

Installing your Gout IP67 gateway

The gateway receives data from your sensor nodes and forwards the data to the internet. This guide walks you through connecting and mounting it. No technical background is needed



IN THIS GUIDE

- | | |
|----------------------------------|----------------------------|
| 1 Connect to the internet | 4 Mount the gateway |
| 2 Choose the right spot | 5 Do's and don'ts |
| 3 Power it up | |

1 Connect to the internet

The gateway needs connection to the internet. It is equipped with 4G, and also has a wired Ethernet/UTP cable port. If you use the wired connection, ask your IT department to make the following changes to the network settings:

FOR THE IT DEPARTMENT

- Open **port 1700**.
- Allow an outbound connection to **router.eu.thethings.network** over the **UDP** protocol.

2 Choose the right spot

For the strongest signal, place the antenna at canopy level. Keep these three rules in mind:

Stand it up

Mount the antenna **vertically** – upright or hanging straight down.

Clear the view

Keep a **line of sight** between the antenna and the sensors.

Give it room

Place the antenna **at least 1 meter** away from concrete or metal elements.

Expected range

The signal between sensor and gateway is mostly reduced by water: the water in your plants and fruits, but also moisture in the air. Higher placement therefore reaches further. Mounting the antenna above the canopy also extends how long the Firefly sensors last on one battery.

Cultivation system	Antenna position	Range
Greenhouse – high wire	Above plant canopy	50 – 100 m
Greenhouse – tables	Above plant canopy	100 – 300 m
Greenhouse – floor	Above plant canopy	300 – 500 m
Open field	> 6 m, above canopy	1,000 – 5,000 m

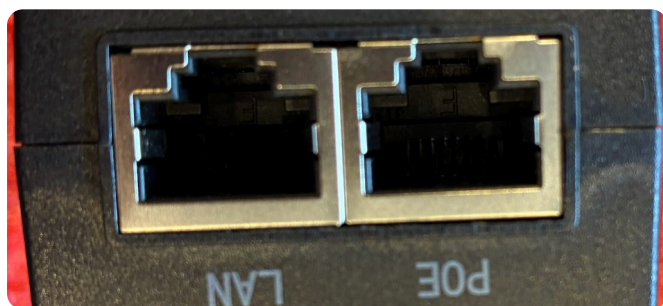
3 Power it up

The gateway is powered through its Ethernet cable: **Power over Ethernet (PoE)**. There are two ways to do this:

In case your network supplies PoE — connect the Ethernet cable straight to the gateway.

In case your network does not supply PoE — use the PoE injector supplied in the box.

When using the PoE injector from the box, connect the gateway cable to the PoE port and use the **LAN port** for your network cable.



Figures 1 & 2. The PoE injector. Use the *power (POE)* port between the injector and the gateway; the LAN port takes your Ethernet LAN cable for internet.



Figure 3. When everything is connected correctly, the power indicator (PWR) on the gateway lights up **green**.

4 Mount the Gateway

Always mount the gateway **vertically** — for indoor use the antenna can be both either up or down. In case the antenna points down, the “UP” label on the gateway will simply appear upside down. That is perfectly fine. For outdoor use the gateway should always be mounted up.

⚠ Keep water out

When the gateway is mounted upside down, water can seep in through the ports. Seal the underside with the **tape supplied in the box** to keep it dry.



Figure 4. The underside of the gateway should never be exposed to water. Close it off with the tape provided in the box.

5 Do's and Dont's

Compare your installation with the examples below. The top row shows correct placements; the bottom row shows what to avoid.

✓ DO



✗ DON'T

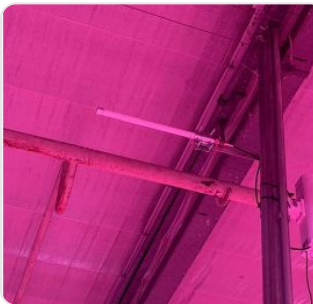


Figure 5. Examples of correct (✓, top row) and incorrect (✗, bottom row) gateway placement.