



Smart Farm Monitoring & Automation Platform

Ladybird | Environmental Sensing & Control Hub

USER MANUAL – MODEL S



LadybirdIoT.com

IMPORTANT: READ BEFORE INSTALLATION

Safety & Warranty Requirements

- Install the Ladybird sensor securely – do not allow it to drop.
 - Make sure the Ladybird is mounted straight and with the light cover on the top.
 - Keep M12 connector protection covers in place when no external sensors are connected.
 - Avoid overtightening connections on external accessories.
 - Do not open the main enclosure – this voids your warranty.
 - Only remove the battery cover when it's time to replace the battery; no other components should be unscrewed.
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Support & Assistance

Technical Support: Email help@ladybirdiot.com for personal assistance from our support team.

Quick Help: Scan the QR code below to visit <https://support.ladybirdIoT.com> or use our Ladybird AI chatbot for an instant answer.



1. Device Overview: Parts, Controls & Accessories

Your Ladybird IoT device connects wirelessly to monitor environmental conditions across your growing operation. Each numbered component serves a specific function in collecting data or connecting additional sensors.

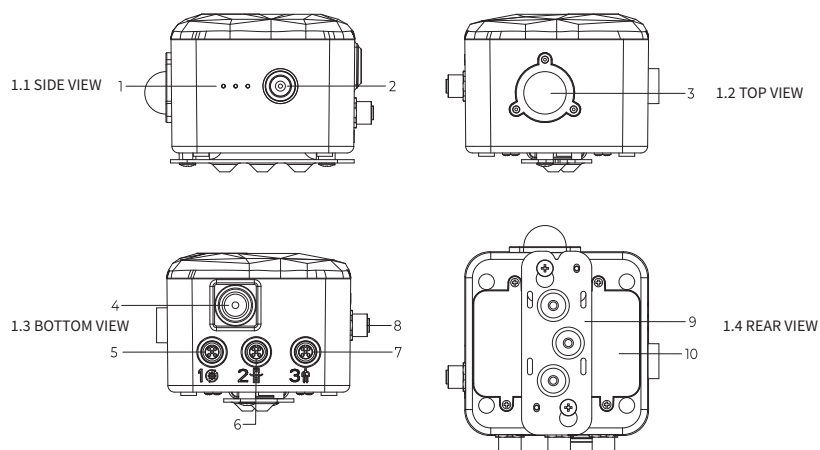


Figure 1: Ladybird device overview

- 1. Status LEDs (green)** – Indicate device operation status.
- 2. Power button (red)** – Press to turn device on/off.
- 3. Light Sensor** – Measures light spectrum and intensity
- 4. Temperature and Humidity Sensor** – Monitors air temperature and air relative humidity.
- 5. Port 1: Automation** - Used for intelligent control of your existing systems such as irrigation, lighting, or ventilation.
- 6. Port 2: Additional Sensors** – Use this port to connect external sensors, e.g. 8-in-1 soil probe (moisture, temperature, EC, salinity, pH, NPK), leaf wetness & temperature sensor anemometer, rain gauge, or water level sensor, and future accessories.
- 7. Port 3: Soil monitoring** – Connect the Delta-T SM150T soil moisture and temperature sensor.
- 8. Port 4: System access** – Reserved for programming, secondary power supply, future accessories and technical support.
- 9. Mounting plate** – Secure to wall or pole.
- 10. Battery compartment** – Houses 6 AA batteries.

For complete technical specifications, installation guides, and troubleshooting support, visit: <https://support.ladybirdIoT.com>.

Available Accessories (sold separately):

- **Automation cable** - Used for intelligent control of your existing systems such as irrigation, lighting, or ventilation.
- **Additional sensors** - 8-in-1 soil probe (moisture, temperature, EC, salinity, pH, NPK), leaf wetness & temperature sensor, anemometer, rain gauge, or water level sensor, and future accessories for Port 2.
- **4-pin splitter** - Enables multiple sensor connections to Port 2.
- **Soil probe** - Delta-T SM150T research-grade moisture and temperature sensor for Port 3 (5-pin connector).
- **Pole mount** - Alternative mounting option for field installations.

All accessories use weatherproof M12 connectors for reliable outdoor performance. For an up-to-date list of accessories, guides, and installation instructions, visit: <https://support.ladybirdIoT.com>.

Accessory Installation

Unscrew the connectors' protection caps **ONLY** if you are connecting a sensor.

Insert the male connectors of the accessories into the female connectors on the Ladybird device and hand-tighten securely to maintain waterproof integrity.

If using a torque spanner, set it to 1 Nm.

2. Device Installation

2.1 Surface mounting plate

- Fix the plate to a stake or wall using three M4 screws or zip ties, then hang the device on the plate as shown in Fig. 2.
- Ensure the bracket is the right way up, with the bottom notch facing down, before mounting the Ladybird.

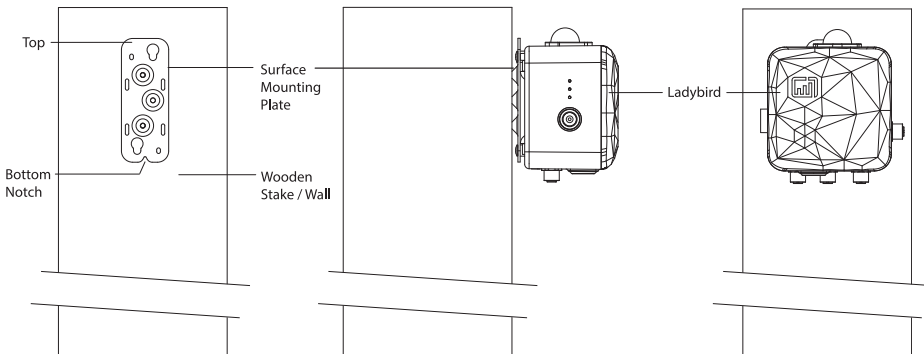


Figure 2: Surface Mounting

2.2 Pole mounting plate

- Install and secure the pole mounting plate to the pole using the included bolt and nut, then hang the device on the plate as shown in Fig. 3.

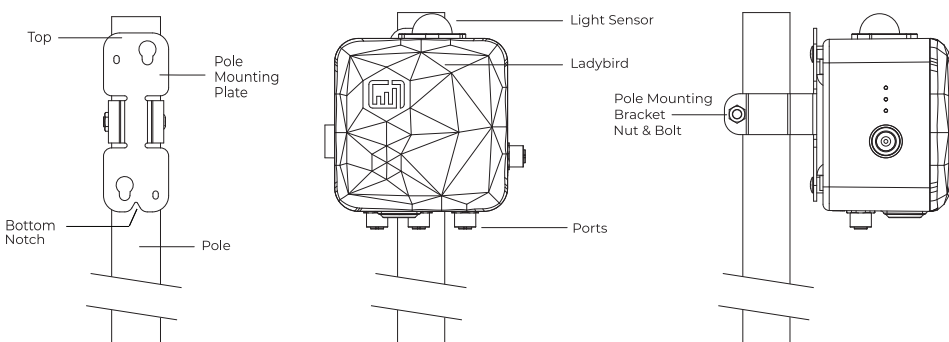


Figure 3: Pole mounting

IMPORTANT NOTE: Always mount Ladybird with the Light Sensor at the TOP

3. Gateway Installation

Setup Requirements:

- Stable power supply and internet connection.
- Central location for optimal sensor coverage.
- A direct Ethernet connection to the router is recommended.

Installation Steps:

1. Follow your gateway's specific installation guide.
2. Connect to power and the internet.
3. Verify that the gateway status lights show a successful connection.
4. Test connectivity before proceeding to sensor installation.

4. Device Activation

Power-Up Sequence:

- 1. Press power button:** Device initiates startup.
- 2. First 2 LEDs turn green:** Power and sensors verified.
- 3. Third LED turns green:** Wireless connection established.

NOTE: All three green LEDs confirm successful activation and network connection.

5. Dashboard Setup

Access Your Data:

1. Visit: <https://dashboard.ladybirdiot.com>
2. Sign in with your credentials.
3. Set up and customise your dashboard to start monitoring your field 24/7.

NOTE: Your dashboard provides real-time monitoring, alerts, and historical data analysis.

6. Care & Maintenance

Regular Maintenance:

- Light sensor: Keep lens clean and unobstructed for accurate readings.
- Housing: Check mounting security during routine inspections.

WARNING: Never remove the light sensor lens — this voids the warranty and compromises waterproofing.

Battery Replacement

1. Remove four battery cover screws.
2. Replace all 6 AA batteries.
3. Ensure the O-ring remains properly seated.
4. Reinstall the cover and tighten the screws (finger-tight only).

NOTE: Proper O-ring placement maintains the waterproof integrity.

7. Regulatory & Safety Notices

This device complies with Part 15 of the FCC Rules and the EU Radio Equipment Directive (RED). Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and;
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator & you body.

Disposal & Recycling Information

The symbol on the product or its packaging signifies that this product has to be disposed of separately from ordinary household waste at the end of its life. Please be aware that it is your responsibility to dispose of electronic equipment at recycling centres to help conserve natural resources. Each country in the European Union should have its collection centres for electrical and electronic equipment recycling. For information about your recycling drop-off point, please contact your local electrical and electronic equipment waste management authority or the retailer where you bought the product.

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