

## Smart Edge Touchscreen **Spray** Controller User Manual

In response to market demands and integrating our latest R&D achievements, we are proud to introduce the new generation cloud-edge-device integrated controller — the Smart Edge Spray Controller. This product supports local cabinet control and remote APP control (cloud-based), enabling efficient and flexible seamless management.

The Smart Edge Controller is meticulously designed to ensure stable operation in various complex environments, while adding a modern technological aesthetic to any space.

### Durable & Reliable in Harsh Environments

IP66 rating – dust-tight and protected against powerful water jets

V0 flame-retardant materials – safe and reliable for indoor and outdoor applications

### Clear Visibility with Transparent Design

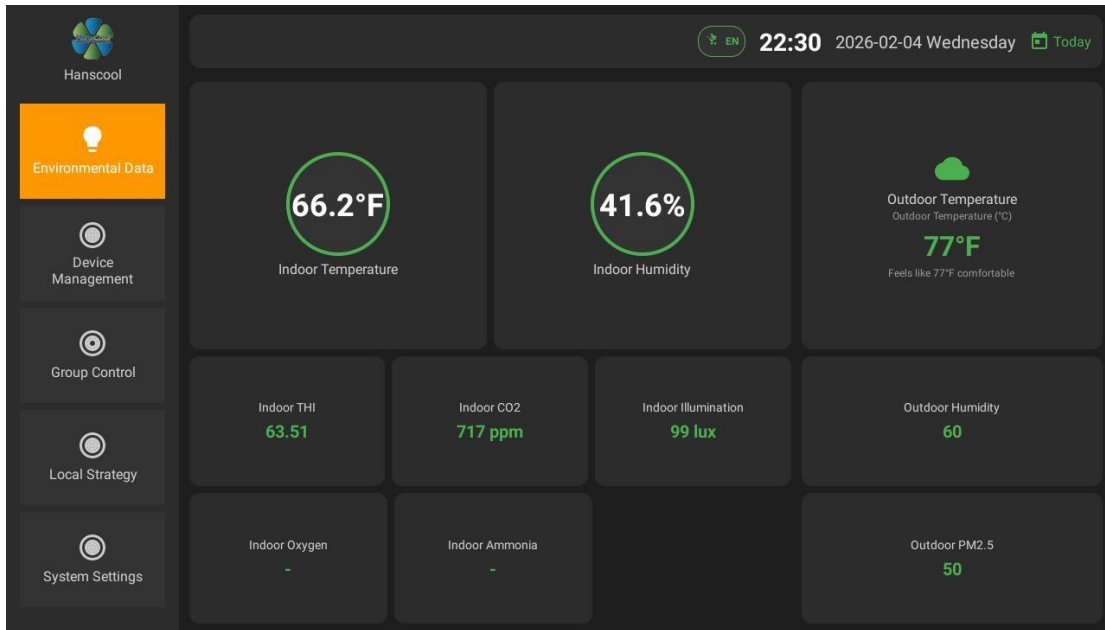
The unique transparent window design, combined with the bracket middle plate, makes device operation status clearly visible — balancing functionality with modern minimalist aesthetics.



## Function Modules

### 1. Environmental Data

The controller seamlessly connects to weather stations and continuously collects and displays key environmental indicators inside the barn, including CO<sub>2</sub>, light, temperature, and humidity. All data is shown as intuitive data cards on the system's home page, helping you grasp the barn environment at a glance and providing real-time, accurate data for informed decision-making.



\*(Figure-1) Environmental Data Interface\*

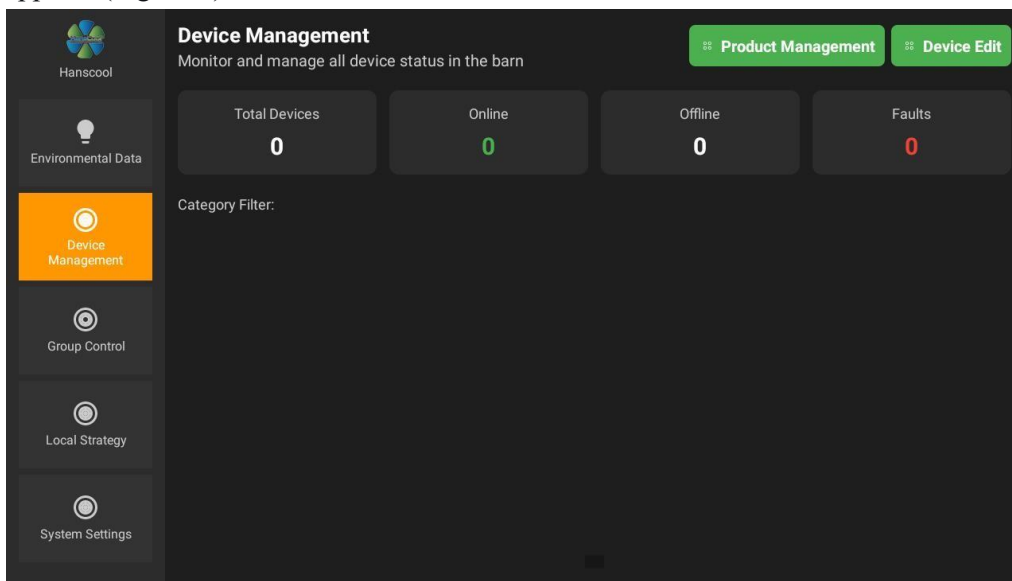
## 2. Device Management

This module manages all spray devices connected to the system. It supports device status monitoring, remote control, parameter adjustment, and automated logic control. Communication is achieved via RS485 signal lines or LoRa wireless modules.

### First-Time Setup Guide

#### 2.1 Initial Status Interface

When the device is first started or no devices have been added, the following guide screen appears (Figure-2).



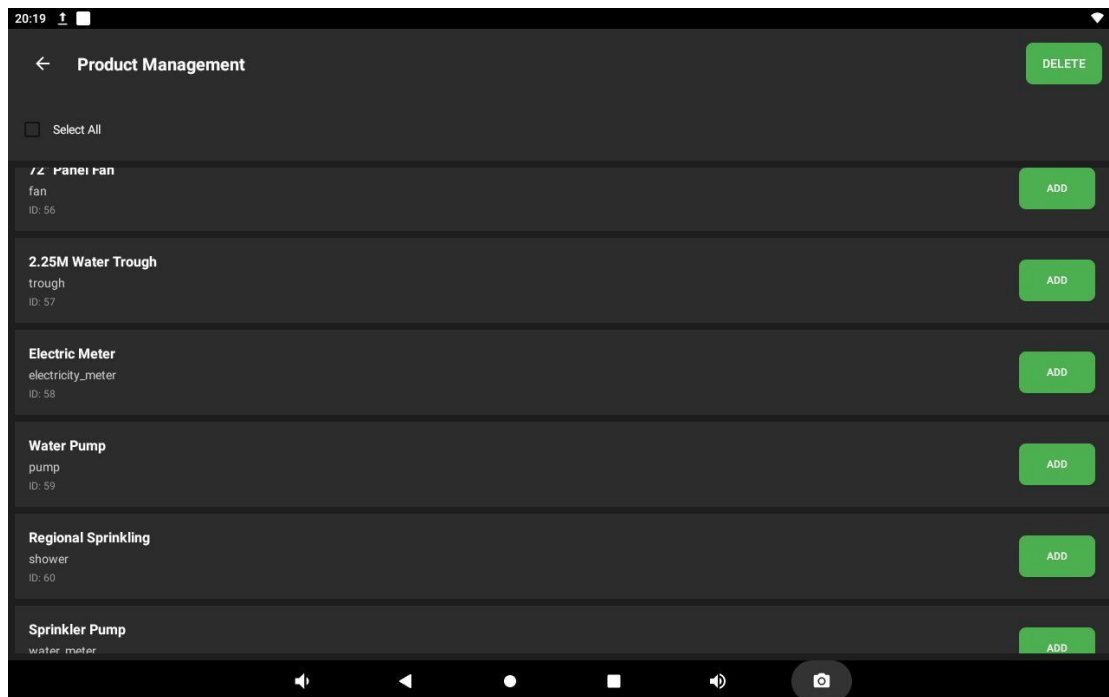
\*(Figure-2) Device Management Interface\*

## 2.2 Network Configuration (Mandatory First Step)

Before adding devices, ensure the controller is connected to the internet and the product type has been successfully added. You can connect via Wi-Fi (swipe down from the top right) or via Ethernet cable inserted into the Ethernet port inside the controller box.

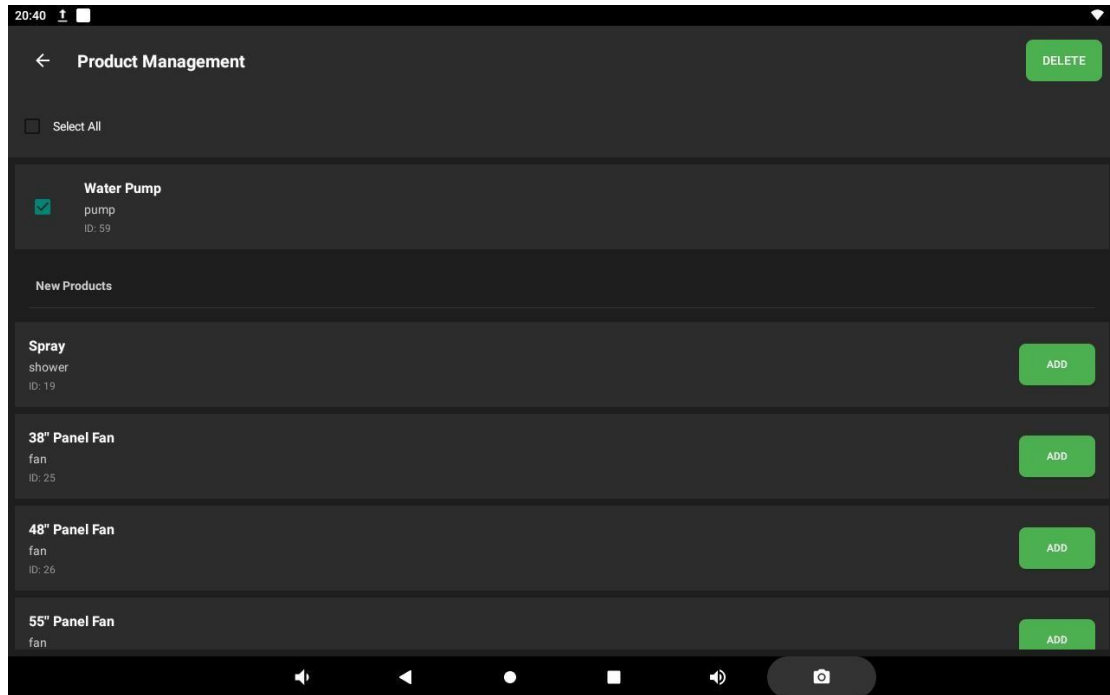
## 2.3 Add Product

First, please note that the product model of the spray device used in this manual is "**Water Pump**". Click the "**Product Management**" button at the top right of picture(Figure-2) to enter the Product Management page (Figure-3). When the device is first started or no devices have been added yet, the page will appear as shown in the figure. Select the desired product from the "**New Products**" list — in this case, the product to be added is named "**Water Pump**". Click the green "**ADD**" button next to the corresponding product to complete the addition.



\*(Figure-3) Product Management Page\*

After successful addition, the product will appear above the "**New Products**" list. To delete a product, select it and click the green "**DELETE**" button at the top right (Figure-4).



\*(Figure-4) Delete Added Product\*

## 2.4 Add Device

After adding the product, return to the initial interface (Figure-2) and click "Device Edit" at the top right.

The device management page (Figure-5) contains four green buttons:

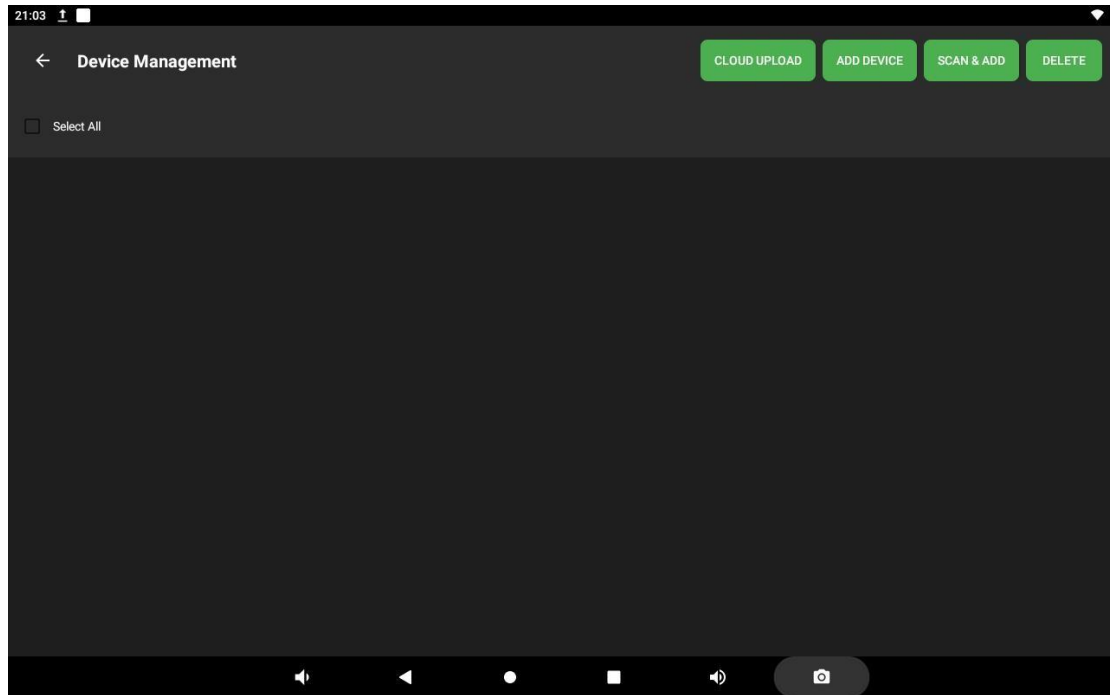
**CLOUD UPLOAD**

**ADD DEVICE**

**SCAN & ADD**

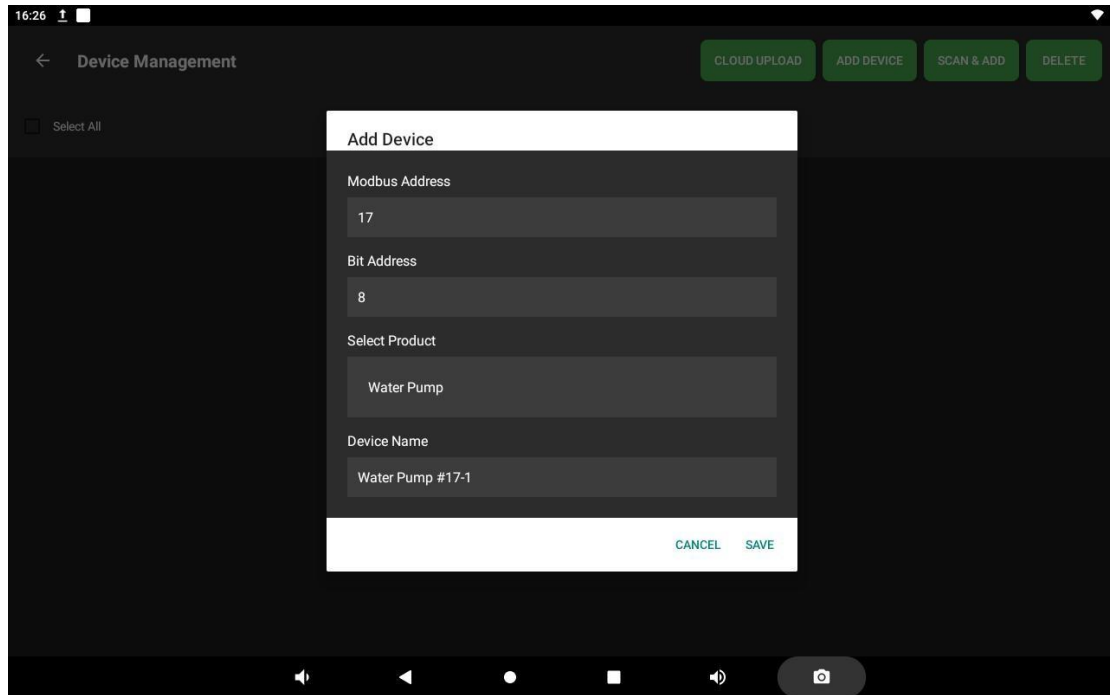
**DELETE**

*Note: CLOUD UPLOAD requires an active network connection.*

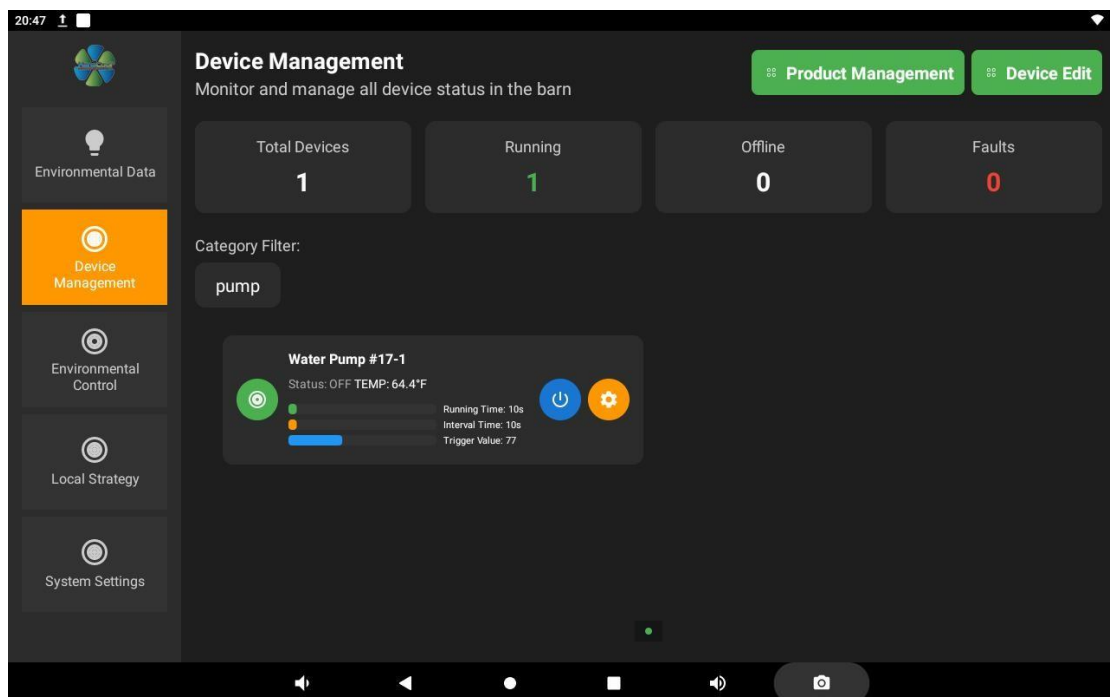


\*(Figure-5) Device Management Page\*

The fogging device currently supports only manual addition. Click "**ADD DEVICE**" to open the popup shown in Figure-6. In the popup, "**Modbus Address**" refers to the Modbus address of the spray panel(Inside the electrical box). In the "**Bit Address**" field, enter any value between 8 and 15. Each value can only be used once under the same Modbus address. Typically, one spray panel controls six fogging lines. It is recommended to start with bit address 8 for the first fogging line, bit address 9 for the second spray line, and so on. The content under "**Select Product**" is pre-filled by default and cannot be modified. There are no restrictions on the "**Device Name**" field. It is recommended to follow the naming format: #17-1". "Product Name #Modbus Address-spray Line Number", for example: "Water Pump #17-1". After successful addition, the device list will appear as shown in Figure-7.



\*(Figure-6) Manual Add –Fogging device\*

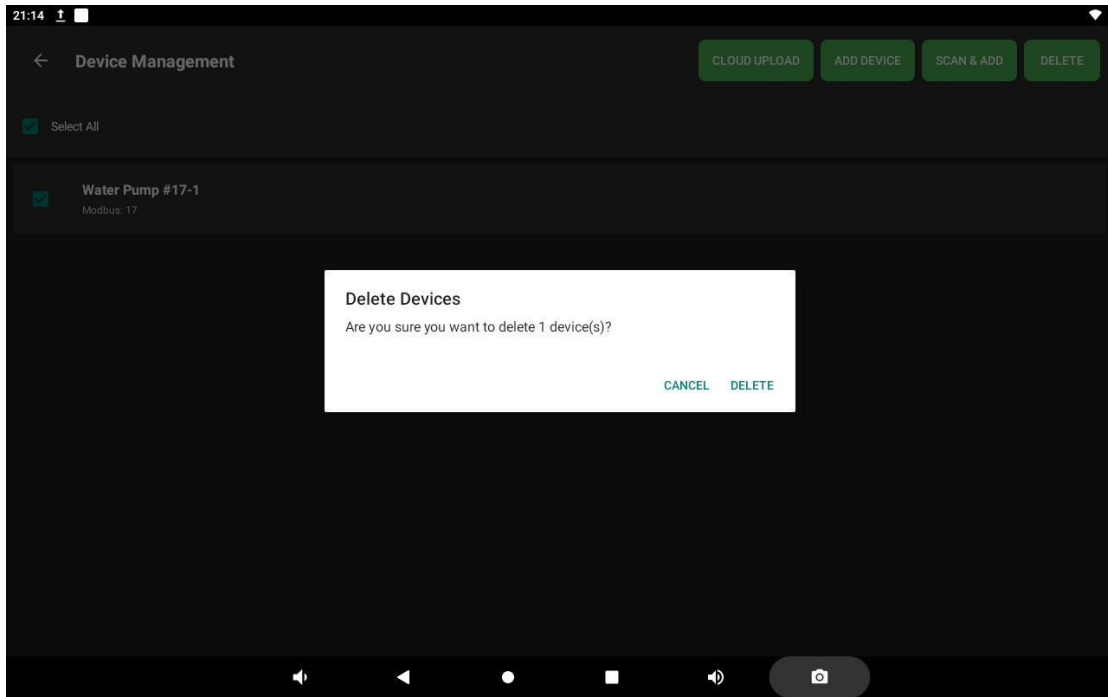


\*(Figure-7) Device List After Adding Water Pump\*

## 2.5 Delete Device

Select the device and click the green "DELETE" button.

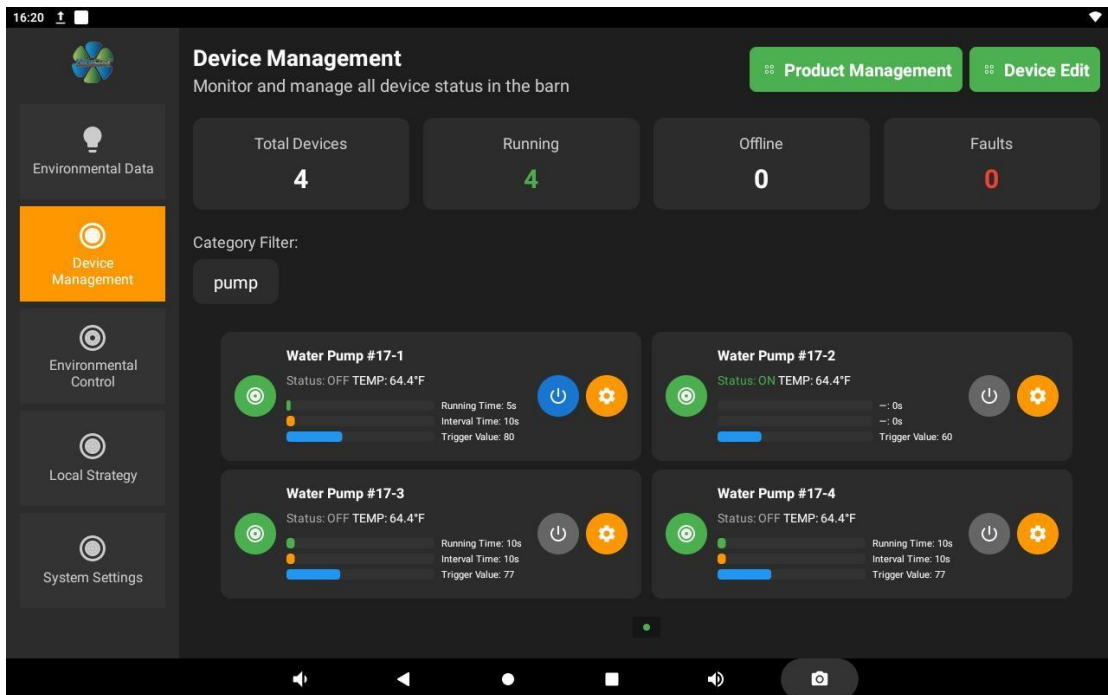
A confirmation popup appears (Figure-8). Confirm to remove the device.



\*(Figure-8) Delete Device\*

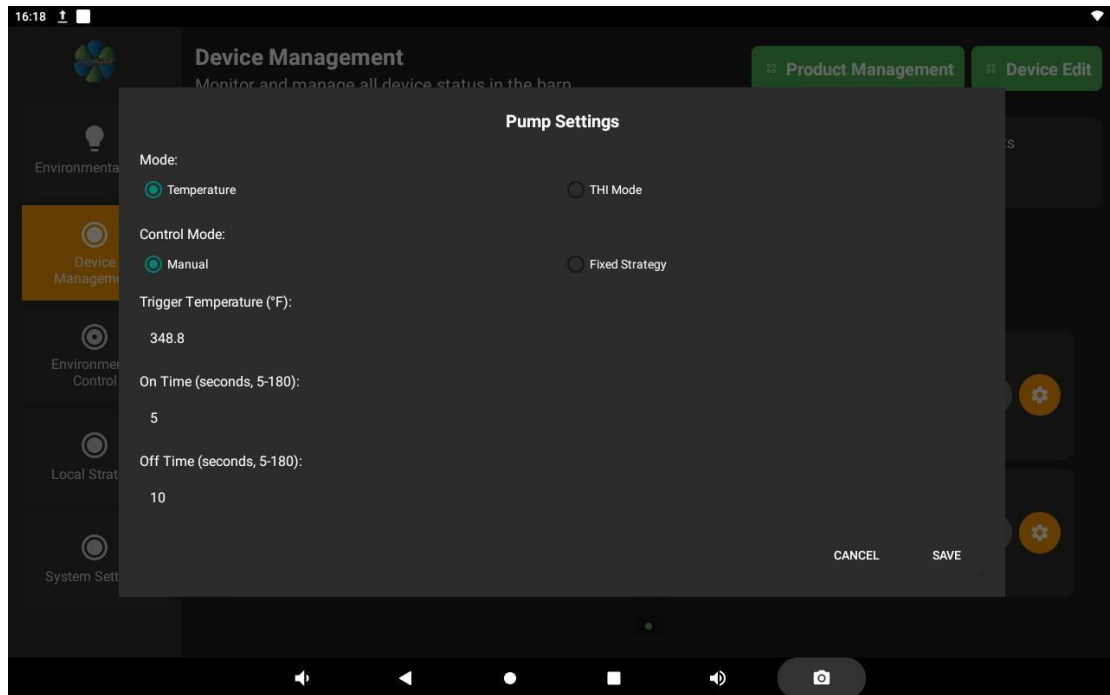
## 2.6 Using Devices

**On/Off Control:** When the device is off, the button appears gray, and the spray on the corresponding channel of the main board stops. Click once, the button turns blue, and the spray on the corresponding channel will continuously spray water, as shown in Figure-9.



\*(Figure-9) Manual On/Off Control Page for Spray Device\*

**Settings Options:** Click the orange-yellow settings button to open the settings popup as shown in Figure-10. Under "**Control Mode**", there are two options: "**Manual**" and "**Fixed Strategy**". "**Manual**" means controlling the start and stop of the spray device by manually clicking the on/off button on the device card. When this option is selected, the fields below — "**Trigger Temperature**", "**On Time**", and "**Off Time**" (items used under automatic strategy control, which will be explained later) — will not take effect.



\*(Figure-10) Spray Strategy Settings Popup\*

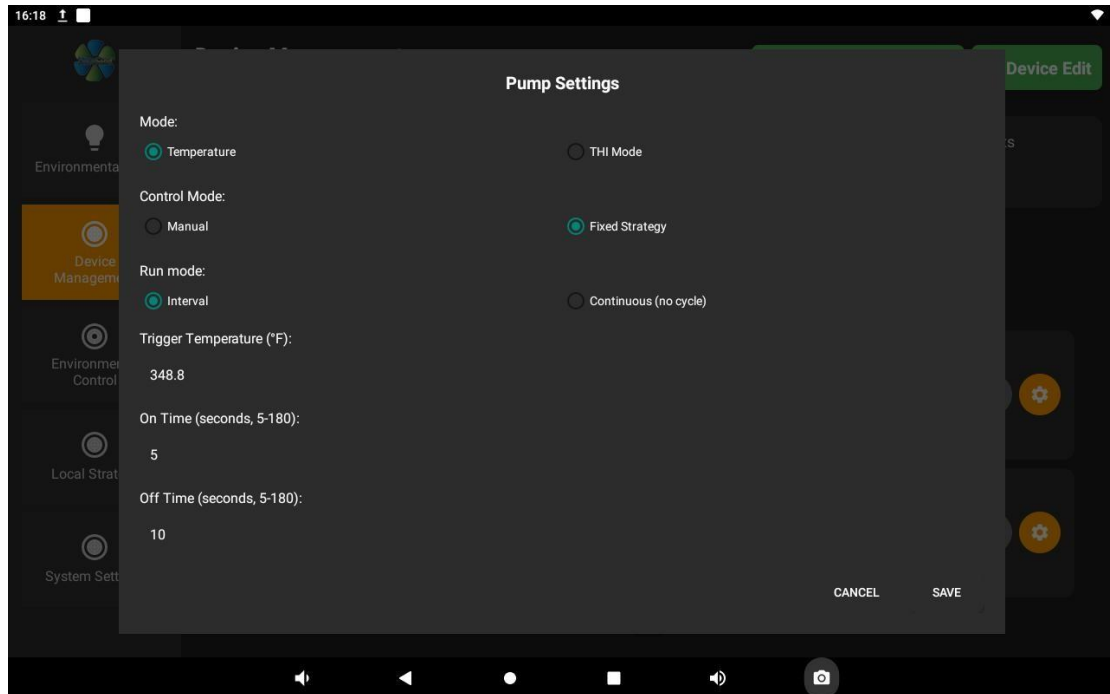
"**Fixed Strategy**" means the device is automatically controlled based on the strategy, without requiring manual pressing of the on/off button. When selected, the "**Trigger Temperature**" field appears at the bottom. When the **temperature** or **THI** value exceeds the value entered in this field, the automatic control strategy will run.

Automatic control will operate the specified spray device based on the option selected under "Mode" — either by "**Temperature**" value or "**THI**" value. The following explanation assumes the "Temperature" option is selected.

After selecting "**Fixed Strategy**", the "**Run mode**" field also appears on the page, with two options: "**Interval**" and "**Continuous (no cycle)**", as shown in Figure-11.

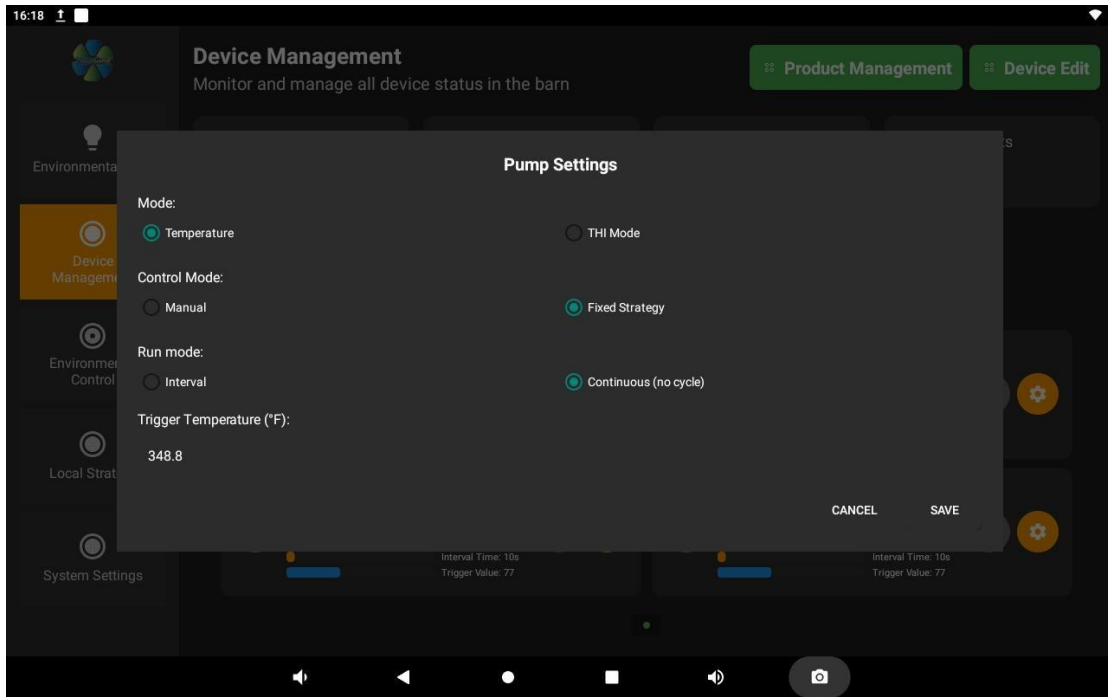
"**Interval**" means that when the spray device runs according to the strategy, it will spray for a period of time (e.g., 5 seconds), then stop for a period of time (e.g., 10 seconds), then spray

again for 5 seconds, stop for 10 seconds, and so on in a repeating this cycle manner. When "Interval" is selected, two additional fields appear at the bottom: "On Time" and "Off Time", as shown in Figure-11, corresponding to the spray duration and pause duration respectively.



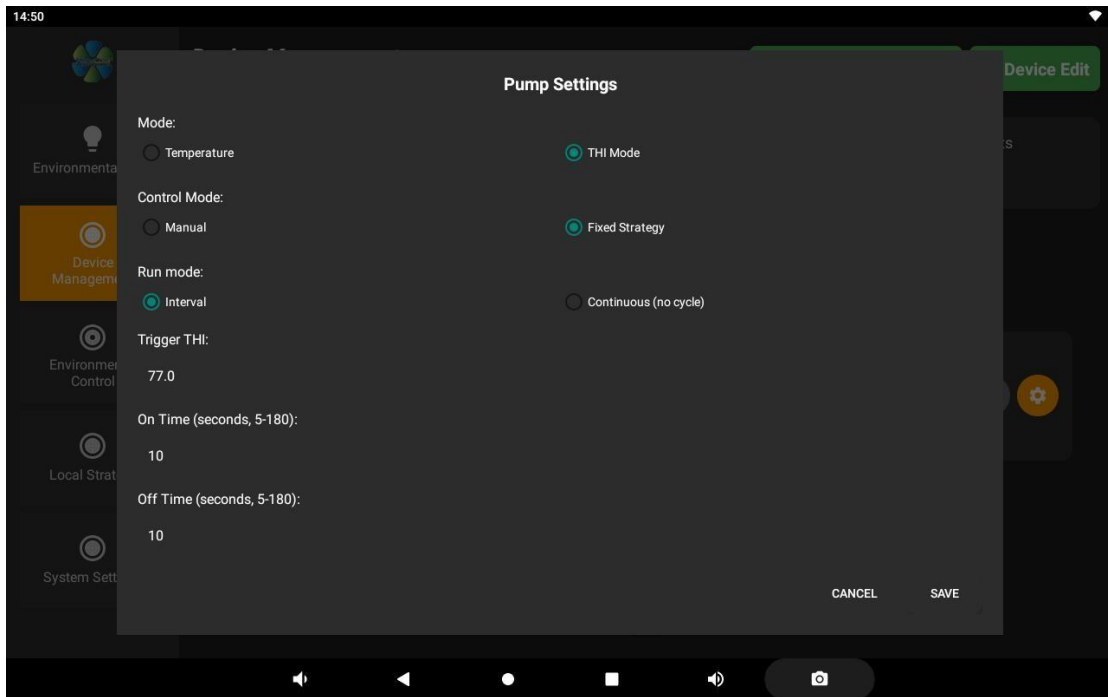
\*(Figure-11) Interval Mode Selected Under Temperature Strategy Control\*

"Continuous (no cycle)" means that when the automatic operation meets the set spray condition, the spray device will spray continuously without any stop interval as described above. The "On Time" and "Off Time" fields will not be displayed on the page, as shown in Figure-12.



\*(Figure-12) Continuous Mode Selected Under Temperature Strategy Control\*

The page after selecting "THI Mode" under the "Mode" field is shown in Figure-13. The remaining operations are the same as those described above for the "Temperature" option and will not be repeated here.



\*(Figure-13) Interval Mode Selected Under THI Strategy Control\*

### 3. Group Control

Currently, the group control function only supports fan and ceiling fan type devices. Spray devices are not supported at this time.

### 4. Local Strategy

Currently, the group control function only supports fan and ceiling fan type devices. Spray devices are not supported at this time.

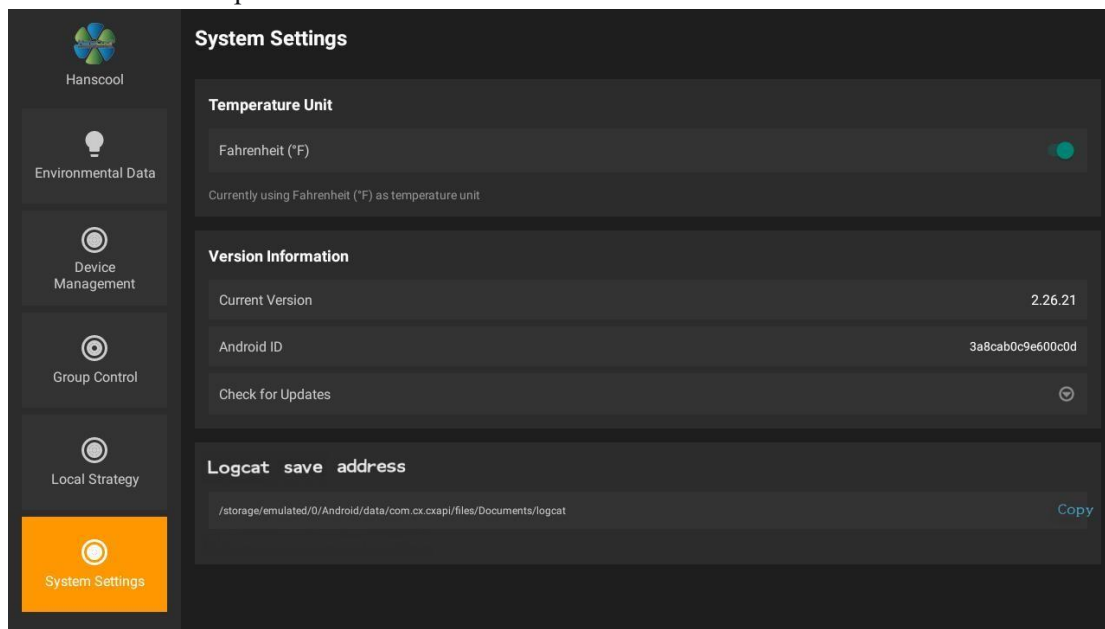
### 5. System Settings

The System Settings page allows you to:

Switch temperature units (°C / °F)

View system info (version, Android ID, etc.)

Click "Check for Updates" to detect and install new versions



\*(Figure-14) System Settings Interface\*

### 6. Cloud-Edge-Device Sync (Optional)

Currently, the group control function only supports fan and ceiling fan type devices. Spray devices are not supported at this time.