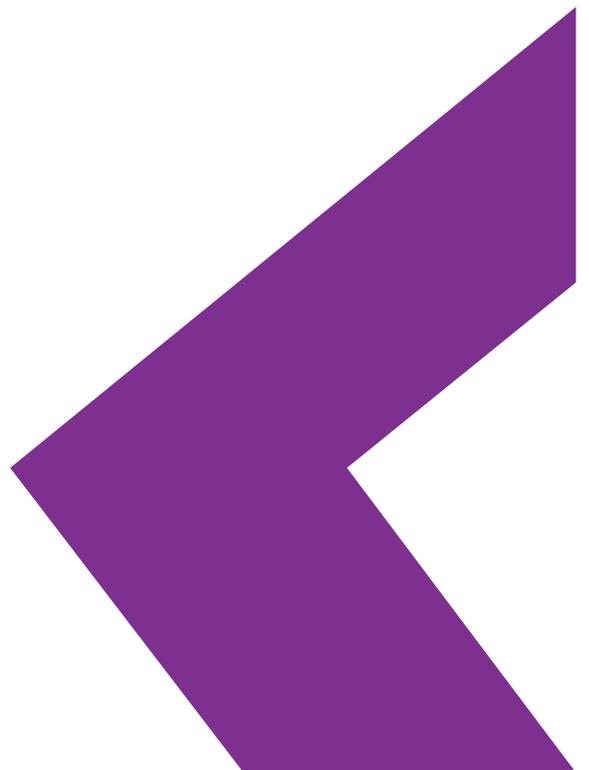


HDL Studio User Manual

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Update History

The form below contains the information of every update. The latest version contains all the updates of all former versions.

No.	Version	Update Information	Date
1	V1.0.0	Initial release	Dec. 1 st , 2021

Introduction

This manual offers the information about the configuration process of HDL Studio, as well as the relevant notes and tips.

Applicable Readers

This manual is mainly suitable for the following engineers:

- Technical Support Engineer
- Maintenance Engineer

Symbols and Icons

The following symbols and icons may be used in this manual as warning or alert.

Symbol	Definition
 Danger	It is used to warn of an emergency and dangerous situation, if not avoided, it will cause death or serious personal injury.
 Warning	It is used to warn of potentially dangerous situations, which, if not avoided, may result in death or serious personal injury.
 Caution	It is used to warn of potentially dangerous situations, which, if not avoided, may cause moderate or minor personal injury.
 Note	Used to transmit equipment or environmental safety warning information. If not avoided, it may cause equipment damage, data loss, equipment performance degradation, or other unpredictable results. "Caution" does not involve personal injury.
 Tips	Used to highlight important/critical information, best practices, tips, etc. "Tips" is not safety warning information, and does not involve personal, equipment and environmental injury information.

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1. Overview

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1. What is HDL Studio

HDL Studio (Hereinafter referred to as "software") is applicable for products configured with Buspro and Buspro Wireless. It supports offline configuration, online debugging, remote search, trouble shooting, firmware updates and etc. The software is well developed with contemporary design and simplified functionality. It is configured with user-oriented interface layout to efficiently achieve precise debugging and setting.

This manual offers information about the configuration process of HDL Studio. The following tools might be included:

- A computer configured with HDL Studio software
- Buspro device
- 1 port programming gateway
- Dedicated Buspro cable(s)

Key function of HDL Studio software:

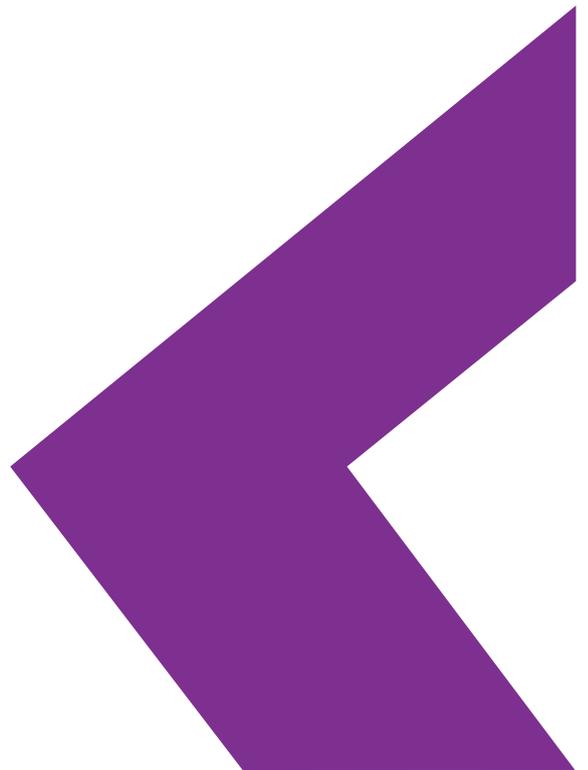
- Offline/online edit or debugging Buspro device
- Remote access
- Data backup/upload/download
- Save project as template for later use/review/importing
- Device update
- IR learner
- Support Chinese/English

 Note:

- Please refer to the datasheet attached to the product for the information of installation, wiring, specifications, etc.
- The illustrations in this manual are for reference only and the actual product should prevail.

2. Settings

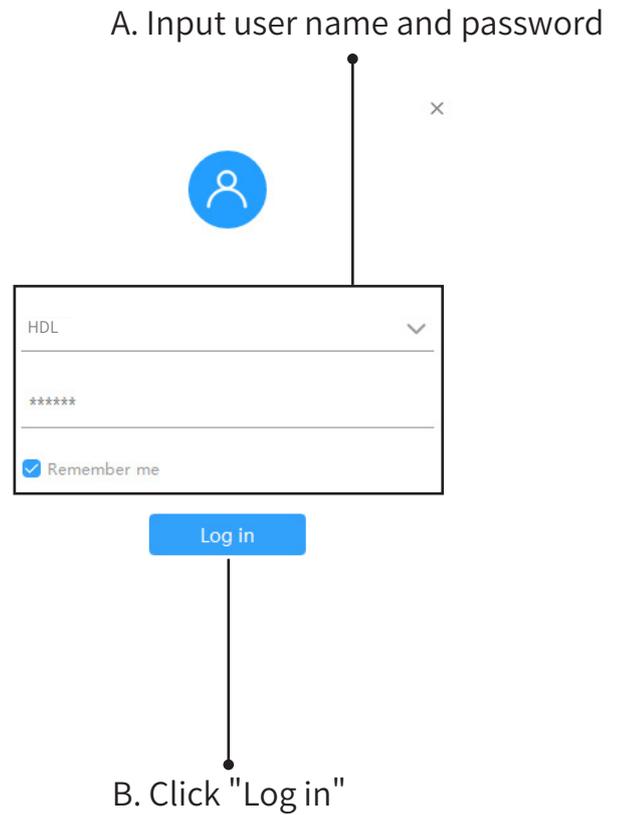
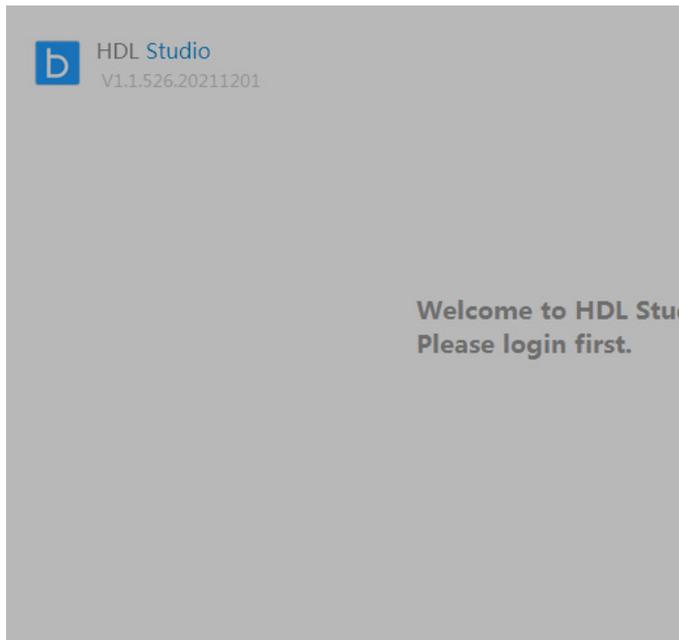
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1. Log in

 Tips: Open HDL Studio, then input user name and password to log in.

 Note: The user name and password refer to the ones you have use to register an account in IOT, please well prepare before logging in.



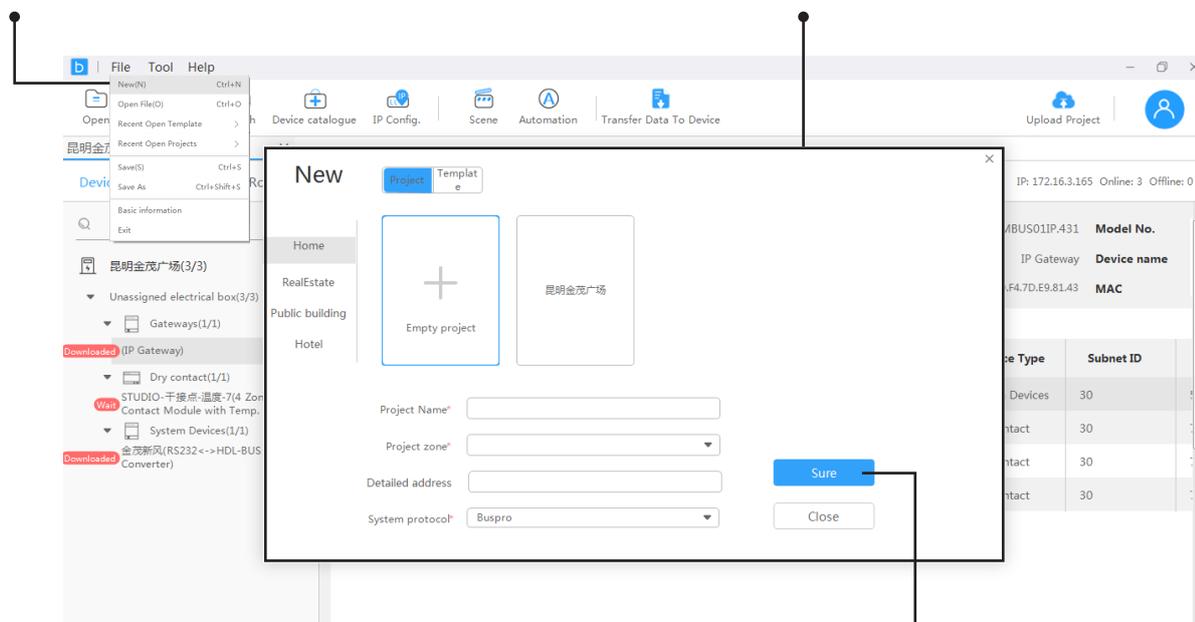
2. Create or Open Project

 Tips:

- To create project, please proceed A-1;
- To open project, please proceed A-2.

A-1. Click "File", select "New"

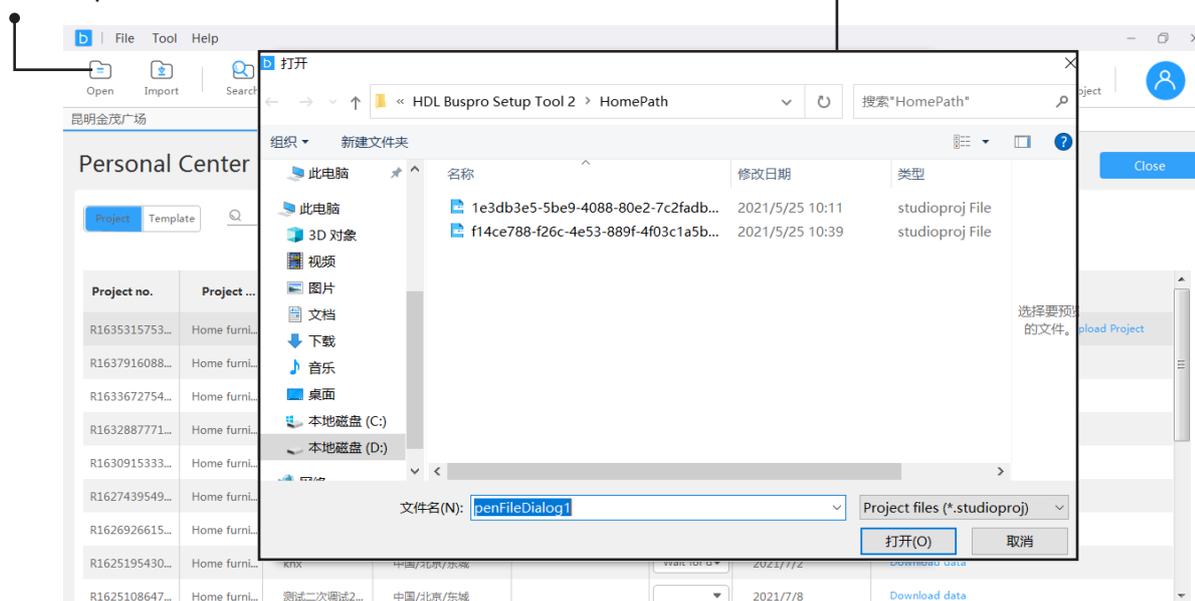
B-1. Input project information, including project name, project zone, detailed address and so on



C-1. Click "Sure" to complete

A-2. Click "Open"

B-2. Select the desired project file (*.studioproj) to import data



3. Main Page

 Tips: Here as below, the main page can be divided into three parts:

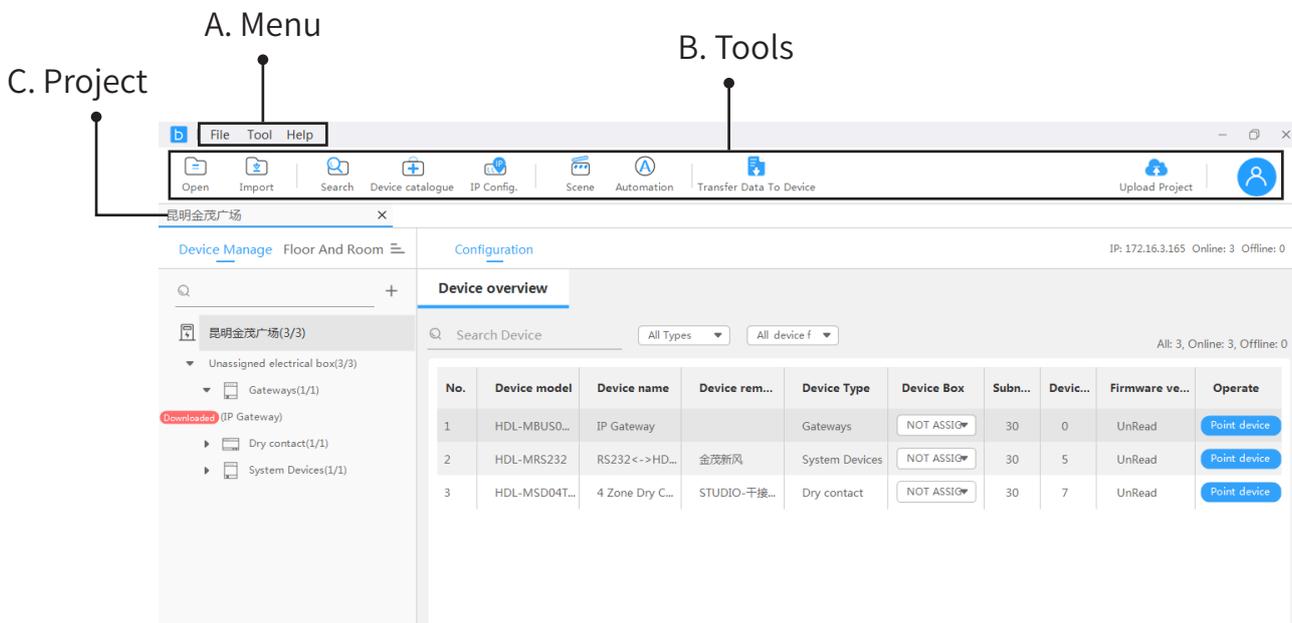
A. Menu

- File: It refers to basic operation for project files, such as create or open projects; save or save as project files; check project information; exit the software.
- Tool: It refers to basic debugging for devices, including device searching, gateway configuration, device upgrading, data upload, IR learner, lighting or scene setting, device resetting and etc.
- Help: You can select language in Chinese or English, or check for updates and technical supports.

B. Tools

- Open: To open project file (*.studioproj)
- Import: To import project file
- Search: To search device and then add to current project if needed
- Device catalogue: To check all types of devices and proceed debugging and configuration if needed
- IP Config.: To check and make gateway configuration, then proceed remote control if needed
- Scene/Automation: It is available only when advanced gateway or 1 port programming gateway is added into the project.
- Transfer Data to Device: To upload device data to Cloud
- Upload Project: To upload project file to Cloud
- Personal Center: To check project files used in current users; to switch account or exit current one

C. Project: To show information about current project, including device, floor and room, configuration and so on



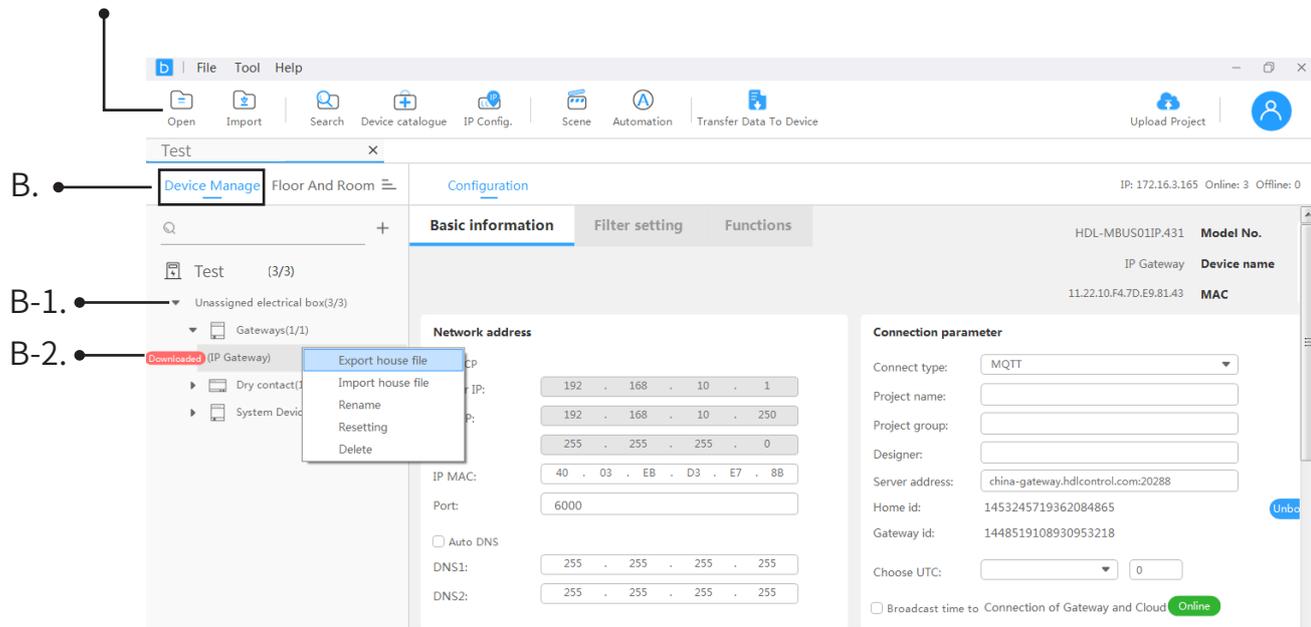
The screenshot displays the software interface with three main sections labeled A, B, and C. Section A (Menu) points to the top menu bar containing 'File', 'Tool', and 'Help'. Section B (Tools) points to the toolbar below the menu, which includes icons for 'Open', 'Import', 'Search', 'Device catalogue', 'IP Config.', 'Scene', 'Automation', 'Transfer Data To Device', 'Upload Project', and a user profile icon. Section C (Project) points to the main content area, which is divided into a left sidebar and a main panel. The sidebar shows a tree view of the project structure for '昆明金茂广场' (Kunming Jinmao Plaza), including 'Unassigned electrical box(3/3)', 'Gateways(1/1)', 'Dry contact(1/1)', and 'System Devices(1/1)'. The main panel displays the 'Device overview' table.

No.	Device model	Device name	Device rem...	Device Type	Device Box	Subn...	Devic...	Firmware ve...	Operate
1	HDL-MBUS0...	IP Gateway		Gateways	NOT ASSIG	30	0	UnRead	Point device
2	HDL-MRS232	RS232<->HD...	金茂新风	System Devices	NOT ASSIG	30	5	UnRead	Point device
3	HDL-MSD04T...	4 Zone Dry C...	STUDIO-干接...	Dry contact	NOT ASSIG	30	7	UnRead	Point device

4. Basic Setting ("Device Manage" & "Floor and Room")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

A. Click "Open" to import project file "Test"



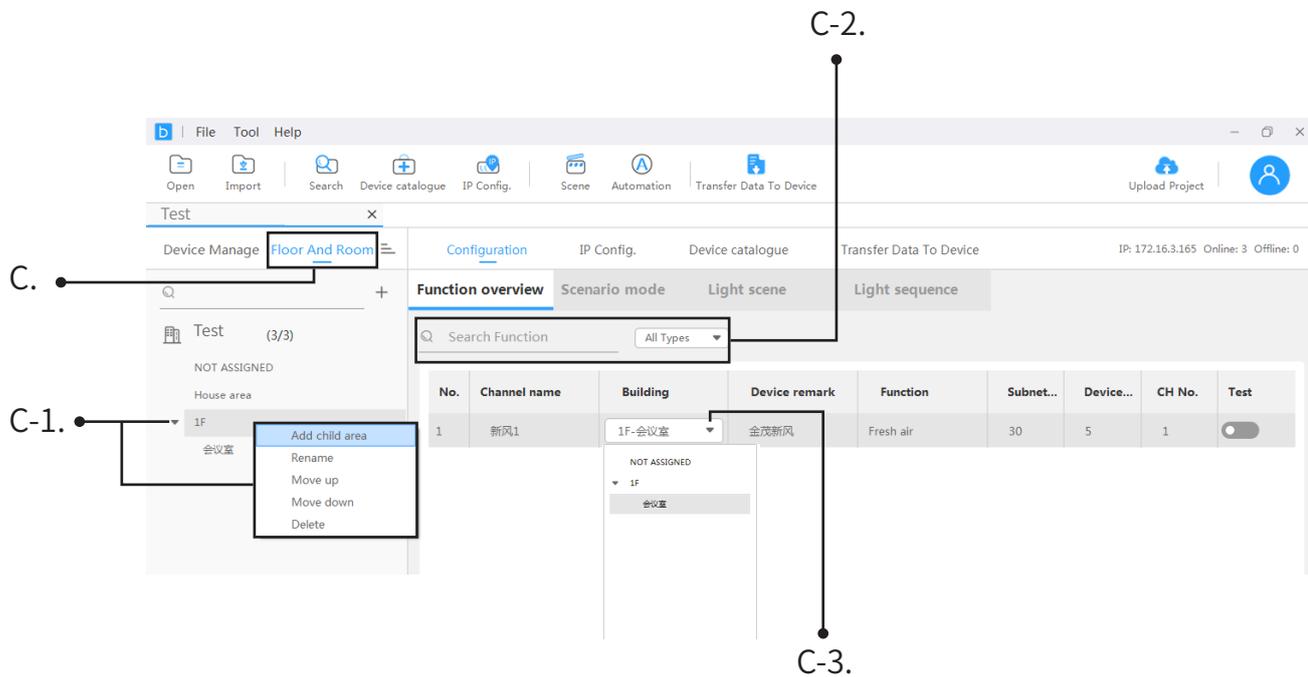
B. Click "Device Manage" to show all devices imported.

B-1. From the drop-down list "Unassigned electrical box", you can check the devices which are not assigned to specific floors and rooms.

B-2. For example, unfold the tab "Gateway", select "1P Gateway", right click to proceed "Export/Import home file", "Rename", "Resetting" or "Delete".

4. Basic Setting (continued...)

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



C. Click "Floor and Room" to show all devices unassigned/assigned to specific area.

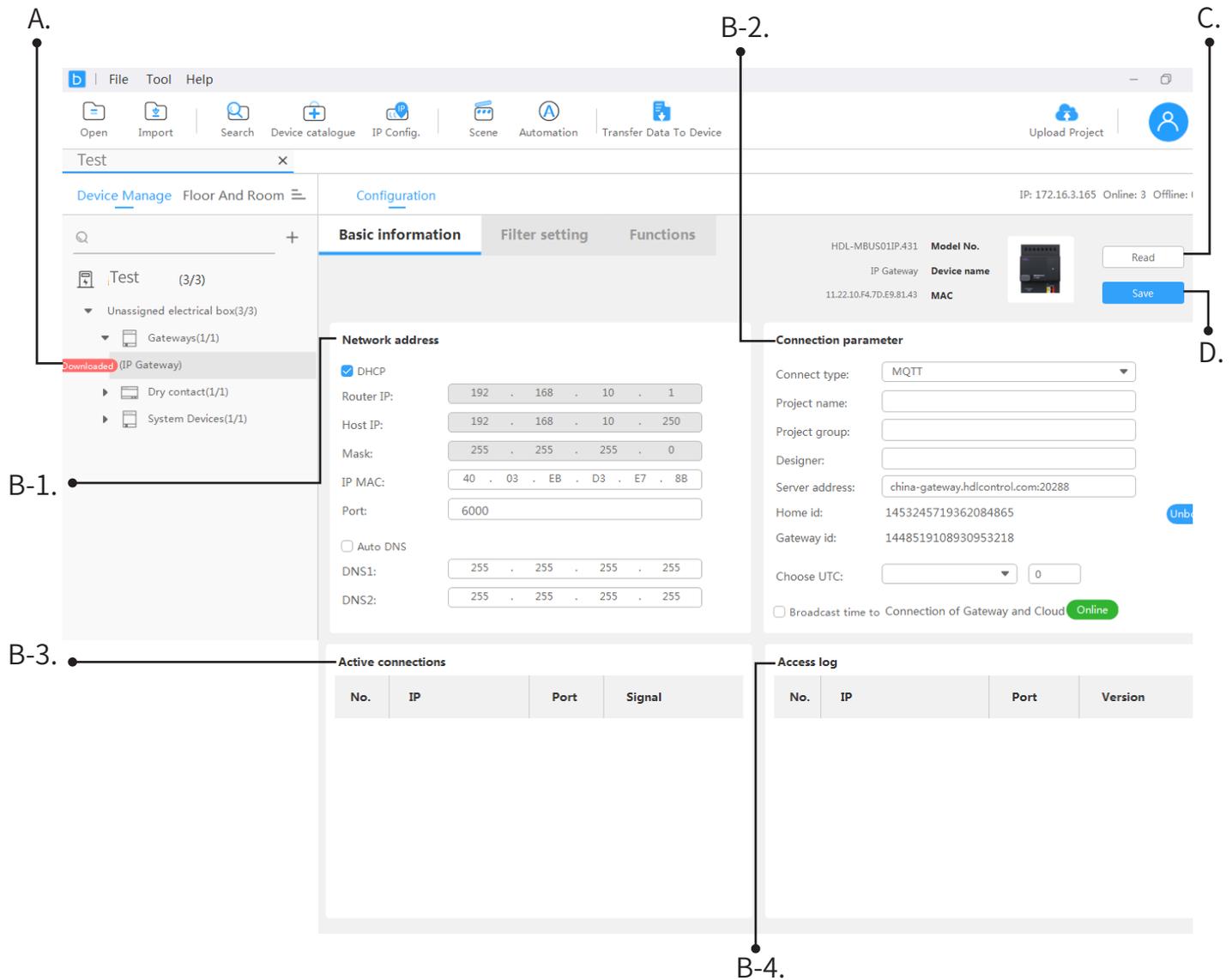
C-1. For example, unfold the tab "1F", right click to proceed "Add child area", "Rename", "Move up/down" or "Delete".

C-2. Search function in all types or in selected types.

C-3. Scroll down to assign area for the device.

4. Basic Setting ("Configuration")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



The screenshot shows the configuration interface for a gateway device. The interface is divided into several sections:

- A.** Points to the left sidebar where the "Test" project is selected, and the "IP Gateway" device is chosen under "Gateways(1/1)".
- B-1.** Points to the "Basic information" tab in the main configuration area.
- B-2.** Points to the "Connection parameter" section on the right, which includes fields for "Connect type" (MQTT), "Project name", "Project group", "Designer", "Server address", "Home id", "Gateway id", and "Choose UTC".
- B-3.** Points to the "Active connections" table at the bottom left, which has columns for "No.", "IP", "Port", and "Signal".
- B-4.** Points to the "Access log" table at the bottom right, which has columns for "No.", "IP", "Port", and "Version".
- C.** Points to the "Read" button in the top right corner of the configuration area.
- D.** Points to the "Save" button in the top right corner of the configuration area.

Regarding "Configuration", here we take "1P Gateway" as an example to show the basic settings.

A. Unfold the tab "Gateway", select "1P Gateway".

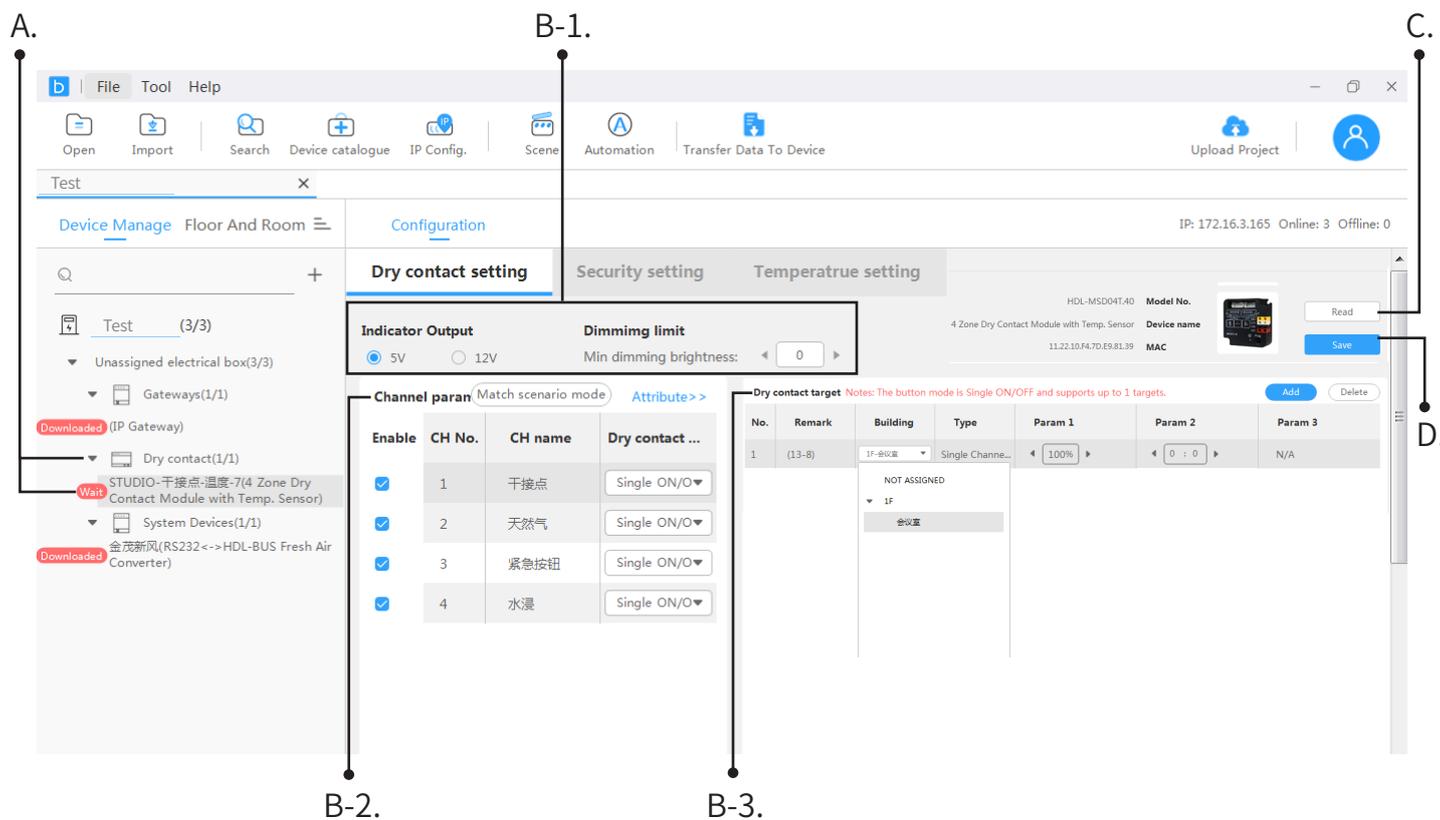
B. Proceed gateway configuration, including B-1. Network address; B-2. Connection parameter; B-3. Active connection; B-4. Access log.

C. Read gateway data if needed.

D. Save gateway data after completing configuration.

4. Basic Setting (continued...)

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



The screenshot shows the configuration interface for a "4 Zone Dry Contact Module with Temp. Sensor". The "Dry contact setting" tab is selected, and the "Channel param" table is visible. The "Indicator Output" is set to 5V, and the "Dimming limit" is set to 0. The "Dry contact target" table shows one target with a building of "1F-会议室" and a type of "Single Channel...".

Enable	CH No.	CH name	Dry contact ...
<input checked="" type="checkbox"/>	1	干接点	Single ON/O▼
<input checked="" type="checkbox"/>	2	天然气	Single ON/O▼
<input checked="" type="checkbox"/>	3	紧急按钮	Single ON/O▼
<input checked="" type="checkbox"/>	4	水浸	Single ON/O▼

No.	Remark	Building	Type	Param 1	Param 2	Param 3
1	(13-8)	1F-会议室	Single Channel...	100%	0 : 0	N/A

Regarding "Configuration", here we take "Dry contact" as an example to show the basic settings.

A. Unfold the tab "Dry contact", select "4 Zone Dry Contact Module".

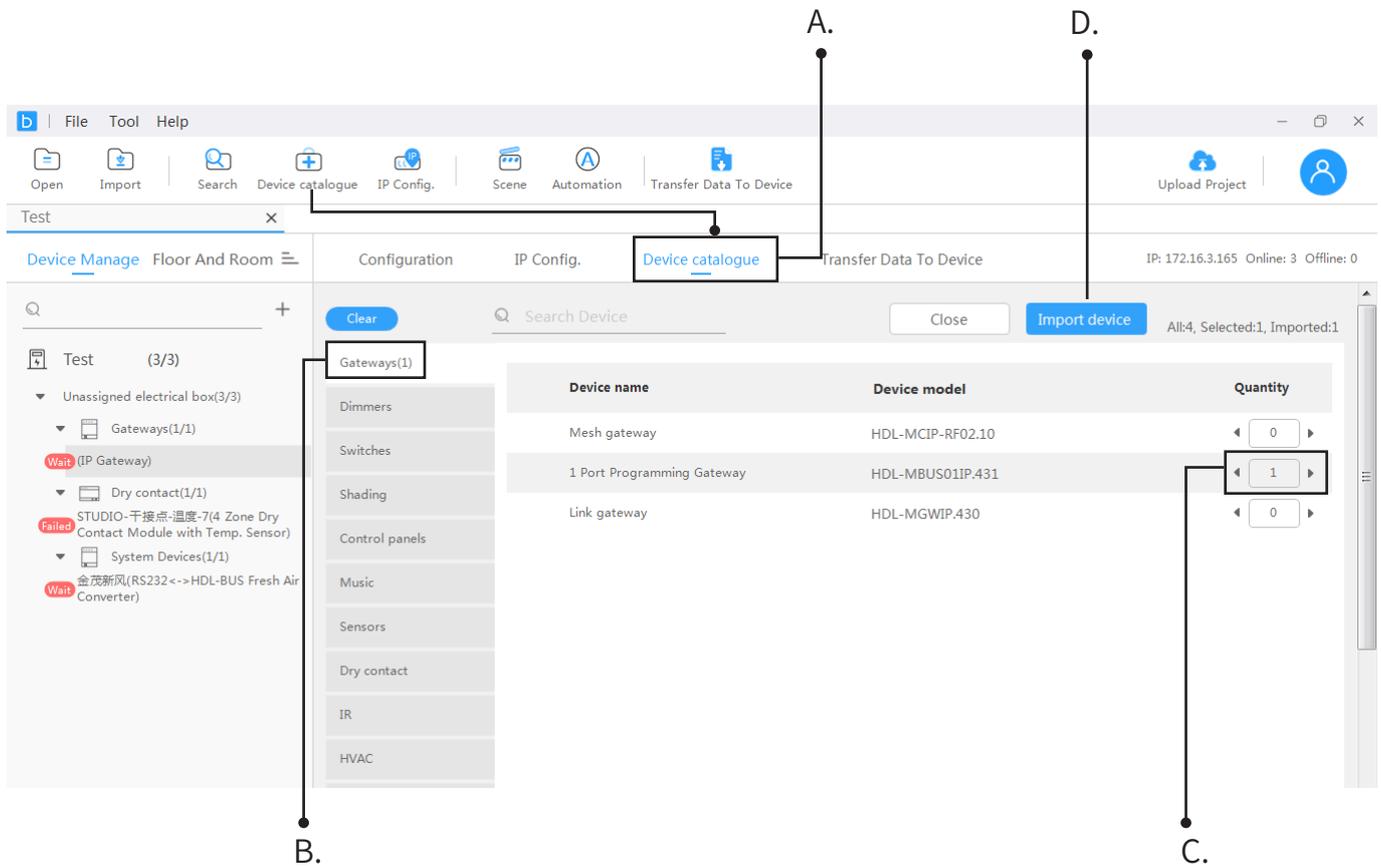
B. Proceed dry contact configuration, including B-1. Indicator output & Dimming limit; B-2. Channel parameter; B-3. Dry contact target.

C. Read dry contact data if needed.

D. Save dry contact data after completing configuration.

4. Basic Setting ("Device catalogue")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



Regarding "Device catalogue", here we take "Gateway" as an example to show the basic settings.

A. Click "Device catalogue".

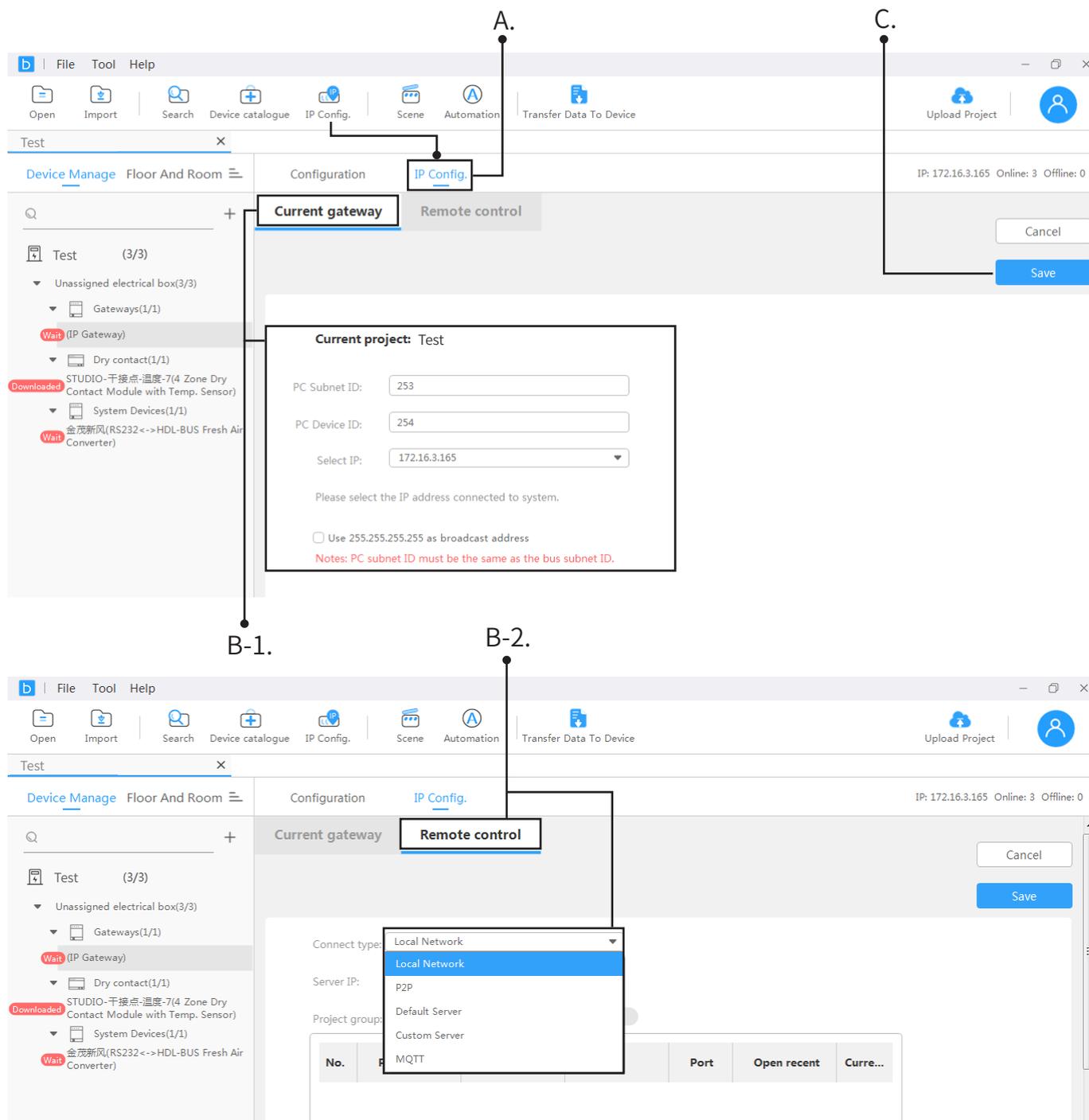
B. Proceed device configuration, e.g., click "Gateway" to show the gateways which have been searched.

C. Select the desired gateway, input quantity.

D. Click "Import device" to add the device.

4. Basic Setting ("IP Config.")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



The image consists of two screenshots of a software interface, likely a configuration tool for a smart home system. The top screenshot shows the 'IP Config.' window for a project named 'Test'. The 'Current gateway' tab is active, displaying fields for 'PC Subnet ID' (253), 'PC Device ID' (254), and 'Select IP' (172.16.3.165). A note below the fields states: 'Please select the IP address connected to system.' and 'Use 255.255.255.255 as broadcast address'. A red note at the bottom says: 'Notes: PC subnet ID must be the same as the bus subnet ID.' The bottom screenshot shows the 'Remote control' tab. A dropdown menu for 'Connect type' is open, showing options: 'Local Network', 'Local Network', 'P2P', 'Default Server', 'Custom Server', and 'MQTT'. The 'Local Network' option is selected. Both screenshots have a sidebar on the left with a tree view of the project 'Test' and a top menu bar with options like 'File', 'Tool', 'Help', 'Open', 'Import', 'Search', 'Device catalogue', 'IP Config.', 'Scene', 'Automation', 'Transfer Data To Device', 'Upload Project', and a user profile icon.

Regarding "IP Config.", here we take "1P Gateway" as an example to show the basic settings.

A. Click "IP Config."

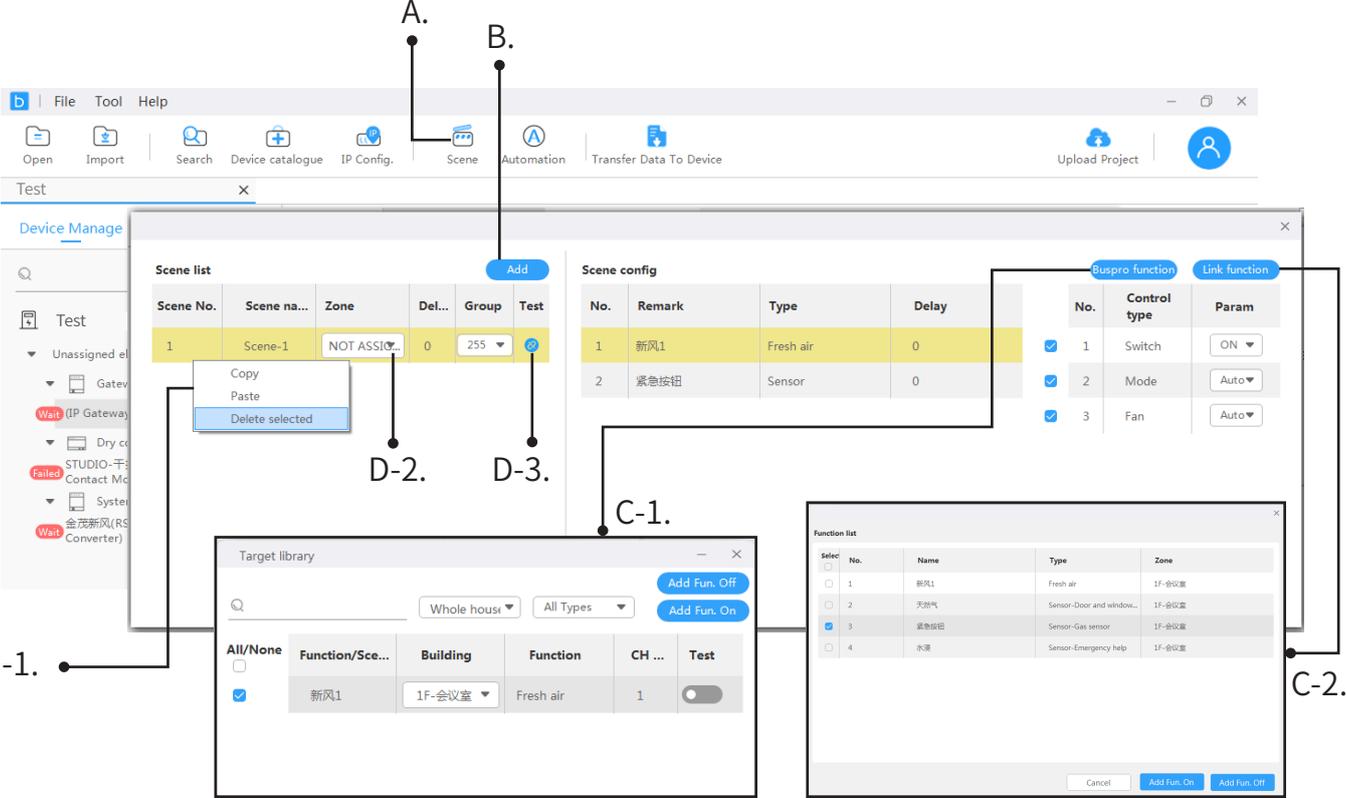
B-1. Click "Current gateway", it indicates gateway-related information. Here you can also revise "PC Subnet ID", "PC Device ID" and select the proper IP.

B-2. Click "Remote control", here you can select "Connect type", such as "Local Network", "P2P", "Default Server", "Custom Server" or "MQTT".

C. Click "Save" to complete configuration.

4. Basic Setting ("Scene")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.



The screenshot displays the software interface for configuring a scene. The main window is titled "Test" and contains several panels:

- Scene list:** A table with columns: Scene No., Scene na..., Zone, Del..., Group, and Test. Row 1 is highlighted in yellow.
- Scene config:** A table with columns: No., Remark, Type, and Delay. It shows two rows of configuration.
- Buspro function:** A table with columns: No., Control type, and Param. It shows three rows of buspro functions.
- Link function:** A table with columns: No., Name, Type, and Zone. It shows four rows of link functions.
- Target library:** A table with columns: All/None, Function/Sce..., Building, Function, CH..., and Test. It shows one row of library items.

Annotations A through D-3 indicate the following steps:

- A:** Click "Scene" in the top menu bar.
- B:** Click "Add" in the Scene list panel.
- C-1:** Click "Add Fun. Off" in the Target library panel.
- C-2:** Click "Link function" in the Scene config panel.
- D-1:** Right-click "Scene 1" in the Scene list panel.
- D-2:** Click "NOT ASSIGNED" in the Scene list panel.
- D-3:** Click the "Test" button in the Scene list panel.

Regarding "Scene", here we take "Add Scene 1" as an example to show the basic settings.

A. Click "Scene".

B. Click "Add".

C. Proceed scene configuration, including C-1. Buspro function, C-2. Link function.

D. From "Scene list", it indicates "Scene 1" which has been added. Proceed scene editing if needed:

- D-1. Right click "Scene 1" to proceed "Copy", "Paste" or "Delete";
- D-2. Assign/Not assign zone for the scene;
- D-3. Test the scene.

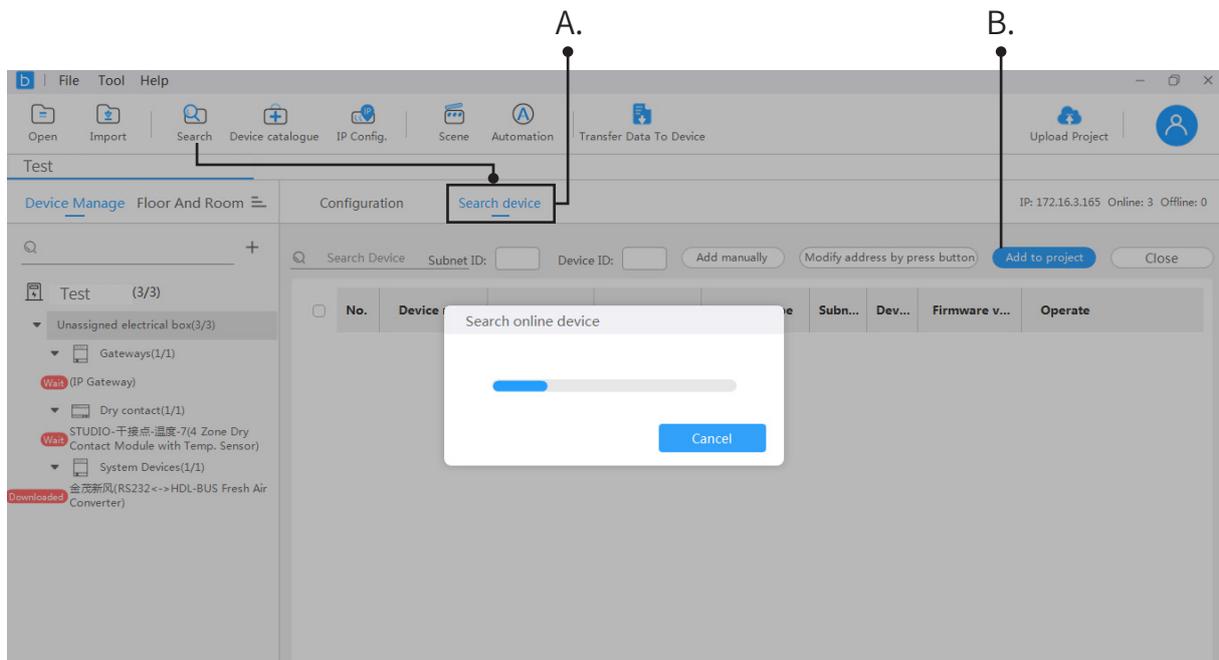
4. Basic Setting ("Search")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

Regarding "Search", please take the followings as reference.

A. Click "Search".

B. Select the desired device after searching, then click "Add to project".



4. Basic Setting ("Upload Project")

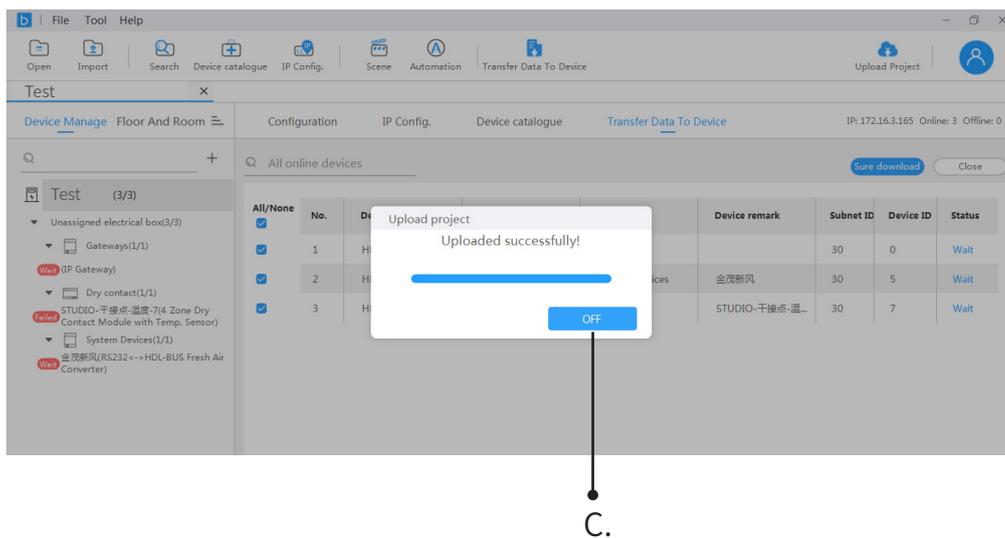
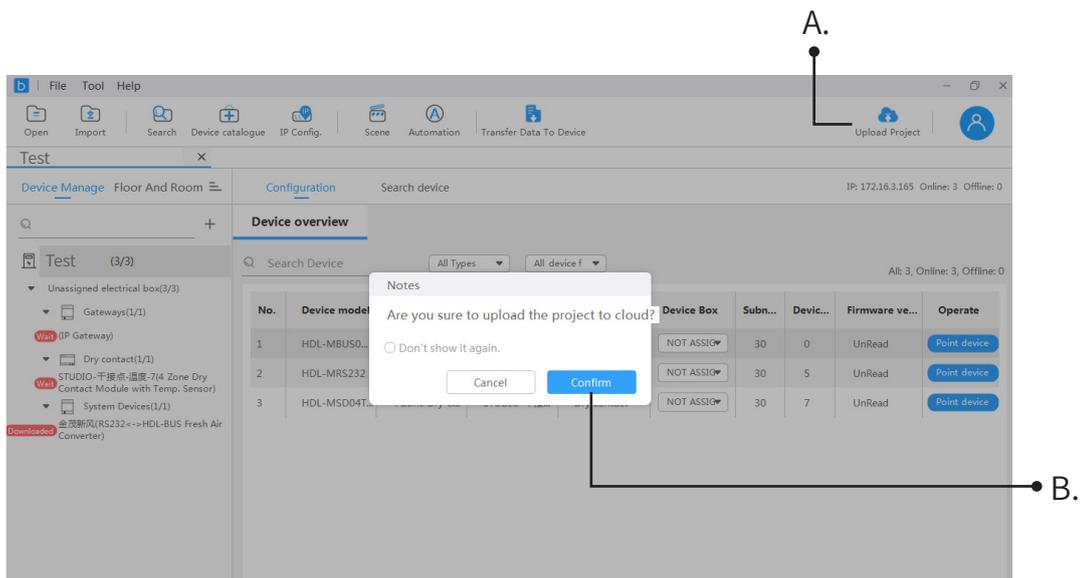
 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

Regarding "Upload Project", please take the followings as reference.

A. Click "Upload Project".

B. Make sure all device data have been saved then click "Confirm".

C. If done, it will prompts "Uploaded successfully". Click "OFF" to complete.



4. Basic Setting ("Upgrading")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

Regarding "Upgrading", please take the followings as reference.

A. Click "Tool", select "Upgrading".

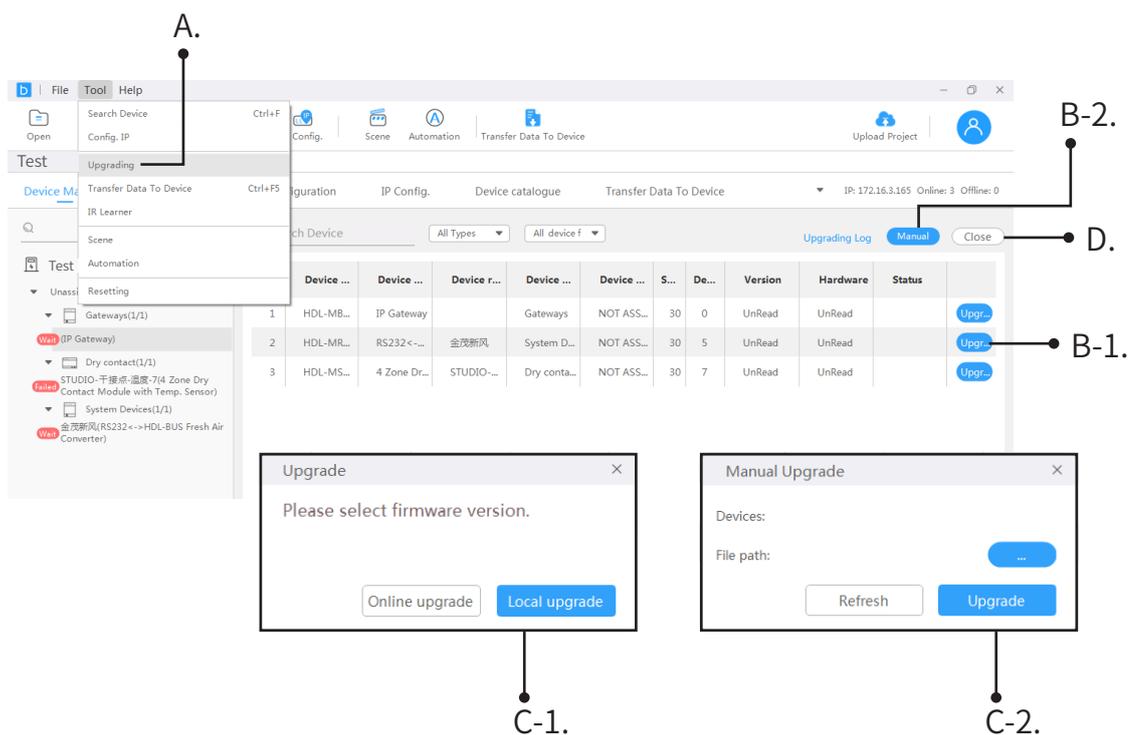
B. Select the desired device then proceed as your need:

- B-1. For auto-update, click "Upgrade".
- B-2. For manually update, click "Manual".

C. Select firmware by following the prompts:

- C-1. Select "Online upgrade" or "Local upgrade" then proceed as prompts.
- C-2. Select "Refresh" or "Upgrade" then proceed as prompts.

D. If done, click "Close" to complete.

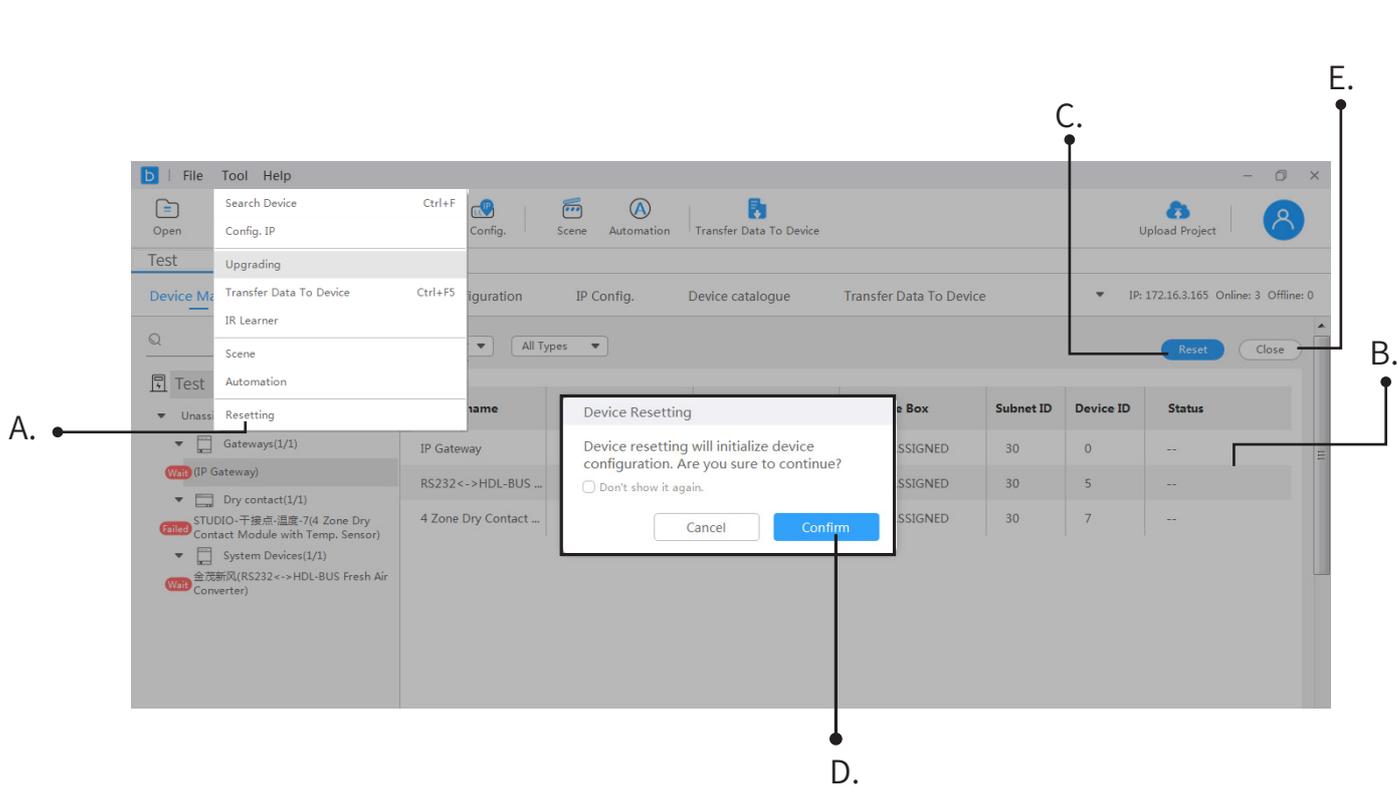


4. Basic Setting ("Resetting")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

Regarding "Resetting", please take the followings as reference.

- A. Click "Tool", select "Resetting".
- B. Select the desired device then proceed as your need.
- C. Click "Reset".
- D. If you sure to continue, click "Confirm".
- E. If done, click "Close" to complete.



4. Basic Setting ("IR Learner")

 Tips: Here as below, we take the project "Test" as an example to show basic and key settings.

Regarding "IR Learner", please take the followings as reference.

A. Conect IR learner with computer by USB. Click "Tool", select "IR Learner".

B. Click "Search IR".

C. Click "Ready", the red & blue indicators of IR learner will be on.

D. Turn your remote control towards IR learner. Press the corresponding button of your remote control. Click "Learn", then in the block "IR Learner", it will show the codes.

E. Click "Test" to test whether the codes are correct.

F. If codes are correct, input IR code remarks.

G. Click "Save to IR Library" to complete.

