HDL® buspro

Tile Series OLED Panel (Buspro)

User Manual

(Applicable for HDL-MPL6B/TILE.48)

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Content

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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	Nov. 06, 2019

1 Introduction

Tile Series OLED Panel (hereinafter referred to as Tile Panel) may be used to control smart devices, including AC, floor heating and fresh air.

This user manual introduces the configuration process of Tile OLED Panel in Buspro Setup Tool 2. The devices include:

➢ Tile Series OLED Panel (Buspro)

➢ Tile Series Power Interface (Model: HDL-MPPI/TILE.48)

➢ A computer with Buspro Setup Tool 2

➢ 1-Port Programming Gateway (Model: HDL-MBUS01IP.431) connected to the router

➢ Dedicated Buspro cables

Notice:

① Please refer to the datasheet attached to the product for the information of installation, wiring, specifications, etc.

② The pictures in this user manual are for reference only. The actual product should prevail.

③ The button functions are shown in Table 1-1 (Please refer to Figure 1-1).

Table 1-1 Button Functions

Button No.	Control Page Function	System Setting Page Function
①, ②	Value adjustment	Move up/down cursor, value adjustment
③	Page switch	Confirm
④	Mode switch	Back
⑤	Turn on/off device	/
⑥	AC fan speed adjustment/floor heating/fresh air channel switch	/

Note: Keep pressing ③ and ⑥ for about 3s to enter panel system setting page.
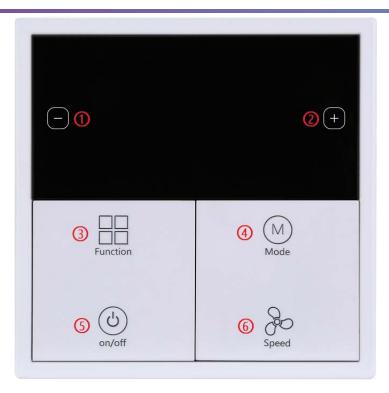
Figure 1-1 Button ID

➢ **How to Enter Configuration Page?**

1. Connect the panel to the system, and open Buspro Setup Tool 2 in the computer.

2. Click "Fast Search".

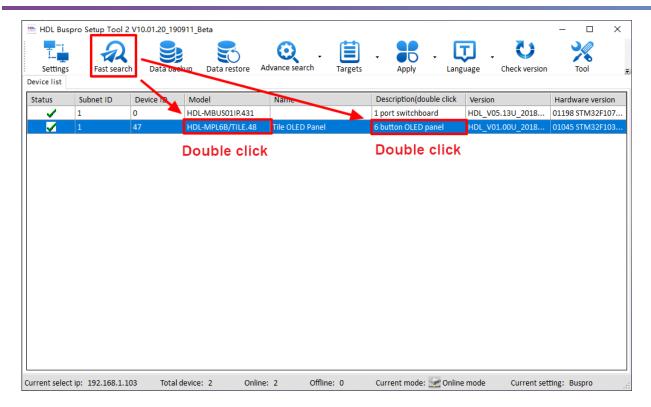3. Double click the "Model" or "Description" column to enter configuration page, as shown in Figure 1-2, Figure 1-3.
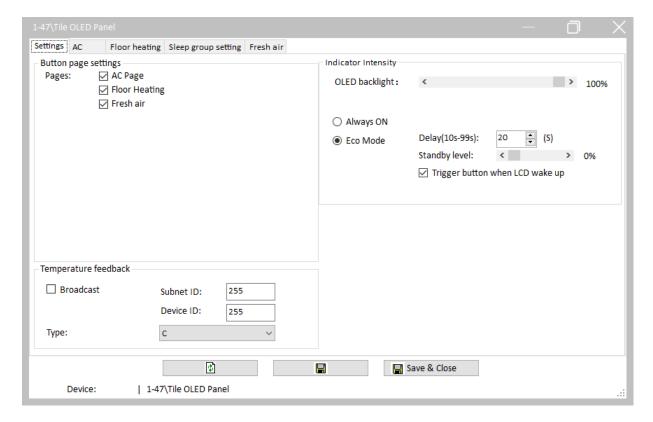
Figure 1-2 How to enter configuration page

Figure 1-3 Configuration page

2 Basic Setting

"Basic Setting" page will be opened by default in configuration page, as shown in Figure 2-1. This page includes the following setting options:

① **Button page setting:** to enable/disable AC, floor heating or fresh air page.

② **Temperature feedback**: Built-in temperature probe in Tile Panel enables temperature detection and the temperature data can be broadcast. Temperature unit can be changed in "Type" column.

Note: Broadcast address is set to subnet ID: 255, device ID: 255. So the subnet ID and device ID on the right are not required to be changed.

③ **Indicator Intensity**:

➢ OLED backlight: to adjust the OLED backlight brightness when in normal status.

➢ Eco mode setting: to set the screen to keep on or enable eco mode. If eco mode is enabled:

Delay: to set the time period between the last operation and entering the eco mode.

Standby level: to adjust OLED brightness in eco mode.

Trigger button when LCD wake up (invalid for now): if enabled, the target will be triggered when wake up the panel by pressing the button; if disabled, when the panel is in energy-saving mode, the first press will wake up the panel, and the second press is to trigger the target.
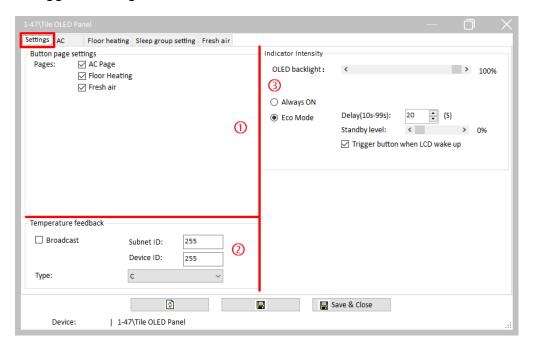

Figure 2-1 Basic Setting page

3 AC Setting

Click "AC" in configuration page, as shown in Figure 3-1.
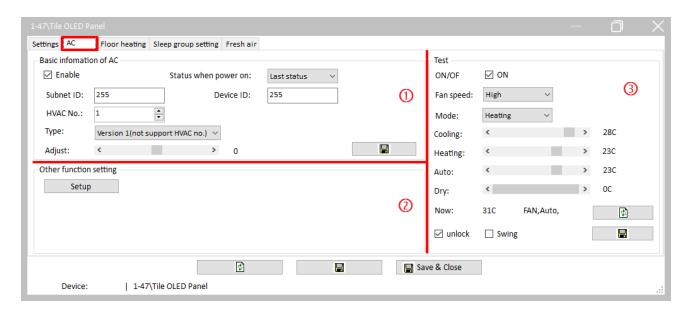

Figure 3-1 AC setting

3.1 AC Basic Information Setting

1. Enable: select to enable AC control function.

2. HVAC No.: enter the AC No. of the AC module to be controlled.

3. Type: select version 2 to enable AC control via HVAC No.

4. Adjust: to adjust temperature data, which ranges from -8℃ to +8℃.

3.2 Other Function Setting

Click "Setting" button in other function setting, as shown in Figure 3-2. This setting window includes the following setting items: Temperature model/range/sensor.
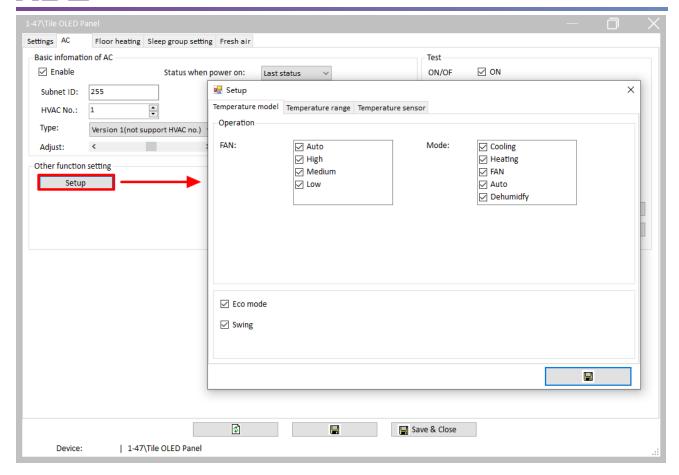
Figure 3-2 Other function setting

3.2.1 Temperature Model

As shown in Figure 3-2, user may enable/disable 4 fan speed level, 5 AC modes and eco mode and swing.

3.2.2 Temperature Range

As shown in Figure 3-3, user may set the minimum and maximum value of temperature control range in cooling/heating/auto/dehumidify mode. The minimum and maximum value can both be set between 0-30℃.
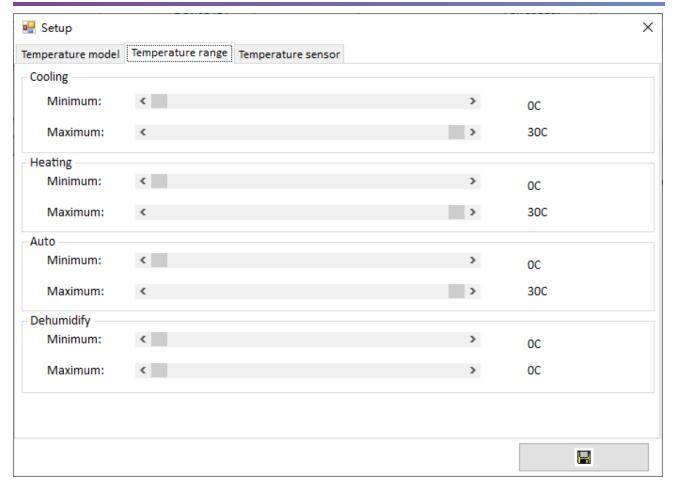
Figure 3-3 Temperature range setting

3.2.3　Temperature Sensor (Invalid for Now)

As shown in Figure 3-4, user may set the temperature data source in this page.

➢ "Internal" means the temperature data from the built-in temperature sensor of Tile Panel.

➢ "External" means the temperature data read from the external device, and the subnet ID, device ID and channel can be set if selected.

➢ "Average of internal and external" means to output the average value of temperature data from the panel and the external device.
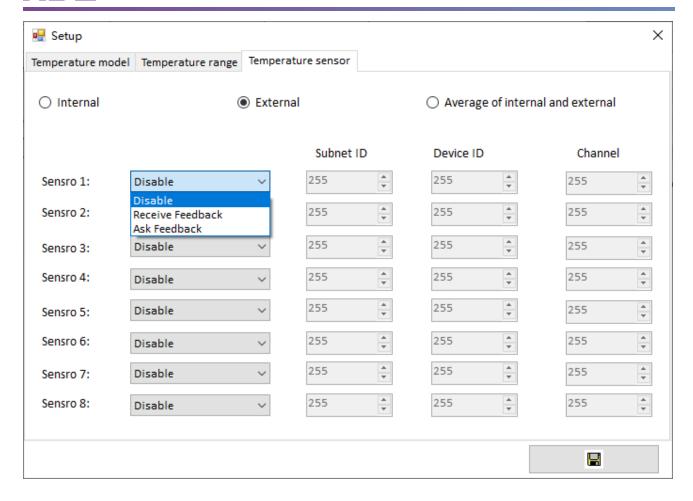
Figure 3-4 Temperature sensor setting

3.3 Test

To test the AC controlled by the panel.

For example, set the fan speed to "High" and click "Save". The fan speed will be switched to high if the configuration is right.

4 Floor Heating Setting

Click "Floor heating" in configuration page, as shown in Figure 4-1. This page includes the following setting items:

① Device information

② Temperature sensor

③ Temperature range
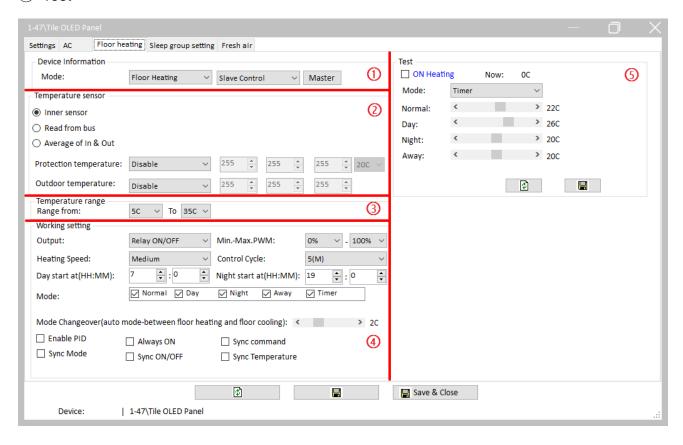
④ Working setting

⑤ Test

Figure 4-1 Floor heating setting

4.1 Device Information

User may set the floor heating device information here.

Device type can be selected in the first pull-down menu, which includes:

➢ Floor heating: to enable floor heating control.

Device working type can be selected in the second pull-down menu, which includes:

➢ Slave control: Tile Panel only sends commands, and the calculation and execution is done by floor heating module.

➢ Fully control: Tile Panel may calculate and send commands to corresponding module to executive.

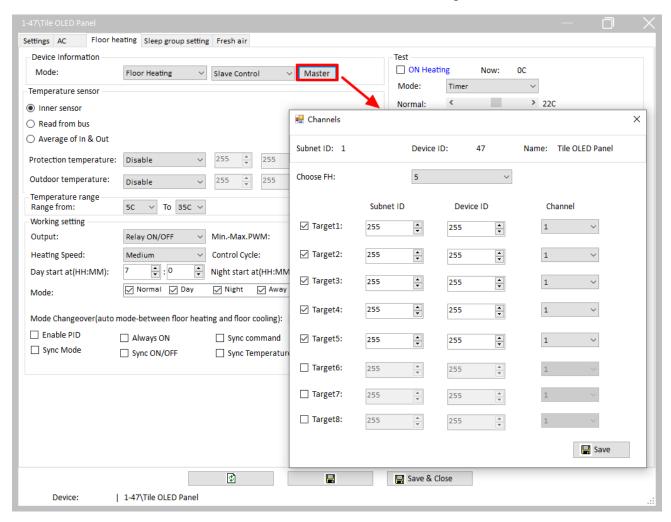Click "Master" button to set master information, as shown in Figure 4-2.

Figure 4-2 Floor heating master setting

4.2 Temperature Sensor

1. Temperature Tata Source:

➢ Inner sensor: to obtain temperature data from the built-in temperature sensor of Tile Panel.

➢ Read from bus (invalid for now): to obtain temperature data from the bus. If selected, the

source device information can be set (up to 2 source devices can be set).

➢ Average of In & Out (invalid for now): to output the average value read from inner sensor and the bus.

2. Protection Temperature Setting

User may set floor heating temperature related information (obtain method, subnet ID/device ID/channel), and select the temperature to enable overheat protection mode. When the obtained temperature is higher than the set temperature, protection mode is activated.

3. Outdoor Temperature Setting (Invalid for Now)

To enable/disable reading outdoor temperature. If enabled, reading method (receive/ask feedback) can be set, and the temperature data source device information can be set, including its subnet ID, device ID and channel.

4.3 Temperature Range

To set the temperature adjustment range, the minimum and maximum value can both be set between 5-35℃.

4.4 Working Setting

1. Output: to select the output type. Relay ON/OFF is to control relay switch, and PWM value is to control target via PWM duty cycle output.

2. Control cycle: the unit is minute.

3. Day/Night start at: if "Auto" is selected below, Day/Night mode is automatically activated when the set day/night time is reached.

4. Mode: to enable the modes of floor heating.

5. Mode changeover: deviation of auto switch between floor cooling/heating can be set here. For example, if base temperature is set to 20, and deviation is set to 3. Then floor cooling will be activated when the temperature is higher than 23 degree, and floor heating will be activated when the temperature is below 17. Base temperature can be set in "Test" part on the right.

6. Other:

➢ Enable PID: Enabling PID leads to precise temperature calculation. It is recommended to enable PID for supported device.

➢ Always ON: user may not turn off floor heating if this is selected.

➢ Sync command: the operation down on this panel will be broadcast to the whole system if selected.

➢ Sync mode: If selected, when another panel sends sync command, this panel can sync the mode selection of the panel which sends the sync command.

➢ Sync ON/OFF: If selected, when another panel sends sync command, this panel can sync the ON/OFF status of the panel which sends the sync command.

➢ Sync temperature: If selected, when another panel sends sync command, this panel can sync the temperature adjustment of the panel which sends the sync command.

4.5 Test

To test the floor heating controlled by the panel.

For example, set the mode to "Away" and click "Save". The floor heating mode will be switched to away if the configuration is right.

5 Fresh Air Setting

Click "Fresh air" in configuration page, as shown in Figure 5-1. This page includes the following options:

1. Device information: Tile Panel supports up to 4 fresh air devices, the subnet ID, device ID and channel of which can be set here.

2. Display type: to set the information to be displayed on Tile Panel (supported device is essential).

3. Channel count: to set the total number of channels.

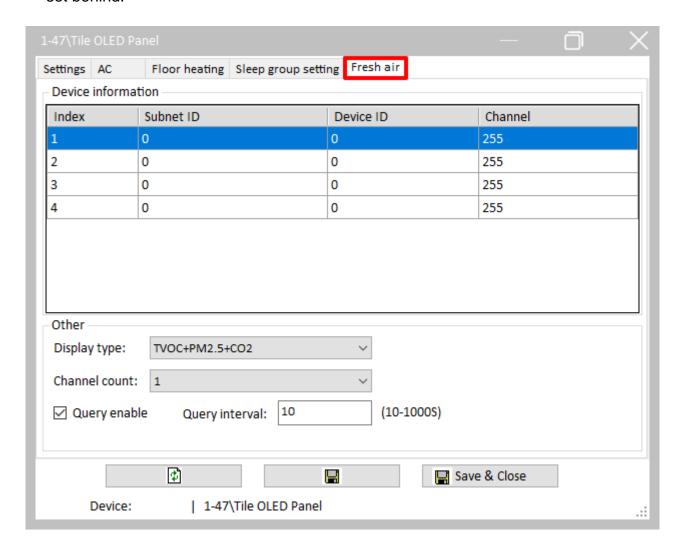4. Query enable: to enable/disable automatic query function, and the query interval can be set behind.

Figure 5-1 Fresh air setting

6 Sleep Group Setting

The panel has two status: Sleep and Standby

➢ Sleep: triggered by command, and the panel will enter sleep mode (similar to pressing the power button for the mobile phone to enter sleep mode)

➢ Standby: in a set period of time after last operation, the system enters standby mode automatically (similar to the mobile phone entering standby mode with no operation for a short period of time)

"Sleep Group" refers to the following situation: if one panel is woke up from sleep/standby mode, other panels in the same sleep group will be woke up as well. Through configuration, one panel can send command for all the panels in the same sleep group to enter sleep mode. Despite that the standby status of the panels in the same sleep group stay independent.

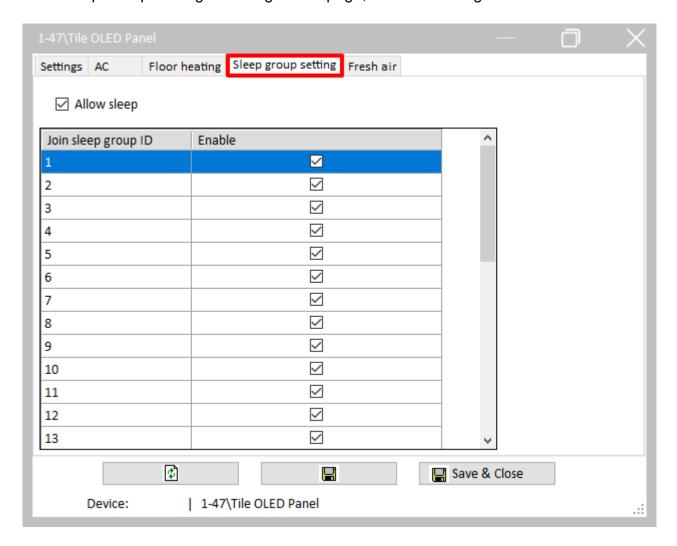Click "Sleep Group Setting" in configuration page, as shown in Figure 6-1.

Figure 6-1 Sleep group setting

Check "Enable" to enable the sleep group function of the panel, otherwise the panel stays independent in the system and its sleep status does not affect other panels.

Add the panel to the corresponding sleep group by selecting "Enable". The system has 32 sleep groups by default. Select "Enable" to add the panel to the corresponding sleep group, and when the panel is woken up, other panels in the sleep group will also be woke up.