

PigCounter

Installation & User Manual (V2.3)

AI-based Pig Counting System · Web Dashboard (Network Edition)



Counter unit and camera



Web dashboard on a phone

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System version: objectbox-2026.09.01-r5.2.17-dev (dashboard screens) · Mode: video (AI camera detection)

Settings page (Section 7): objectbox-2026.10.02-r5.4.3-modelv2-dev

Document version v2.2 (adds the Settings page) · Based on v2.0 of 2026-09-01

PART A — INSTALLATION

1. Installation Guide (9 Steps)

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



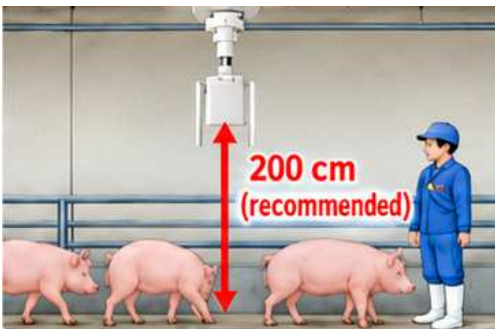
Step 1: Prepare the Equipment

- Prepare all components of the pig counting system.
- Install the camera.



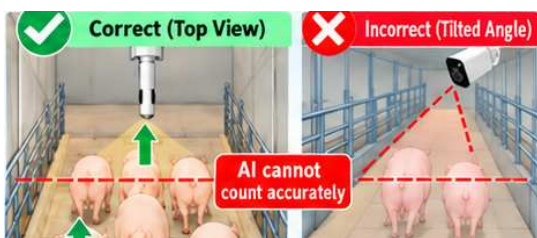
Step 2: Lighting

- The passageway must be well lit: **at least 300 lux**.
- If daylight is not enough, add LED lighting.
- Avoid backlight and dark areas.



Step 3: Camera Height

- Mount the camera at about **200 cm** (recommended).
- Aim it **straight down**.
- With 8–10 pigs in the frame, length and weight estimates are more accurate.
- After mounting, enter the real height in **Settings** (Section 7.3).



Step 4: Camera Angle and Direction

- Mount above the passageway, pointing straight down.
- Turn it so the pigs are centred in the frame.
- Keep the view clear. A tilted or blocked camera gives wrong counts (right picture: “Incorrect (Tilted Angle)”).



Step 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**.



Step 6: Phone Connection and Live View

- Connect your phone to the same Wi-Fi as the device (see Section 3).
- Open **http://pigcounter.local** to see live video and counting results.
- The page shows: live video, pig count, body length, shoulder width, estimated weight, system settings.



Step 7: Power On

- Switch on the main unit (switch at bottom left).
- The LED display turns on and shows the pig count and time.
- The top-right corner of the display shows **ON**.



Step 8: Start Counting

- Let the pigs walk through the passageway.
- The count appears live on the LED display and the web page.



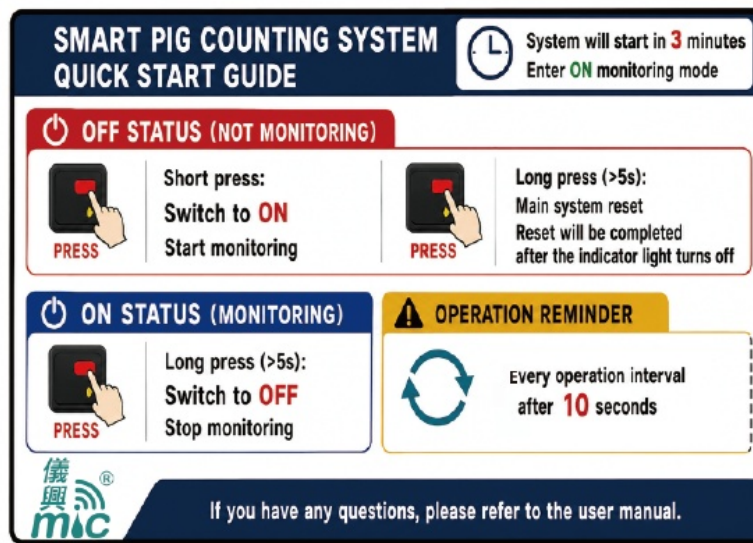
Step 9: End Counting

- When all pigs have passed, counting stops automatically.
- The LED display shows **OFF** and stays in standby.

Note: Keep the camera lens and passageway clean. Avoid strong backlight, darkness and obstructions for the best accuracy.

2. Main Unit Button

The physical button switches the unit between OFF (not monitoring) and ON (monitoring). It can also be operated from the web page (Section 6).



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 (monitoring).
- Wait at least **10 seconds** between button presses.
- The system resets automatically after each operation.

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.

3. Turn on the Dashboard

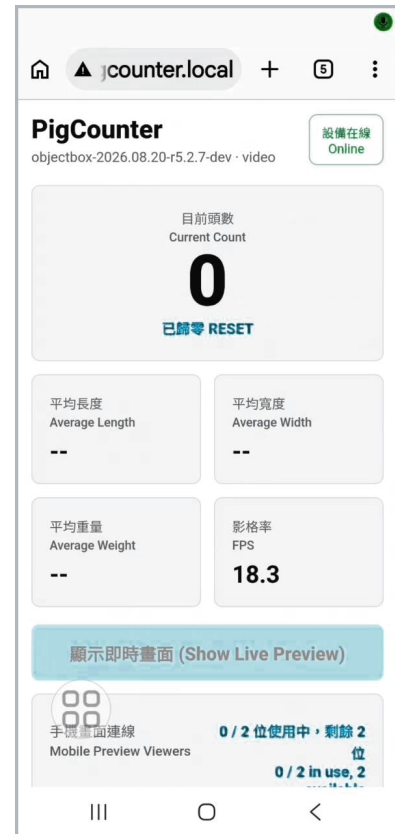
Turning on the dashboard (every time)

- Make sure your phone or computer is on the **same Wi-Fi / LAN** as the device.
- Scan the QR code below, or type **http://pigcounter.local** into a browser (Chrome recommended). No app is needed.
- Log in with the MIC Pig Counter account supplied by MIC or your installer.
- A green **Online** badge at the top right means you are connected.



Scan to open dashboard: pigcounter.local

Note: A warning icon in the address bar is normal for a local address. If the page does not open or Online is missing, check Wi-Fi first, then power and network, or call your engineer.



Dashboard on a phone

4. Camera App (ViGi) and Links

The ViGi app lets you watch the site camera from your phone. Scan the code for your phone:



Android — Google Play



iOS — App Store



ViGi app icon

Account setup: register an email address in the app, then share camera access with the MIC support email given to you by MIC or your installer. Passwords are not printed in this manual; keep login details private.

Item	Where	Link
Dashboard	Browser, same Wi-Fi	http://pigcounter.local
Device Wi-Fi setup	Browser, device Wi-Fi	192.168.4.1
ViGi app	Android	play.google.com/store/apps/details?id=com.tplink.vigi
ViGi app	iOS	apps.apple.com/tw/app/tp-linkvigi/id1509214439

PART B — DAILY USE

5. Daily Counting Routine

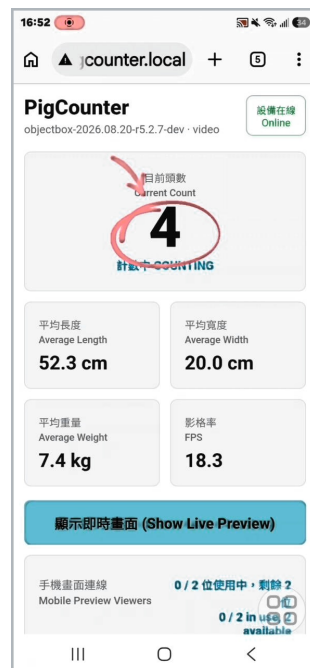
Follow this order for every batch (each truckload, pen or day):

#	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 is clear and green boxes sit 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 Section 8.2 and Section 9.
8	(Optional) Open Recording History and tap Download Video .	Keeps a video proof of the batch.
9	Next batch: go back to step 2. End of day: just close the browser, or hold Shutdown 3 s to power off.	

Note: Do not tap Reset while pigs are still passing. Tapping Start again after Stop **adds** to the same total. Tap Reset first for a new batch.



Ready: count 0, “Reset”



Counting



Live preview with AI boxes

6. The Dashboard Screen

From top to bottom, the screen shows:

Item	What it means
Online	The page is connected to the device. If it changes or turns grey, numbers stop updating.
Gear icon	Next to Online (newer software). Opens Settings : language, timezone, camera height (Section 7).
Current Count	Pigs counted so far. Status below it: Reset (0, not started), Counting , Stopped (held).
Avg. Length / Width / Weight	Averages of the pigs counted so far (cm, cm, kg). Shows "--" before any pig passes.
FPS	Camera processing speed. About 14–20 is normal; small ups and downs are fine.
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), e.g. "1 / 2 in use, 1 available".
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	Newer software: set in Settings (Section 7.2). Older software: dropdown on this screen, choose your country/city and tap Apply . It controls all times shown.
Network Time	"Synchronized" = device clock is correct.

Control buttons

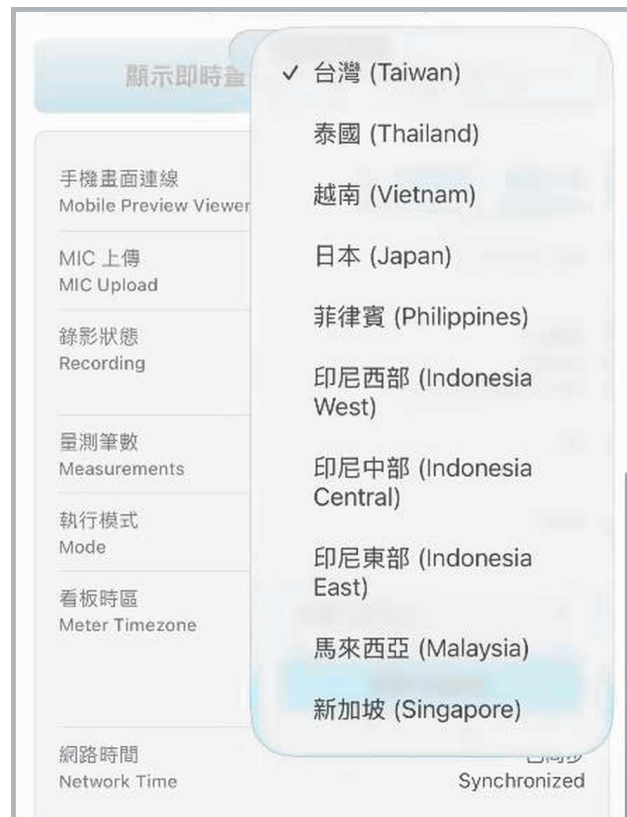
Button	What it does
Start (green)	Starts counting and video recording.
Stop (red)	Stops counting and saves the video. Count, averages and records are kept.
Reset (grey)	Asks for confirmation, then clears count, averages and per-pig records. Does not delete videos.
Shutdown (red)	Hold 3 seconds to power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

6.1 Dashboard Screenshots

Newer software sets the timezone in Settings (Section 7.2); the Meter Timezone list below is from older software.



Status list: Mobile Preview Viewers, MIC Upload, Recording, Measurements, Mode, Meter Timezone, Network Time



Meter Timezone list (older software)



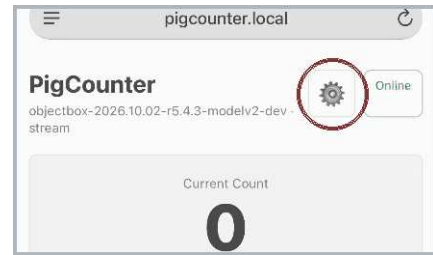
Control buttons: Start, Stop, Reset, Shutdown

Control buttons

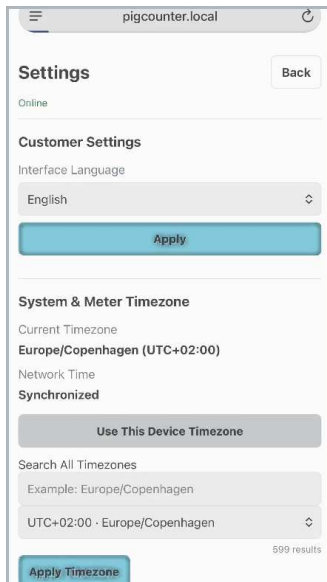
- **Start** (green): begin counting and recording.
- **Stop** (red): stop and save the video. Looks dim until counting starts.
- **Reset** (grey): clear count, averages and records after a confirmation.
- **Shutdown** (red): **hold 3 seconds** to power off.

7. Settings: Language, Timezone, Camera Height

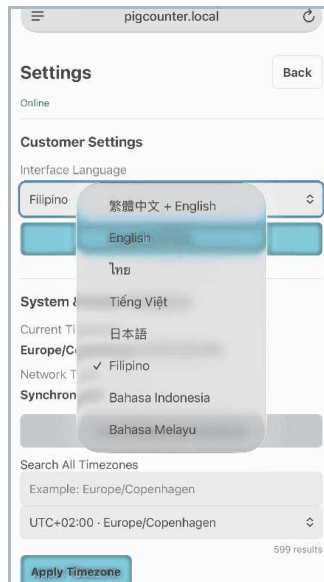
Tap the **gear icon** (circled in red) next to the green **Online** badge at the top of the dashboard to open **Settings**. Tap **Back** (top right) to return. Newer software only (build r5.4.3 and later).



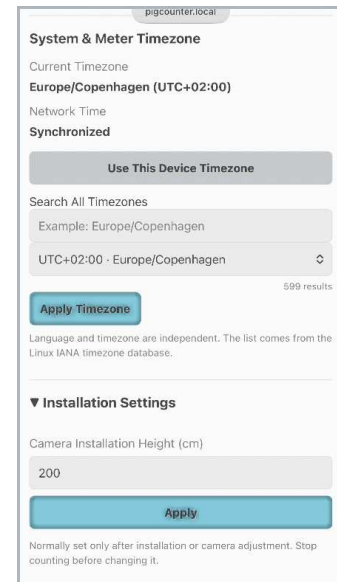
Tap the gear icon



Settings page



Language list



Timezone and Installation Settings

7.1 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**.

7.2 System & Meter Timezone

- Current Timezone** shows what is set now (example: Europe/Copenhagen, UTC+02:00). **Network Time** should say **Synchronized**.
- Quick way: tap **Use This Device Timezone**.
- Or pick one yourself: use **Search All Timezones** or scroll the list (599 choices, shown like “UTC+02:00 · Europe/Copenhagen”), choose the place where the unit is installed, then tap **Apply Timezone**.
- The timezone sets every time shown (preview clock, records, recording file names). Language and timezone are independent.

7.3 Installation Settings (camera height)

- Tap **Installation Settings** to open it.
- Enter the real mounting height of the camera in **Camera Installation Height (cm)** (the example shows 200, the recommended height in Installation Step 3), then tap **Apply**.

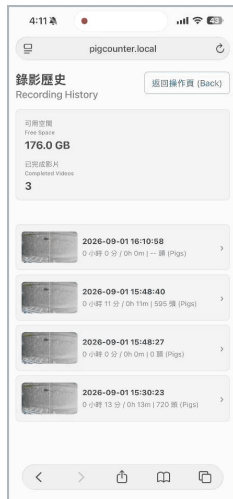
Note: Set the camera height only after installation or camera adjustment. **Stop counting before changing it.**

8. Recordings, Records and Engineering Info

8.1 Recording History & Downloads

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

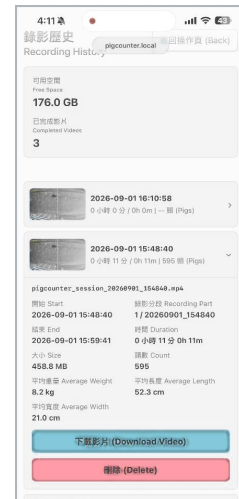
- The top shows **Free Space** (GB) and **Completed Videos**.
- Sessions are listed newest first with date, duration and pig count. Tap one to see details (file, times, size, averages).
- **Download Video** saves the .mp4 to your phone or computer. Only available after Stop.
- **Delete** removes it from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



Session list



In progress: no download yet



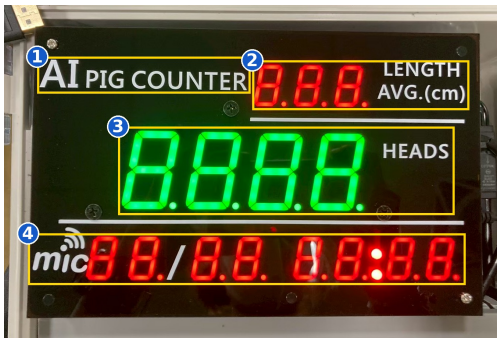
Finished: Download / Delete

8.2 Per-Pig Records

Tap **Per-Pig Records** to open the table. 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 (e.g. overlapping pigs, pig partly in view). 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.

8.3 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 any segment stays dark, tell your engineer. Width, weight and records are only on the web page.

8.4 Engineering Information (for engineers)

Tap the arrow under Per-Pig Records to open. 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



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

9. Troubleshooting

Problem	What to do
Page does not open / no “Online” badge	Check that the phone is on the same Wi-Fi as the device, and that the device has power. Redo Wi-Fi setup (Section 3) if needed.
Warning icon in the address bar	Normal for a local address. Safe to continue.
Count is different from the real number	Open Per-Pig Records; check rows with In Average = No or an unexpected Direction. Use Live Preview to check the camera view.
Cannot open Live Preview (0 available)	Max 2 phones at once. Ask someone to tap Hide Live Preview.
Time on screen is wrong	Tap the gear icon, set the correct timezone under System & Meter Timezone and tap Apply Timezone (Section 7.2). Check Network Time shows Synchronized.
Upload not OK / MIC Upload not 200	Check the site network. If it continues, ask an engineer to check MQTT / RS485.
Free Space is low	Download the videos you need, then Delete old ones in Recording History.
FPS goes up and down	Normal (about 14–20). Only a problem if it stays very low or the video stutters.

— End of Manual —