Silvanet Gen 4 Pro Installation Field Guide

DRYAD

Silvanet App

Download the Silvanet on the app Store

Download the Silvanet on the Play Store

Guide and tutorials

For more information visit the online documentation: https://help-center.dryad.net/

Our Youtube channel has tutorial which providing deployment and fire testing guidelines.

Tools



Tool box that is big enough to carry all necessary tools and sensors.



10 mm wood drill bit and an (optional) 6 mm wood drill bit to drill a pilot hole to prevent splitting, especially with hardwood trees



Hammer for treenails.



Cordless drill for drilling holes for treenails (min 18V) with extra battery and charger.



Chisel to shave off tree bark.



Chainsaw for quickly cutting large branches if required.



Shears (snips) for trimming branches (if required) and for cutting lengths of garden wire.



Walkie talkie or other alternative means of communication for locations with no cell connectivity.



Smart phone to use the deployment app and access the webapp on the go.



Phone Power bank.



A 16-foot (5 meter) ladder for installing sensors and gateways. A folding ladder or a telescoping ladder is easier to carry through the uneven ground of a forest and longer distances.

Weight Range: 15–35 lbs (7–16 kg).

Field Safety

1. It is highly recommended to **not proceed with deploying alone** in the forest or in a utility setting. Deploying safely requires a team of at **least 2 people.**

2. **LCES** (Lookouts, Communications, Escape Routes, and Safety Zones). This system ensures critical safety measures are always in place.

3. Confirm the deployment plan is finalized and you have the **right of way** to deploy so last minute delays can be avoided.

4. Ensure you possess the necessary **certifications** and **safety training** required for working in the designated deployment area.

Safety Gear



PPE (Personal Protective Equipment) kit for tree climbing or forestry work is designed to protect against injuries while climbing trees, handling tools, and navigating potentially hazardous environments.



Top ladder safety strap.
To stabilize the ladder, secure the ladder to the tree. Make sure to have enough length to accommodate big trees.



Tree Climbing Harness to securely support climbers when ascending, descending, or working on trees. This is essential when deploying higher than 3 meters.

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Before deploying the sensor

- The App is necessary to deploy the devices in the field. It should be downloaded before going to the field.
- You must have an NFC enabled smartphone to deploy Gen 4 pro (iOS, android)
- You can deploy sensors offline, but you must open the plan in the app at least once **while online before going to the field**.

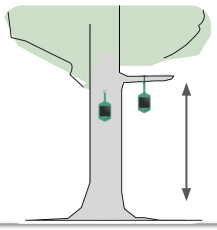
Sensor kit



The sensor comes with

- (x1) 18 cm wooden Nail
- (x1) 8-cm spacer
- Mounting wire (optional)

Sensor Installation Height



Sensor must be installed at minimum **3 meters from the ground.**

Ensuring Sensor Connectivity

- (Satellite) The sensor should have a free line of sight of 20 to 30 degrees above the horizon.
- (LoraWan) The sensor must be in line of site with the nearest gateway and deployed within set Lora coverage.
- Do not deploy the sensor in interior, or surrounded by large infrastructure (urban areas, large walls,...)
- Do not mount on a metal pole, and preferably not on a reinforced concrete pole.
- A distance of 8–10 cm between the tree trunk and the sensor is required

Mounting Orientation

Fire Detection Sensor

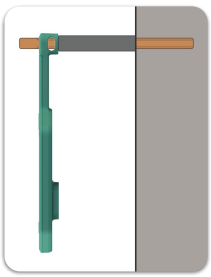
Install the sensor on a South - facing direction (Lora & Satellite)

Weather Station

South-facing in partially shaded areas (Satellite only).

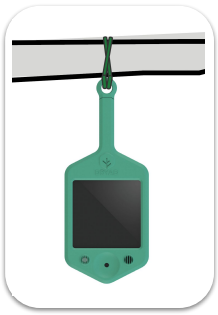
If a **weather station sensor** (satellite) is installed in an **area with continuous sun exposure**, orient it north-facing to minimize the impact on environmental measurements.

Sensor Tree mounting Type



Permanent installation.

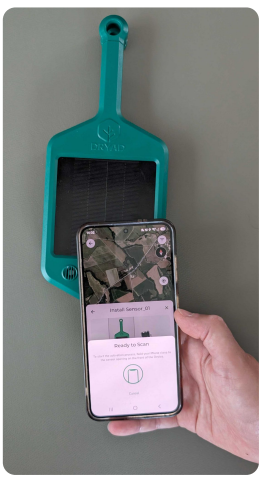
1. Use a chisel to carefully remove the top layer of tree bark, making it easier to drill a hole.
2. Drill a 6 cm deep hole.
3. Assemble the sensor, the spacer and the nail
4. Hammer assembled unit in. The treenail must fit tightly, and it will expand in humid conditions to hold the sensor firmly without harming the tree.



Alternative Installation

Usually done as a temporary way to mount a sensor, you can attach the sensor on a branch using the mounting wire, taking care to minimize sensor oscillations as much as possible.

Deploy a sensor with the app



1. Mount the sensor on its support (tree, wooden utility pole,...)
2. Open the app and login
3. Search for the name of the site you are deploying
4. Tap “Show device on map”
5. Select the sensor to deploy
6. Confirm the installation is done
7. Scan the sensor via NFC
8. When successful tap close or show device details to review the sensor. As soon as a sensor is successfully installed, it is visible in our webapp.

Note: Sensor may appear inactive until they charge and had their first uplink.

Reduce false positives

Road or Highway section

Do not deploy directly at the roadside but ideally, 50 to 100 meters away to allow exhaust fumes, particularly from heavy-duty vehicles,time to dissipate.

Public spaces with burning areas (camping, barbeque,..)

When protecting an outdoor BBQ area, we also recommend avoiding deployment directly at the site of the fire itself, unless, of course, your goal is to detect illegal burning.

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