User Manual

PigCounter

AI Pig Counting System · Web Dashboard (Network Edition)



Camera and counter unit

Package contents: 1 × AI camera + 1 × counter unit (main unit)

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Features & Specifications

PigCounter AI Pig Counting System

Thank you for purchasing the MIC PigCounter. It uses AI camera detection to count pigs in real time as they pass through a passageway, and estimates body length, shoulder width and weight.



Features:

✓ Real-time AI pig counting with edge AI computing in the main unit.
✓ Estimates body length, shoulder width and weight of each pig.
✓ Large LED display: running count, average length, date and time.
✓ Web dashboard on any phone or computer (pigcounter.local) – no app needed.
✓ Every session is recorded as video; per-pig records for checking the count.
✓ Data uploaded to the MIC cloud through the supplied router.

!!Caution!!

Do not open the main unit or the camera. Unauthorized opening or modification voids the warranty.

Standard Package Includes:

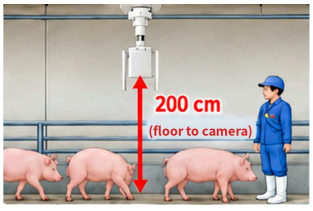
1 × AI camera, **1 × counter unit** (main unit with LED display) and **1 × router** (Cudy WR300), plus the Quick Start Guide and this user manual.

Specifications

Product	PigCounter AI Pig Counting System	
AI functions	**Counting**	Real-time pig count (in / out direction)
	Measurement	Body length, shoulder width, estimated weight
	Mode	Video (AI camera detection)
Installation	**Camera height**	2 m (200 cm) from the floor to the camera, pointing straight down
	Lighting	At least 300 lux in the passageway
	Pigs in frame	Many pigs at once are fine – they only need to not overlap
Main unit	**Dimensions**	300 × 400 × 120 mm
	Weight	Approx. 4.5–5 kg
Display	**LED panel**	HEADS count (up to 9999), average length, date/time
	Dashboard	http://pigcounter.local (Chrome recommended); live preview max 2 phones
Network	Cudy WR300 router in WISP mode (connects to the customer's 2.4 GHz Wi-Fi)	
Languages	Traditional Chinese + English, English, Thai, Vietnamese, Japanese, Filipino, Bahasa Indonesia, Bahasa Melayu	
Power	**110–240 VAC, 50/60 Hz**	

Installation (Steps 1–5)

Follow the steps in order. The system uses AI to count pigs and estimate body length, shoulder width and weight in real time.

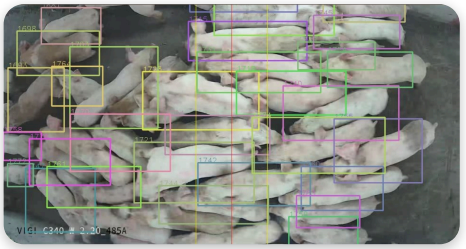
Step	What to do	Picture
1. Prepare the equipment	Prepare all components of the system (camera, main unit, router). Install the camera.	
2. Lighting	The passageway must be well lit: **at least 300 lux**. If daylight is not enough, add LED lighting. Avoid backlight and dark areas.	
3. Camera height	Mount the camera **2 m (200 cm) from the floor**, aiming straight down. Many pigs in the frame are no problem, as long as they do not overlap.	
4. Camera angle	Mount above the passageway, pointing **straight down**, with the pigs centred in the frame. Keep the view clear: a tilted or blocked camera gives wrong counts.	
5. Main unit and power	Fix the main unit in a stable place (wall or control box). Power supply: **110–240 VAC, 50/60 Hz**. Size 300 × 400 × 120 mm, approx. 4.5–5 kg.	

IMPORTANT – Installation

- Keep the camera lens and passageway clean. Avoid strong backlight, darkness and obstructions for the best accuracy.
- Do not tilt the camera. A tilted angle makes AI counting inaccurate (“Incorrect (Tilted Angle)”).

IMPORTANT – No blind spots

Install the camera so it records the **whole passage width clearly**, from one side to the other, with **no blind spots** (dead angles). Pigs that walk outside the picture, or in dark or blocked corners, are not counted. After installing, tap **Show Live Preview** on the dashboard and check that the whole passage is visible. **When there are no blind spots, measure again from the floor to the camera.** If it is not 2 m (for example higher), enter the measured height (cm) at **pigcounter.local** (see P9, marked in red). This keeps the count correct and the weight estimate more accurate.



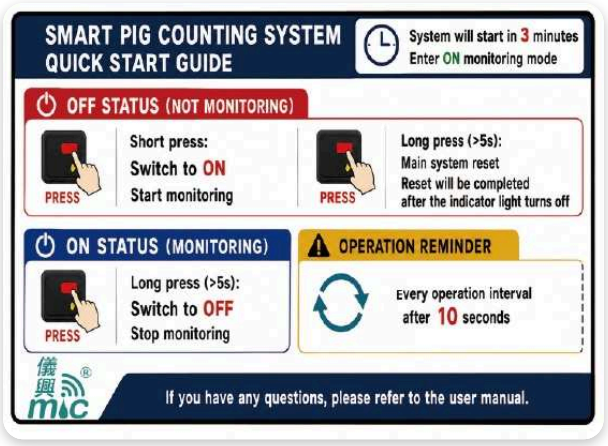
× Wrong: blind spots – passage not fully covered

Installation (Steps 6–9) & Button

Step	What to do	Picture
6. Phone connection	Set up the router first (P5–P6). Connect your phone to the same Wi-Fi, then open **http://pigcounter.local** to see live video and counting results.	
7. Power on	Switch on the main unit (switch at bottom left). The LED display shows the pig count and time; the top-right corner shows **ON**.	
8. Start counting	Let the pigs walk through the passageway. The count appears live on the LED display and the web page.	
9. End counting	When all pigs have passed, counting stops automatically. The LED display shows **OFF** and stays in standby.	

Main Unit Button

The button switches the unit between OFF (not monitoring) and ON (monitoring). It can also be operated from the web page (P8).



Quick Start Guide supplied with the unit

Unit is...	You do...	Result
OFF (not monitoring)	Short press	Switches ON and starts counting.
ON (monitoring)	Hold more than 5 seconds	Switches OFF and stops counting.
OFF (not monitoring)	Hold more than 5 seconds	Main system reset. Done when the indicator light goes off.

- After power-on, the system needs about **3 minutes** to start, then enters ON.
- Wait at least **10 seconds** between button presses.

Note

A long press does different things in each state: in OFF it resets the system, in ON it stops counting. Check the state first.

Router Setup (1)

The supplied **Cudy WR300 router** works in **WISP** mode: it joins the customer's Wi-Fi to reach the internet, and gives the PigCounter its own network, **WIFI-MIC**. Do this at installation and whenever the customer changes their Wi-Fi name or password.

IMPORTANT – Connect your phone to WIFI-MIC first

The router page (**192.168.10.1**) only opens when your phone is connected to **WIFI-MIC**. It does not open from the customer's Wi-Fi or mobile data.

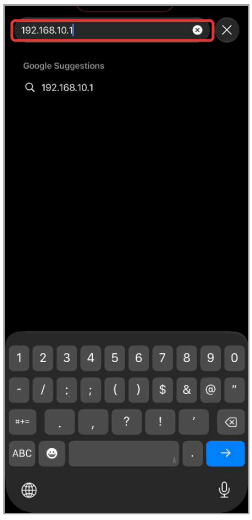
IMPORTANT – Do not touch the router inside the box

Do not press or touch the Wi-Fi router inside the box by accident (especially its reset button). If the router is reset by accident, its Wi-Fi name is no longer **WIFI-MIC**: connect your phone to the router's default Wi-Fi (name on the router label), open **192.168.10.1**, change the Wi-Fi name back to **WIFI-MIC**, then do the WISP steps (P5–P6) again.

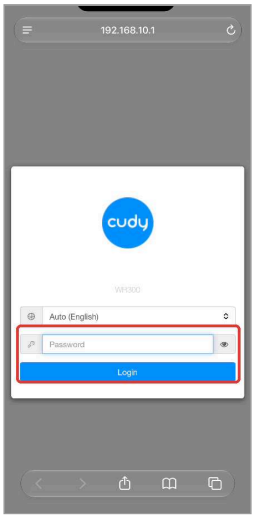
You need	Where to get it
Customer Wi-Fi name and password	Farm owner or the customer's IT person.
Router admin password	MIC or your installer (not printed here; keep it private).
A 2.4 GHz customer network	The WR300 cannot see 5 GHz-only networks.



1 Join WIFI-MIC



2 Open 192.168.10.1



3 Log in



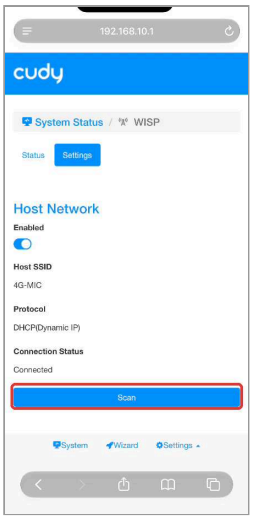
4 Open WISP

1. **Connect to WIFI-MIC (required).** Power on the router and wait 1 minute. In the phone's Wi-Fi settings, join **WIFI-MIC**. Turn off mobile data. "No internet" is normal – stay connected.
2. **Open 192.168.10.1.** Still on WIFI-MIC, open Chrome or Safari and type **192.168.10.1** in the address bar (not 192.168.1.1). Does not open? Go back to step 1.
3. **Log in.** Enter the router admin password and tap **Login**. The System Status page opens.
4. **Open WISP.** Scroll down to the **WISP** card and tap **More Details**.

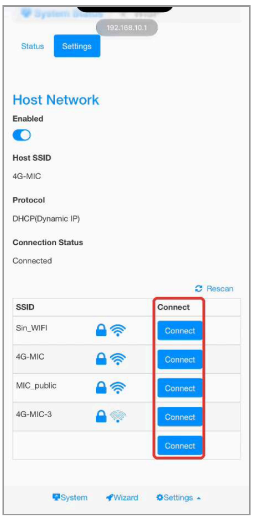
Router Setup (2)



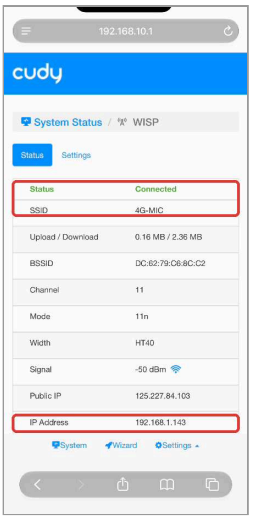
5 Settings tab



6 Scan



7 Connect



8 Connected

5. **Open the Settings tab** on the WISP page.
6. **Scan.** Leave **Enabled** on and Protocol **DHCP**. Tap **Scan** and wait until 100 %.
7. **Connect.** Find the customer's network in the SSID list and tap **Connect** on that row. Enter the customer's Wi-Fi password and confirm. Not listed? Tap **Rescan**. If your phone drops off, reconnect it to **WIFI-MIC**.
8. **Check.** System › WISP › More Details: **Status: Connected**, SSID shows the customer's network, and there is an IP address. Then open the dashboard (P7) and check **MIC Upload: OK HTTP 200**.

Note: Only change the WISP host network. Leave LAN (192.168.10.1), DHCP Server and Wireless (WIFI-MIC) as delivered.

Router Troubleshooting

Problem	What to do
192.168.10.1 does not open	Phone is not on WIFI-MIC. Join WIFI-MIC, turn off mobile data, check the router has power.
WIFI-MIC not in the Wi-Fi list	Check router power, wait 1 minute, move closer. Router reset by accident? See the box on P5.
Customer network not listed	Rescan; move the router closer; check the network has 2.4 GHz.
Status not Connected	Wrong password (case-sensitive). Repeat steps 6–7.
Connected, MIC Upload not OK	The network may block new devices (guest login, MAC filter). Ask the customer's IT, then contact MIC.

Dashboard & Daily Counting

1. Turn on the Dashboard

- Make sure your phone or computer is on **WIFI-MIC** (the router's Wi-Fi).
- Scan the QR code or type **http://pigcounter.local** in a browser (Chrome recommended). No app is needed.
- Log in with the account supplied by MIC or your installer.
- A green **Online** badge at the top right means you are connected.
- A warning icon in the address bar is normal for a local address.

pigcounter.local

2. Daily Counting Routine

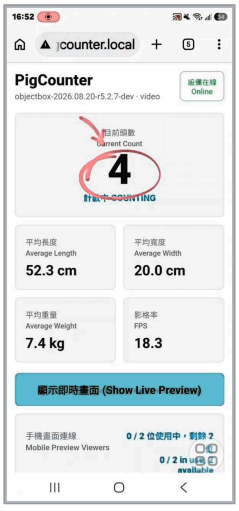
#	Do this	Check
1	Open pigcounter.local.	Green Online badge at top right.
2	Tap **Reset**, then OK.	Current Count shows 0, status "Reset".
3	Tap **Start** (green).	"Start command accepted", status "Counting".
4	(Optional) Tap Show Live Preview.	Camera view clear, green boxes on the pigs.
5	Move the pigs through the passage.	Count and averages go up live.
6	When all pigs have passed, tap **Stop** (red).	Status "Stopped". Numbers are kept.
7	Compare Current Count with the real number.	If different, see P10 and P14.
8	(Optional) Recording History › Download Video.	Keeps a video proof of the batch.
9	Next batch: go back to step 2. End of day: close the browser, or hold Shutdown 3 s to power off.	

IMPORTANT – Reset to 0 for every session

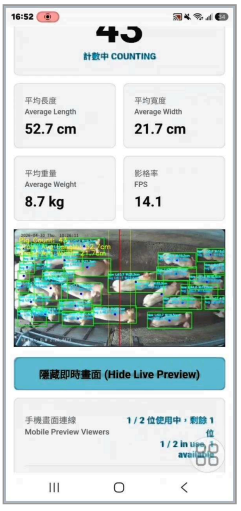
Always tap **Reset** (count 0) before each new session or batch. Otherwise the new pigs are added to the previous total and the count and averages are miscalculated – on the dashboard, the LED panel and the cloud (P13). Do not tap Reset while pigs are still passing.



Ready: count 0



Counting



Live preview

The Dashboard Screen

Item	What it means
Online	The page is connected to the device. If it turns grey, numbers stop updating.
Gear icon	Opens Settings: language, timezone (P9).
Current Count	Pigs counted so far. Status: Reset, Counting, Stopped.
Avg. Length / Width / Weight	Averages of the pigs counted so far (cm, cm, kg). "--" before any pig passes.
FPS	Camera processing speed. About 14–20 is normal.
Show / Hide Live Preview	Live camera with green boxes per pig (ID, length L, width W) and the red counting line.
Mobile Preview Viewers	How many phones are watching live (max 2).
MIC Upload	"OK HTTP 200" = data uploaded to the cloud.
Recording	"Recording" during a session, "Saved" after Stop, plus free storage (GB).
Measurements / Mode	Number of records so far / operating mode (video).
Meter Timezone	Set in Settings (P9). Controls all times shown.
Network Time	"Synchronized" = device clock is correct.

Control Buttons

Button	What it does
Start (green)	Starts counting and video recording.
Stop (red)	Stops counting and saves the video. Count, averages and records are kept.
Reset (grey)	After confirmation, clears count, averages and per-pig records. Does not delete videos.
Shutdown (red)	Hold 3 seconds to power off safely (maintenance or moving). For a normal end of day, use Stop.



Status list



Control buttons

Settings

Tap the **gear icon** next to the green Online badge to open Settings. Tap **Back** (top right) to return.



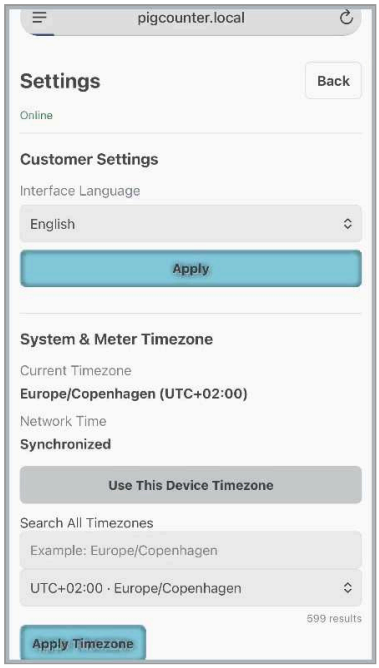
Tap the gear icon

1. Interface Language

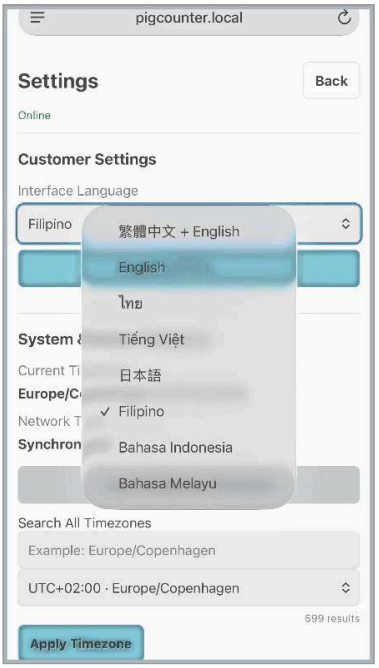
- Under Customer Settings, tap **Interface Language** and choose: Traditional Chinese + English, English, Thai, Vietnamese, Japanese, Filipino, Bahasa Indonesia or Bahasa Melayu. Tap **Apply**.

2. System & Meter Timezone

- **Current Timezone** shows what is set now. Network Time should say Synchronized.
- Quick way: tap **Use This Device Timezone**.
- Or use **Search All Timezones** / scroll the list, choose the place where the unit is installed, then tap **Apply Timezone**.
- The timezone sets every time shown (preview clock, records, recording file names).



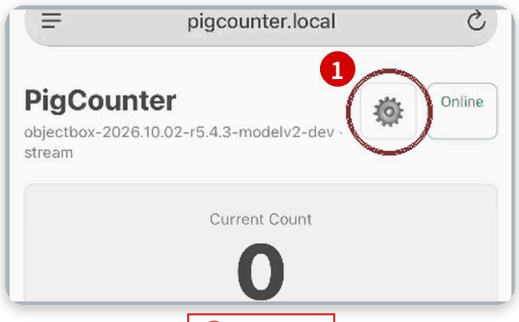
Settings page



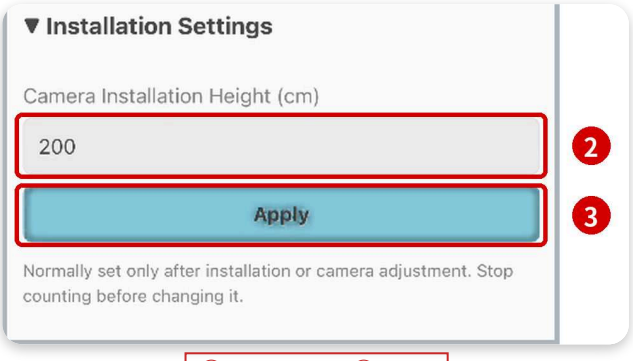
Language list

IMPORTANT – Enter the measured camera height

After checking that there are no blind spots, measure from the floor to the camera. If it is not 2 m: ① tap the gear icon next to Online, ② open **Installation Settings** and type the measured height in cm, ③ tap **Apply**. Stop counting before you change it.



① Gear icon



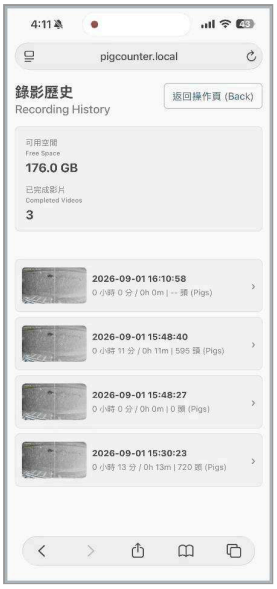
② Height (cm) ③ Apply

Recordings & Per-Pig Records

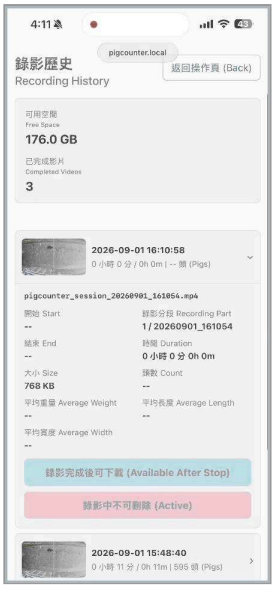
1. Recording History & Downloads

Every session from Start to Stop is recorded. Tap **Recording History & Downloads** on the dashboard (Back returns).

- The top shows **Free Space (GB)** and **Completed Videos**.
- Sessions are listed newest first with date, duration and pig count. Tap one to see details.
- **Download Video** saves the .mp4 to your phone or computer (only after Stop).
- **Delete** removes it from the device for good – download first if you need it.



Session list



In progress



Download / Delete

2. Per-Pig Records

Tap **Per-Pig Records**. One row = one pig. Swipe left/right to see all columns.

Column	Meaning
Time / Direction	When the pig crossed the line; Left or Right (in / out).
Total	Running headcount at that row.
In Average	No = left out of the averages (overlapping or partly visible pig). Check these rows first if the count looks wrong.
Length / Width	This pig's size in cm.
Upload / Raw Weight	Weight sent to the cloud / weight before correction (kg).
Upload	OK = uploaded. Anything else: check the network.

LED Panel, Engineering Info & ViGi

1. Front LED Panel



No.	Shows
1	Product name (label only)
2	Average length (cm), red
3	HEADS: running count, green (up to 9999)
4	Date and time (month/day hour:minute)

The photo shows all segments lit (lamp test). If a segment stays dark, tell your engineer. **If HEADS shows 901, no camera is connected** (P14). Width, weight and records are only on the web page.

2. Engineering Information (for engineers)

Tap the arrow under Per-Pig Records. Normal values:

Item	Normal
USB Button	CONNECTED
RS485	Connected (e.g. weight sensor)
MQTT	CONNECTED (live data upload)
LAN MAC	Device ID
Last Update	Time of last refresh

If RS485 or MQTT is disconnected, data upload may be affected. Contact an engineer; do not open the hardware.



Engineering info

3. Camera App (ViGi)

The ViGi app lets you watch the site camera from your phone. Register an email in the app, then share camera access with the MIC support email given by MIC or your installer.

Android

iOS

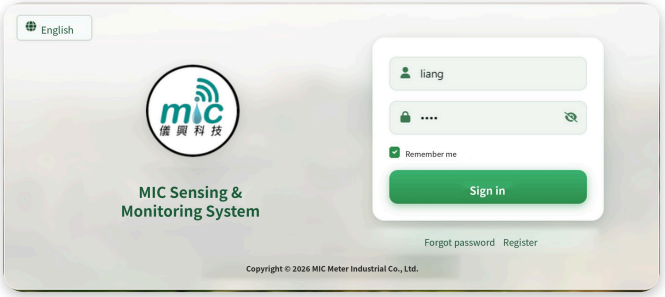
Cloud on a Computer (1)

When the router is connected to the internet (P5–P6), the PigCounter uploads every counted pig – count, weight, length and width – to the **MIC cloud**. Use a **computer** to see all records, view curves and download Excel. The cloud does not change any setting on the main unit.

Website	**https://www.mic-meter.com/Micc/Home/Login** (web browser on a computer)
Account	MIC registers your account before shipment. Use the User ID and password supplied by MIC.
Data kept	Up to 1 year. Download Excel regularly if you need it for longer.

1. Log in

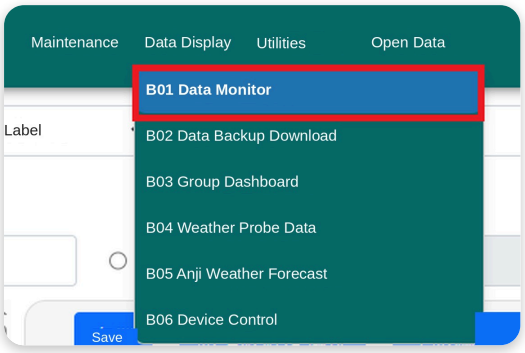
- Select the language from the language menu on the login page.
- Enter your User ID and password, and press **Sign in**.



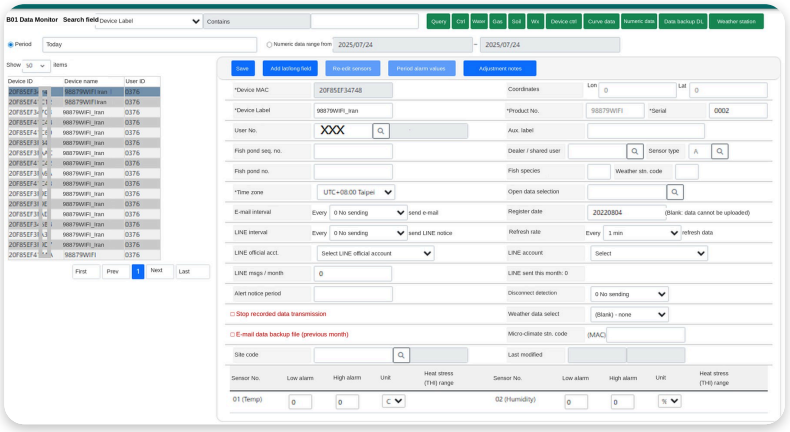
Cloud login page

2. Device List – B01 Data Monitor

- Click **Data Display** › **B01 Data Monitor**.
- The left side lists your devices (MAC and device label). Click your PigCounter to edit it on the right.



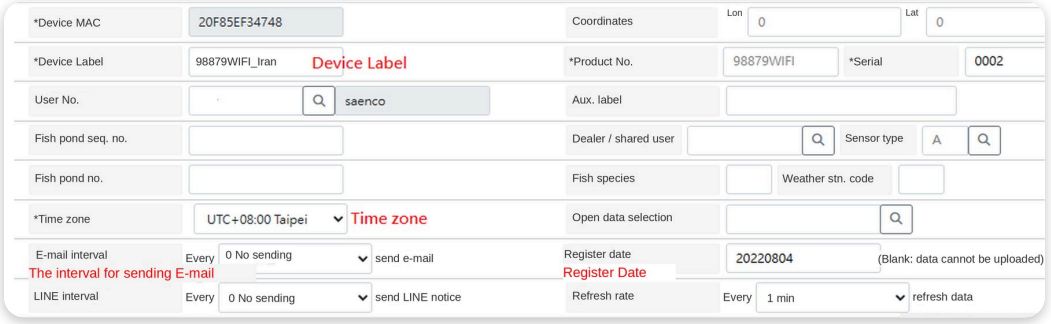
Data Display menu



B01 Data Monitor

3. Device Label and Time Zone

- **Device Label:** name of the farm or passage, e.g. “Barn 2 loading”.
- **Time zone:** select from the list. The record time changes immediately.
- Press **Save** after editing.

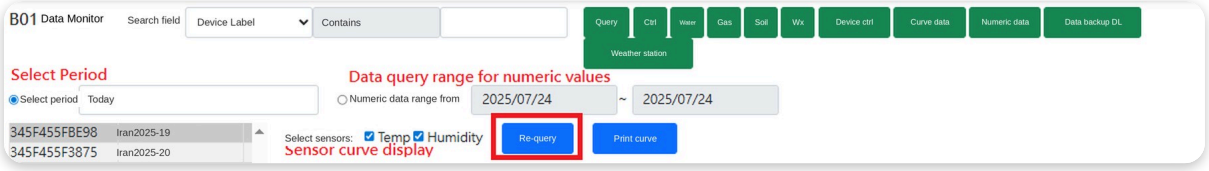


Edit data: device label and time zone

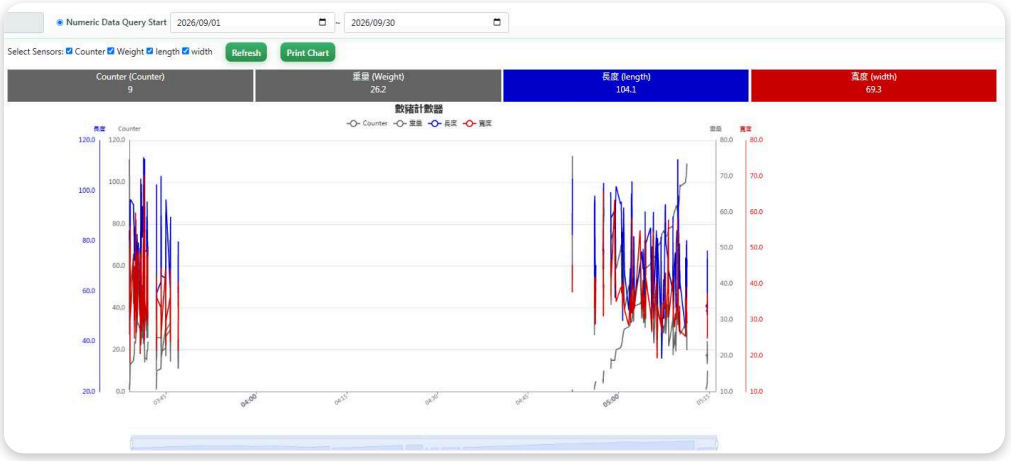
Cloud on a Computer (2)

4. Curves

- In B01 Data Monitor, select your device and click **Curve data**.
- Choose a period, or a **Numeric Data Query** date range.
- Tick the sensors to show – **Counter, Weight, length, width** – and press **Refresh**.
- Move the mouse over the chart to see the values at that time. **Print Chart** prints it.



Select period, date range and sensors



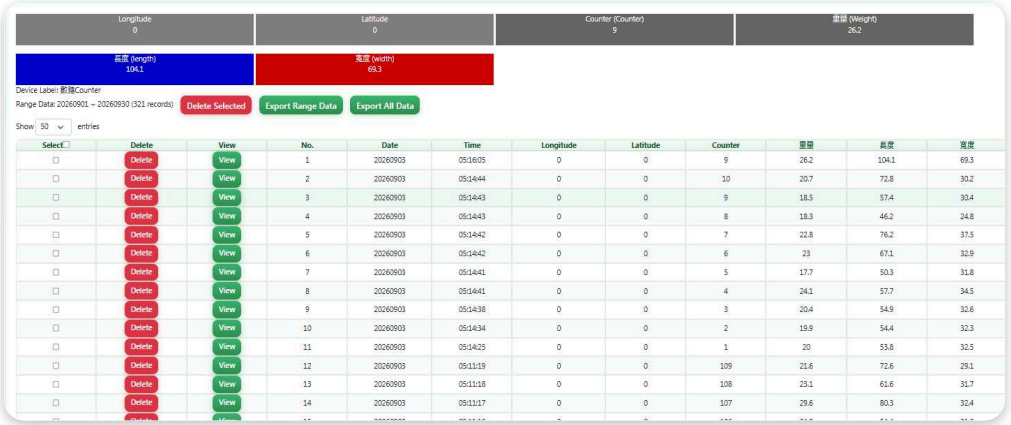
Grey line = Counter: it climbs 1, 2, 3 … during a session and starts again after Reset

IMPORTANT – Reset the PigCounter to 0 for every session

Tap **Reset** (Current Count = 0) before every new session or batch. If you do not, the new pigs are added to the previous total, so the count and averages on the dashboard, the LED panel and the cloud are miscalculated, and one batch cannot be told apart from the next.

5. Numeric Data and Excel

- Click **Numeric data**. Records are listed from the newest. **Counter** is the pig number in the session (1, 2, 3 …).
- **Export Range Data** (selected dates) or **Export All Data** downloads a Zip file. Unzip it and open the Excel file.
- To log out, press **Logout** at the top right.



Numeric data: one row per pig (Counter, weight, length, width)

Troubleshooting:

30-second self-check: ① Main unit power ON? ② Router powered, phone on WIFI-MIC? ③ Green Online badge on the dashboard? ④ Camera clean, not tilted, passageway lit (≥300 lux)? ⑤ LED panel not showing 901?

Problem / message	Cause	Solution
Main unit & camera		
LED panel shows 901	No camera connected.	Check the camera cable at both ends and the camera power. If 901 stays, call your engineer.
LED segment stays dark	Display fault.	Tell your engineer.
Button does nothing	System still starting; pressed too soon.	Wait 3 minutes after power-on and 10 s between presses.
Network & dashboard		
Page does not open / no Online badge	Phone not on WIFI-MIC; device off.	Join WIFI-MIC; check power; redo router setup (P5–P6) if needed.
Warning icon in address bar	Normal for a local address.	Safe to continue.
MIC Upload not 200	Router not connected to the internet.	Check WISP status (P6). If it continues, ask an engineer to check MQTT / RS485.
Live Preview: 0 available	Max 2 phones at once.	Ask someone to tap Hide Live Preview.
Counting & records		
Count differs from the real number	Overlapping pigs, tilted camera, poor light.	Open Per-Pig Records; check rows with In Average = No or an unexpected Direction. Check the camera with Live Preview.
Count lower than the real number	Blind spot: the camera does not cover the whole passage.	Move or adjust the camera until the whole passage is visible in Live Preview (P3).
Total keeps adding	Start tapped again after Stop.	Tap Reset before each new batch.
Time on screen is wrong	Timezone not set.	Gear icon › System & Meter Timezone › Apply Timezone (P9).
Free Space is low	Many videos stored.	Download the videos you need, then Delete old ones (P10).
FPS goes up and down	Normal (about 14–20).	Only a problem if it stays very low or the video stutters.

Still not solved? Send MIC: farm name, a **screenshot of the problem**, the page (P-number) where it happened, and a photo of the LED panel.

Maintenance:

When	Check
Daily	Green Online badge; LED panel shows count and time; camera lens clean.
Weekly	Camera angle still straight down; passageway lighting ≥300 lux; Free Space enough.
After changes	After moving the camera, mount it again 2 m from the floor, pointing straight down; redo router setup if the customer's Wi-Fi changes.

WARRANTY

This instrument is warranted for two years from the date of purchase (one limited warranty applies to cables). A Return Authorization letter must be issued before returning for any reason. This warranty does not apply to defects resulting from action of the user such as misuse, abuse, alteration, neglect, improper wiring, improper installation, maintenance or repair, unauthorized modification, or operation outside of specification. During the warranty period the manufacturer reserves the right to decide either to repair or replace the product. Products are to be returned with good packing to prevent any damage in shipment and insured against possible damage or loss.

The two years' warranty doesn't apply to:

- Accessories and consumables (not covered by warranty).
- Claims for improper use (including applications not foreseen in this manual), improper combination with incompatible accessories or equipment, or previous repair attempts by unskilled or unauthorized personnel.
- Damage caused by the user's improper use (impact, water, cutting or crushing cables, lightning or power surge).
- Loss of internet service, the customer's network, and third-party apps.

Contact

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