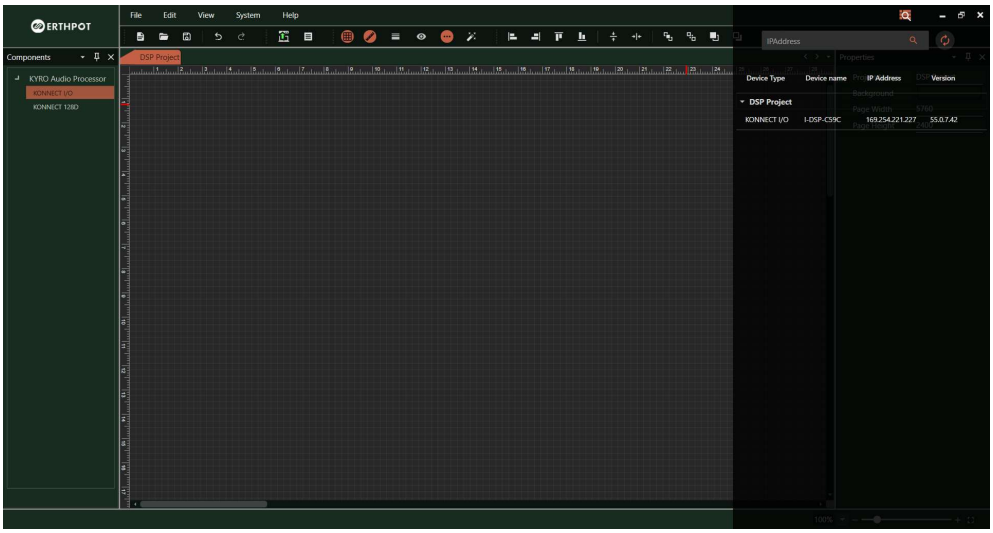
2）Output display area, display the output related information;

3）Aerial view area, showing an aerial view of the entire editing area module.

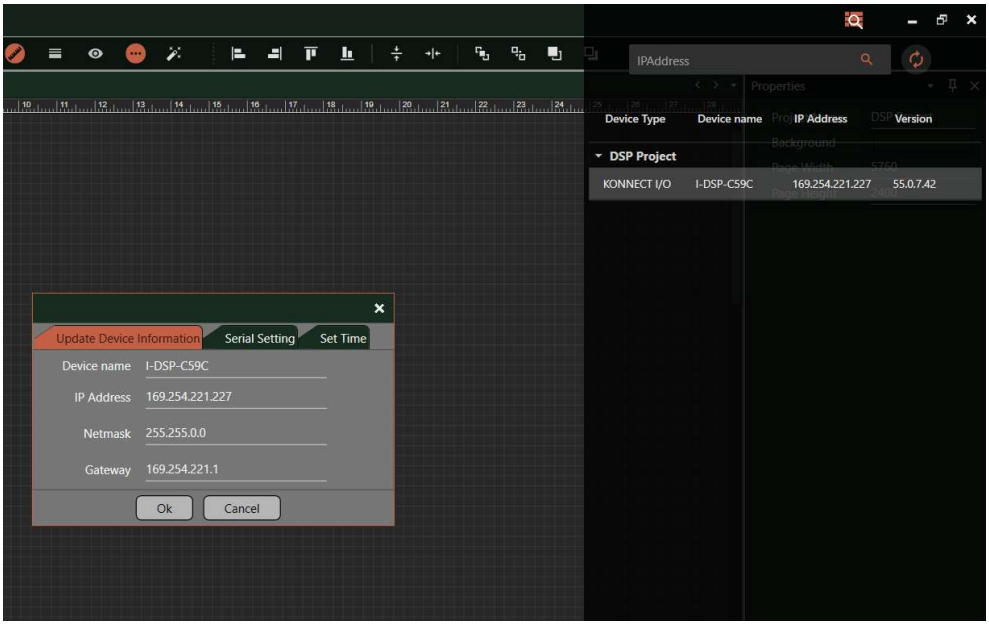
2 Introduction to Software use

2.1 Discover the Equipment

In the upper right corner of the main software interface, click the device search button (the small icon of the magnifying glass), all the recognized devices will appear on the right side of the interface, and the device discovery list shows the device type, device name, IP address, firmware version of all the known devices in the network.



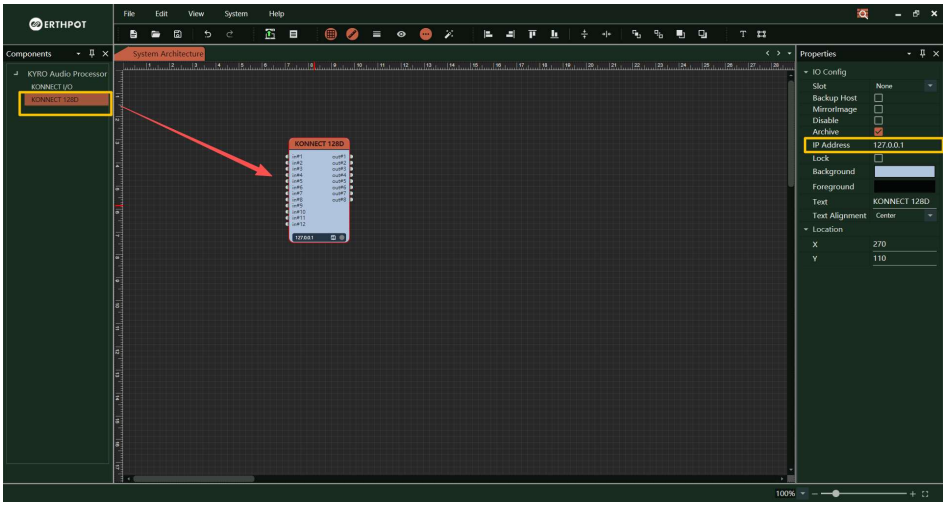
Double-click a device in the device list. In the pop-up dialog box, you can modify the device basic information and serial port settings, as shown in the following figure:



Note: As long as the device is in the unified LAN, even if it is not in the same network segment, users can find it through the device discovery bar, but if you want to download and upload the device, the operating computer must be in the same network segment as the device.

2.2 Create a New Device

In the system architecture interface, the user selects the target device from the device bar on the left side of the software main interface, and drags the left mouse button to the central main form of the software, as shown in the following figure:



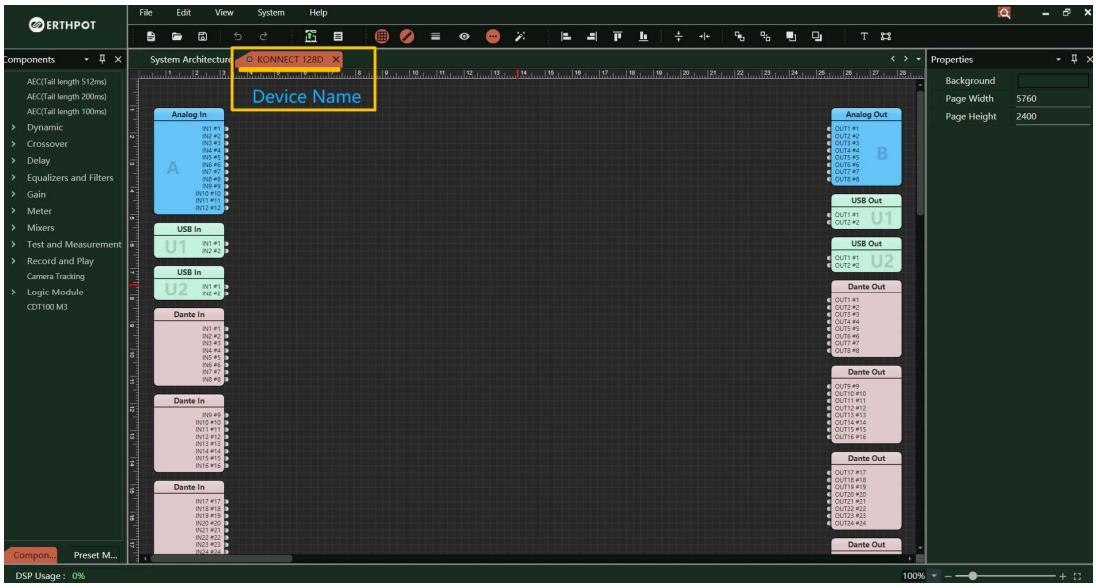
Click the created device module, and the properties configuration of the created device module is displayed on the right of the form to configure the following attributes:

1) **IP address:** IP of the corresponding device hardware (target device IP in the device discovery list);

Note: incorrect configuration will cause the program fail to be uploaded to the processor.

2) **Text:** Display name of the device module.

The software supports the design and management of multiple devices under the same program. Editing or controlling each device only needs to double-click the device module or device name tab to enter the programming page of the device, as shown in the following figure:

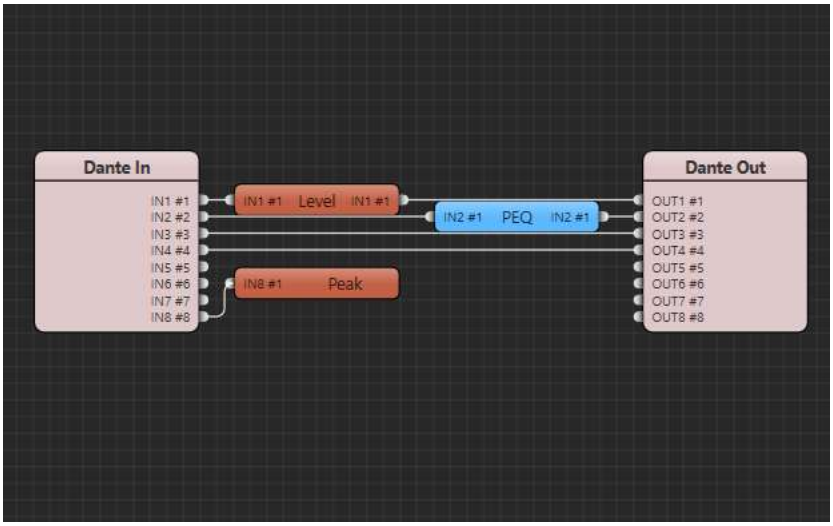


2.3 Detailed Programming Steps

2.3.1 Module Connection

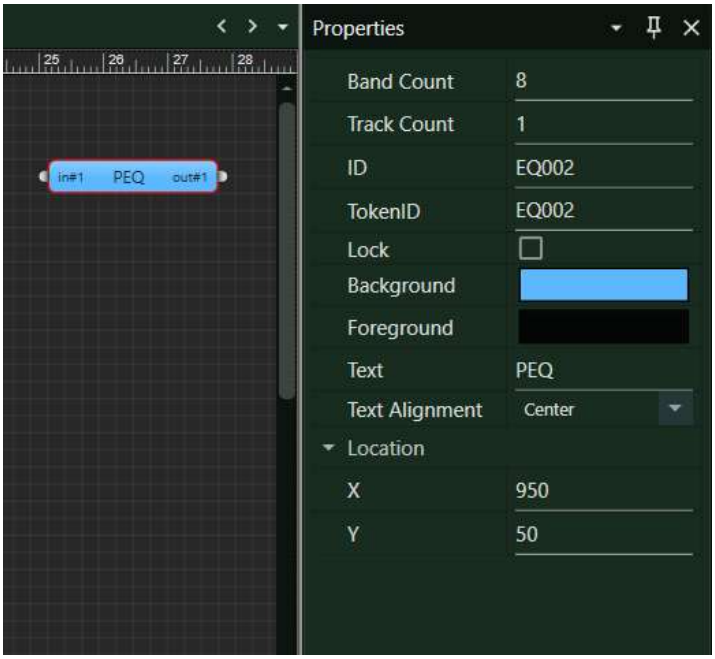
The system realizes the programming of the whole system equipment through the intuitive module pin and line, connecting the output pin of one module to the input pin of another module.

The input and output pin of the same line represents that it is under the same link, as shown in the figure below. Users only need to click a pin to drag to the opposite end pin, or box select multiple pins to drag to the opposite end pin.



2.3.2 Modify Module Properties

Click a module, and the properties configuration information of the module is displayed on the right side of the window. The user can make targeted changes, such as text, channel number, module color, text color, and so on (as shown in the figure below).

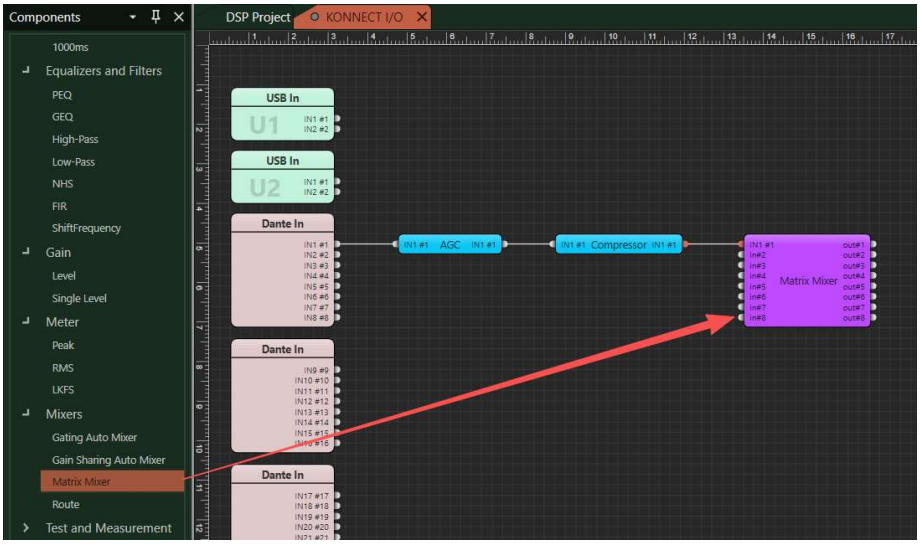


2.3.3 DSP Module Application

There are various DSP control processing modules in the software. After the user enter the device page, all available components are used on the left side of the software. According to the user requirements and the actual situation of the system, drag and drop the relevant processing module from the component library to the program to complete the routing allocation, control and processing of audio signals.

Click and hold the left mouse button to drag to the main window area for use, including level control, level meter, high and low pass filter, parametric equalizer, feedback suppressor, delay processing, routing allocation, matrix mixing, etc.

As shown in the figure below:



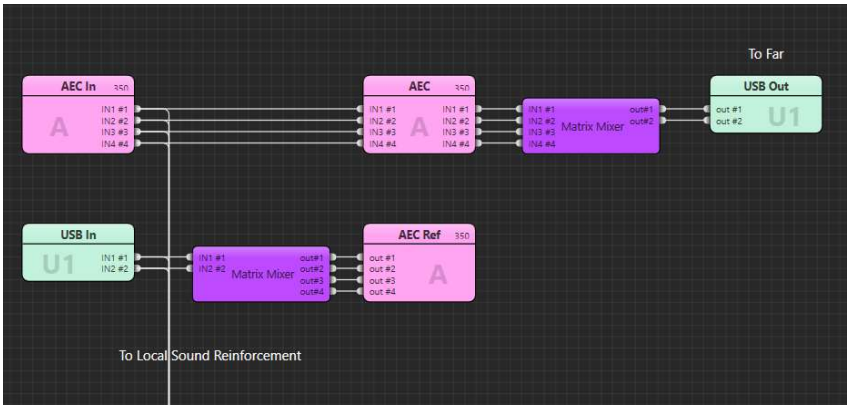
2.3.4 The AEC Function Application

AEC (Acoustic Echo Cancellation) processing is a technique used to eliminate audio echoes. In remote audio communication, due to the reflection and propagation of sound waves, echo phenomena may occur, affecting the audio quality and clarity. AEC technology can detect and eliminate echoes in real time through mathematical algorithms and signal processing, improving the quality and stability of audio communication.

In audio systems, AEC processing is mainly used in conference rooms, voice communication, distance education and other scenarios. In these scenarios, two-way audio communication is usually required, and echo will cause interference and noise to audio communication. The audio processor is built into a high-performance dedicated chip to run the AEC algorithm, which can

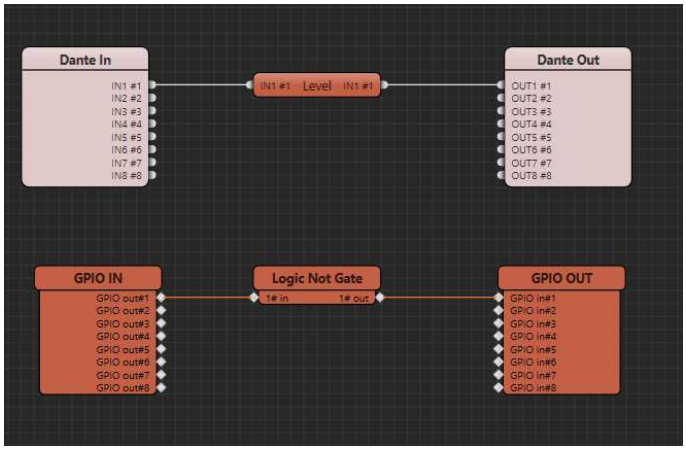
detect and eliminate echoes in real time, making the audio communication more clear and more stable.

Each AEC channel of the audio system will have a corresponding signal reference module "AEC Ref". The AEC connection can be completed by connecting the remote signal input source to the corresponding channel of the reference module.



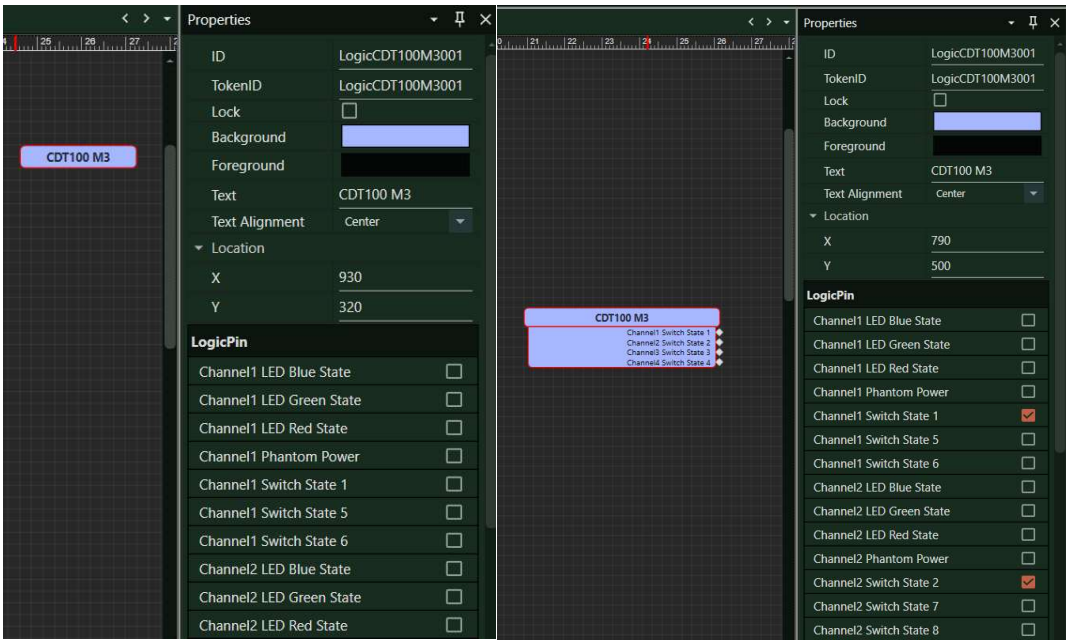
2.3.5 Logic Module

Audio channels use round pins while Logic module and GPIO use square pins. The wiring of the two kinds of signals is not allowed.

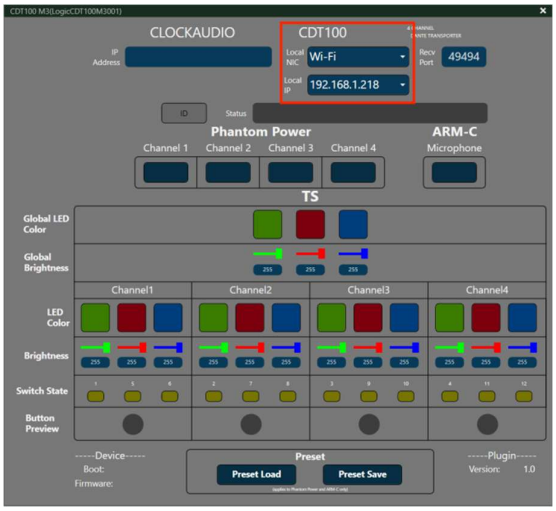


2.3.6 CDT100 MK3 Application

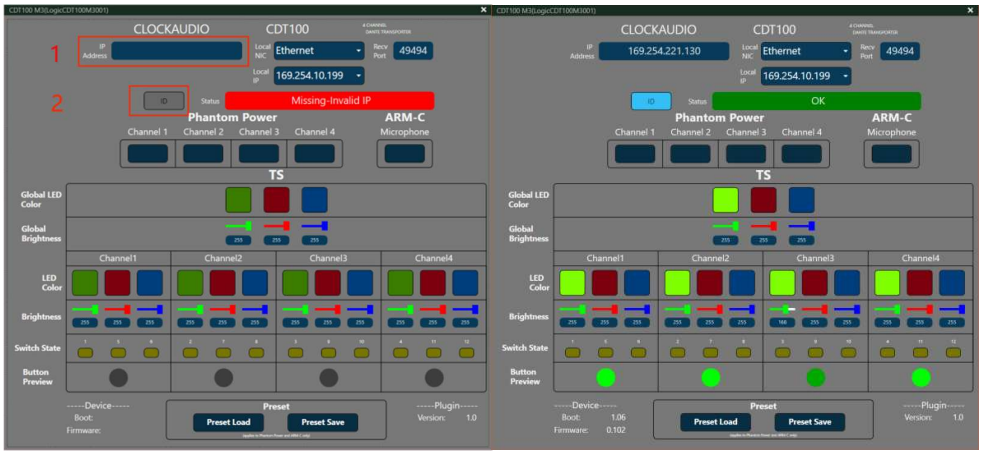
All the control pins of CDT100 MK3 module are available in the properties window, enable them by choosing the corresponding pins (showed in the figure below).



Then, configuration of the CDT100 MK3 module is done under compile mode or online mode. Select the corresponding network interface of the PC, which should be on the same sub-net with the CLOCKAUDIO CDT100 devices.



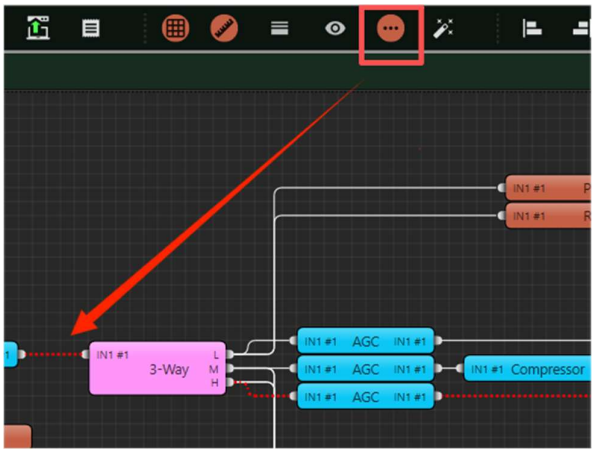
Type in the actual CDT devices' IP address in the following position then click the "ID" button to create connection.



2.3.7 Link Signal Path Lookup

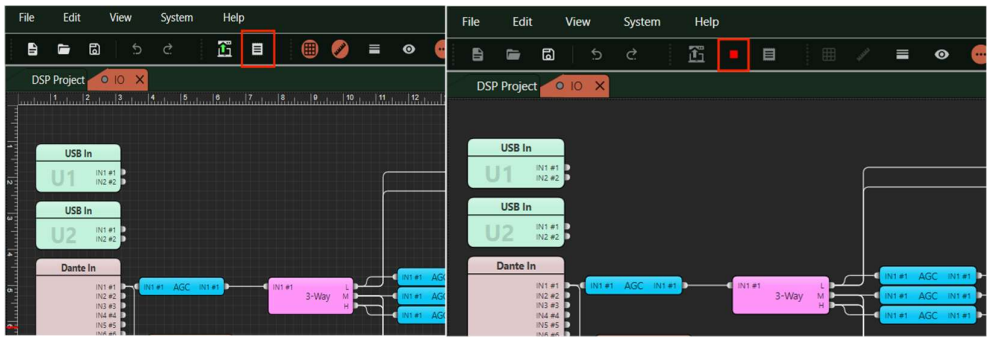
In the complex audio system, in order to quickly locate the transmission path of the audio signal, find the complete path of the signal from the input end to the output end, so as to facilitate users to conduct troubleshooting and maintenance, and avoid tedious manual search and testing.

Turn on the "Signal link identification" icon in the toolbar, and then click the link you want to view. The signal transmission path can be displayed in red line, as shown in the figure below:



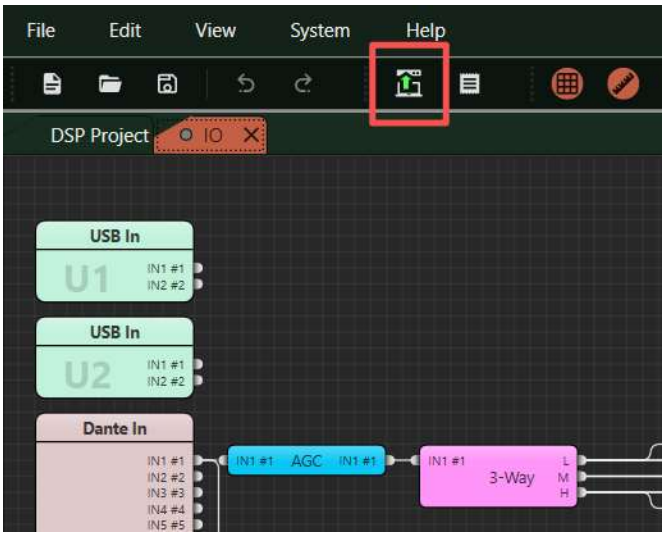
2.3.8 Compile and Simulation

After the program design is completed, the user can compile to simulate without actual devices needed. Click the compilation button in the toolbar (as shown in the figure below) or press the "F 6" of the keyboard. In the simulation, the user can change the parameter configuration of the program.

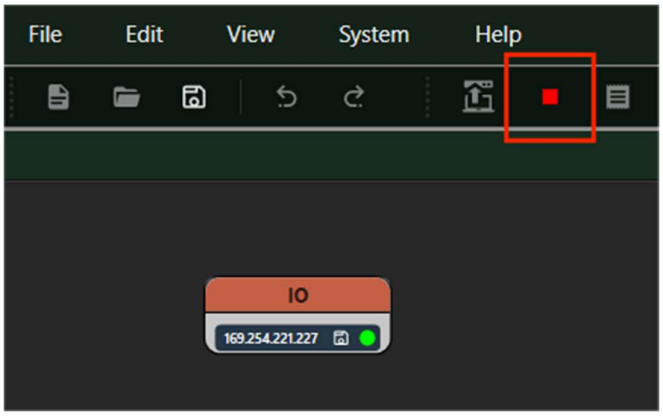


2.3.9 Upload and Run the Program / Stop the Program

After editing the programming of the device, it needs to be uploaded to the processor to make the program take effect. Click the upload icon in the software toolbar (as shown in the figure below) or press the F5 key of the keyboard.



After the program is successfully uploaded, the toolbar of the software interface will change from "edit status" to "running status". At this time, most of the modules cannot be edited, and you need to press the F7 or stop button to continue editing.

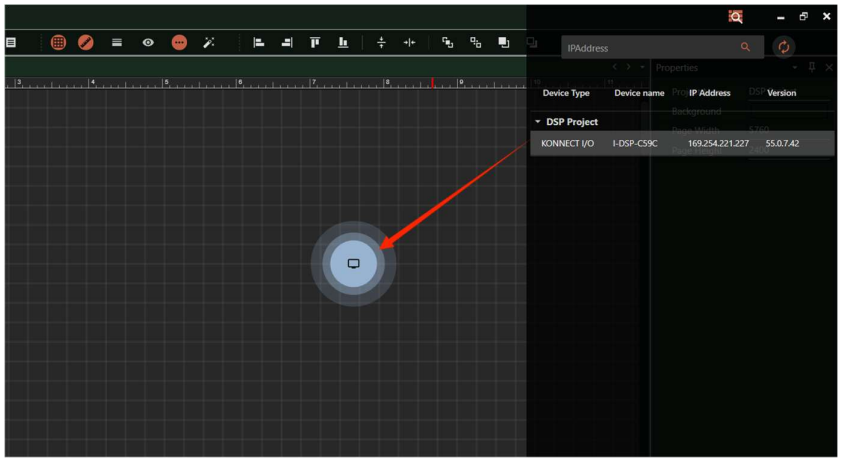


Note: the "DSP Usage" at the lower left of the software window cannot exceed 100%. If the value is exceeded, the software and the corresponding equipment will not operate normally.

Note: The IP and IO card of the uploaded program device module must be consistent with the actual hardware device configuration. If the configuration is inconsistent, the upload program will fail and the dialog box will pop up.

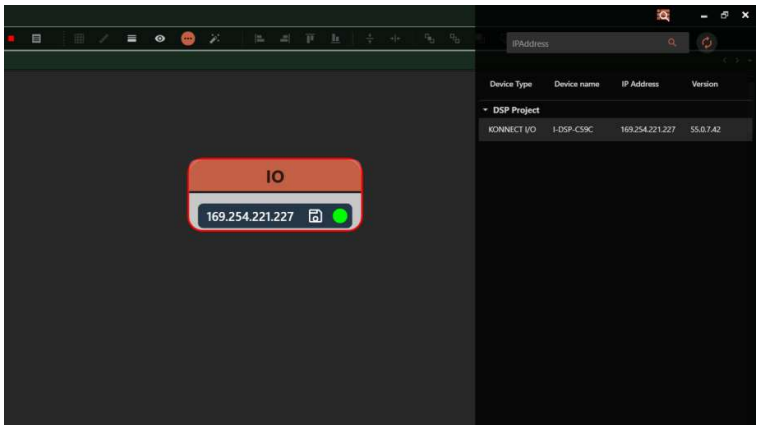
2.3.10 Downloading from The Device

Users can view, control, or modify the programs in the current network equipment, but they need to download the programs in the running device to the software for corresponding operations. The download operation of the program only needs to select the target device from the discovery bar on the left side, hold down the left mouse button, and drag it to the blank space of "system architecture" page in the middle area of the software, as shown in the following figure.



Note: The computer must be in the same network segment as the target device to successfully download the program to the software.

After a successful download, the software will be in the running state, the target device module will appear in the main interface, and the status light icon on device module will be green. As shown in the figure below:



Note: If the target device has modified the IP address, the downloaded program will still remember the previous IP address, and after downloading the program, the status light below the main interface device module is "gray"(as shown in the figure below). If we need to control the device, we need to exit the "running state", then click the device module to modify the IP address to the actual IP address of the current device hardware, and then upload the program again.

2.3.11 Save Program File

Save allows you after the program is edited, and the new program needs to select your local path first.

3 User Interface

3.1 User Interface Profile

The user interface is an important feature of the audio processor. Its role is to allow users to create and customize the application interface according to their own needs or the actual field layout, so as to better control and monitor the entire audio system.

The user interface helps users easily access the various functions of the audio processor and provides intuitive visual feedback to better understand the state and operation of the system. Through the interface, users can perform various operations, such as adjusting the volume, switching input sources, selecting sound effects, mixing routes, etc.

(1) Customization: Users can create their own interfaces according to their own needs and preferences, so as to better meet their specific application needs.

(2) Easy to use: The user interface uses intuitive graphics and controls, so that users can easily operate (as shown in the figure below), without tedious programming or technical knowledge.

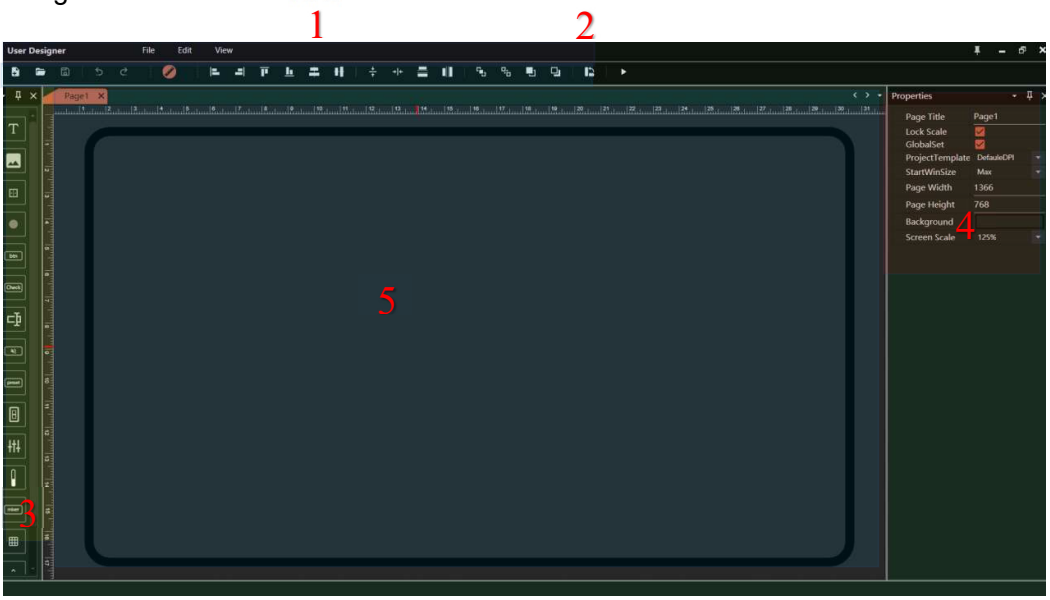
(3) Improve efficiency: The user interface can improve the work efficiency of users, because it allows users to quickly access and control all aspects of the system.

(4) Real-time feedback: the user interface provides real-time feedback, which can help users to better understand the state and activities of the system, so as to better monitor and control it.

In summary, users provide a customized, easy-to-use, and efficient way to control and monitor audio systems.

In the menu bar of the software interface, click "Help" and "user interface" to open the production of the user interface.

The editing interface is shown below:



The user interface is divided into five areas, 1 corresponding to the menu bar, 2 the toolbar, 3 the component bar, 4 the attribute bar, and 5 the editing area.

Menu bar and toolbar: new page, open, save, undo, restore, ruler, various alignment button, arrangement button, control layered button.

Component bar: text, picture, frame, status indicator, button, mute button, preset button, gain, channel, level, mix matrix, etc.

Attribute Bar: Make parameter changes to the properties of the different controls.

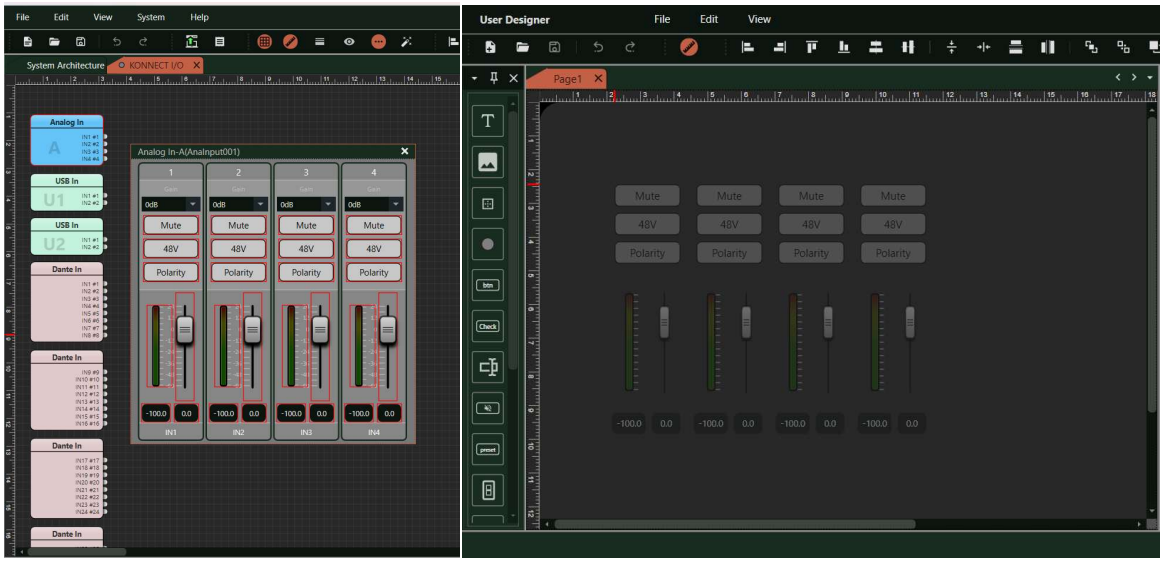
Editorial area: The editing area is the project editing area, and the debugging of all modules is carried out here.

Note: The properties of the controls in the left component library will be slightly different from the ones copied in the software. It is recommended to directly copy the functional modules needed in the software.

3.2 Make the User Interface

Design drag and drop controls in the software and set and configure them. Users can set the look and feel of the controls, including color, size, location, and font. The user can also set the behavior and functionality of the controls, such as which devices or parameters they should control, and how to respond to user input.

Users need to switch to the software interface, select the equipment module double click into the target equipment engineering page, double click the module to be controlled, need controlled and feedback keys and display module in the system editing software (mouse box selection), then use copy (Ctrl + C), paste (Ctrl + V) to the editing area of the user interface, as shown in the following figure:

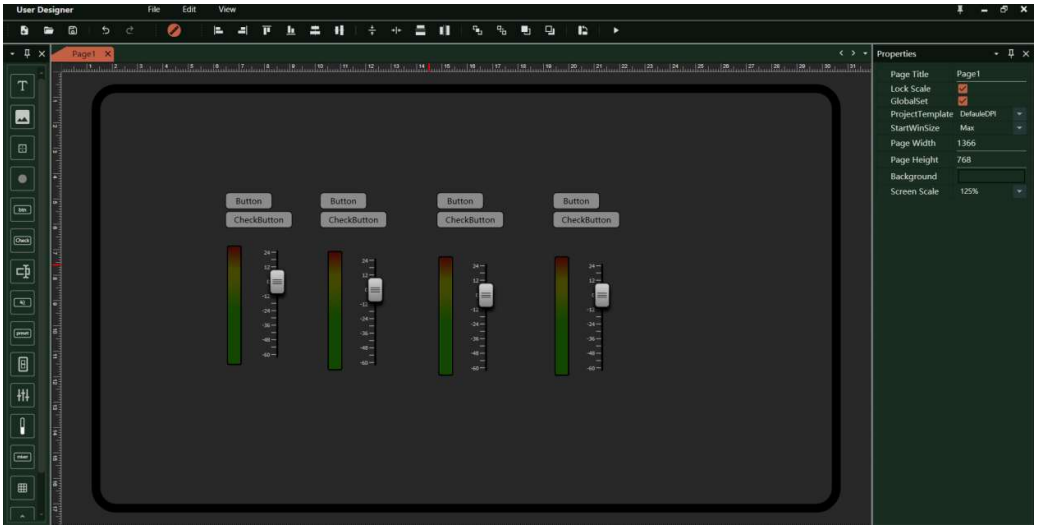


Note: To make the user interface, press F7 or "stop" to withdraw the project from simulation or online operation.

If the software is dual-opened, the controls can only be copied from the software interface that opens the user interface.

3.2.1 Attribute Adjustment

In the process of project programming, the user can specify the editing module name, description, font, color, size, direction, and the IP address of the corresponding device in the attribute bar on the right.



3.2.2 Control Mode Adjustment

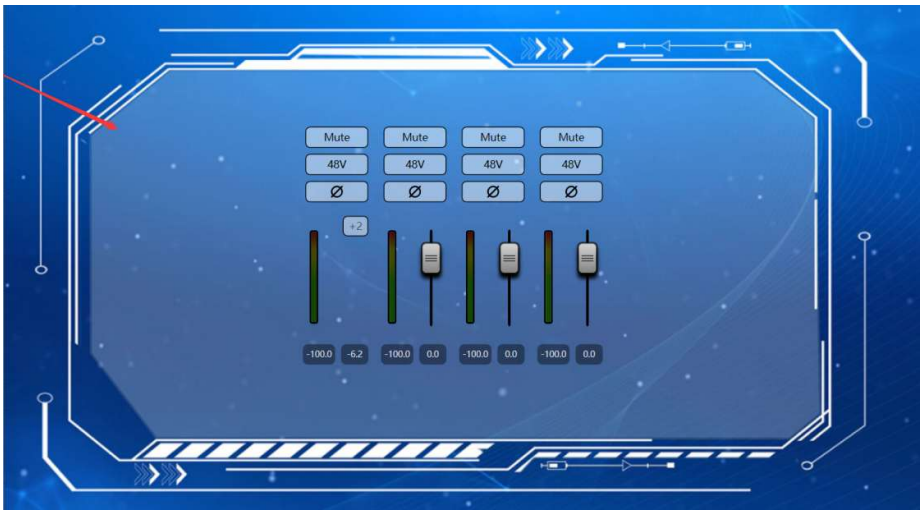
Controls such as the gain fader can adjust their control type, and change their control mode accordingly to meet the needs of the user and the interface style.

For example, the gain fader module can be changed to the mode of step length button, set the step size to + 1 or-1, select the gain fader control, change the control type from "Slider" to "Step Button", and then modify the step size attribute to "1", "-1" or other numbers not less than 5.

3.2.3 Set the Picture

The user interface supports the addition of pictures or underlays, which can add more visual elements to the UCI interface, making the UCI interface more beautiful, intuitive and easy to understand. By adding pictures or base pictures, the UCI interface can be made more vivid, rich and interesting, improving the user experience and satisfaction. By adding pictures or underlays, you can provide guidance and prompts in the UCI interface, such as marking important controls and operating areas, as well as providing instructions and help information for users to quickly understand and use the system.

Drag a picture control from the left component library to the editing area, and select the corresponding picture from the local computer through the right attribute bar, as shown in the following figure:



Users can add .png format transparent images and interface software layer adjustment function, the key for the picture, change the key press and lift the color can make room layout type control interface, as shown in the figure below, for maintenance personnel, can be intuitive to mute a microphone in the interface, or control the gain of a position horn.