# E150 Industrial Data Gateway

## Technical Specification

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# 1. Product Overview

The E150 is a multifunctional wireless data gateway capable of collecting and forwarding data from multiple IoT devices under harsh working conditions. It provides stable wireless data relay services for on-site industrial data collection. The product supports 2.4 GHz and 5.0 GHz IEEE 802.11 b/g/n/ac wireless data transmission.

# 2. Product Features

2.1. Efficient Data Processing Capability:

A powerful processor and optimized software algorithms ensure efficient and stable data processing even under heavy data flow.

2.2. Ease of Installation and Maintenance:

Simplified installation steps and user-friendly design make device installation and maintenance more convenient. Built-in diagnostic tools and remote maintenance features further reduce maintenance costs.

2.3. Adaptability to Complex Environments:

Specially designed to operate stably over a wide range of temperatures, suitable for various harsh industrial environments.

2.4. Security and Reliability:

Advanced security features such as encrypted data transmission and access control ensure data security and prevent unauthorized access.

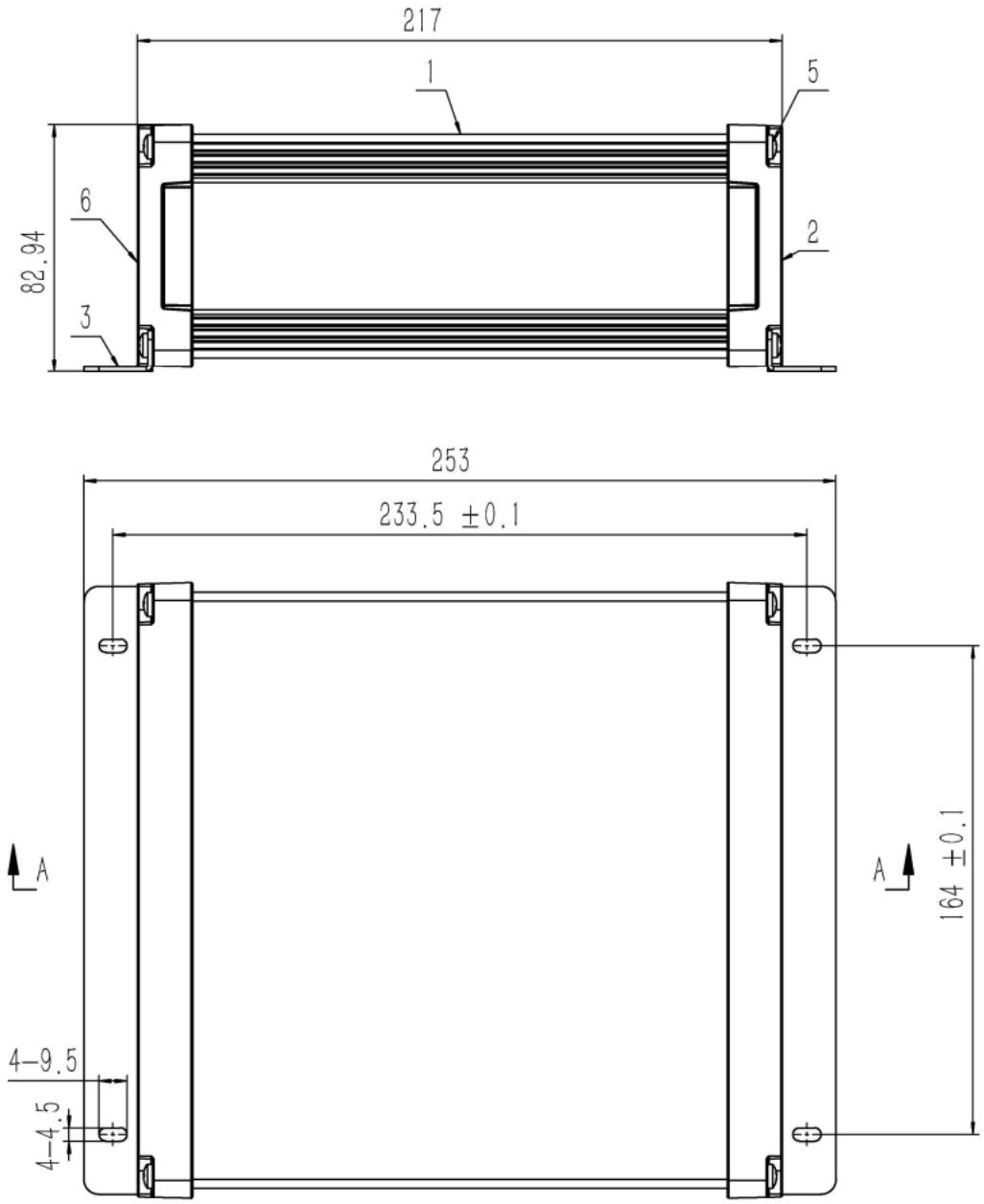
2.5. Scalability and Customizability:

Modular design allows for the addition of extra functional modules according to different application needs, offering flexible customization options.

2.6. Environmentally Friendly and Energy Efficient:

Focuses on energy use efficiency while maintaining high performance, reducing energy consumption and meeting modern eco-friendly standards.

# 3. Technical Specifications




3.1. Dimensions: 253mm * 217mm * 82.94mm

3.2. Weight: 2kg

3.3. Protection Level: IP65

3.4. Enclosure Material: Aluminum housing

3.5. Mounting Method: Screw mounting

3.6. Operating Temperature Range: -20 to 70°C

3.7. Storage Temperature: -40 to 85°C

3.8. Relative Humidity: 0 to 95%

3.9. Installation Altitude: Below 2000m

3.10. Power Supply: 9-30VDC，24VDC@Max 1A

3.11. Power Protection: Reverse connection protection

3.12. 2 Ethernet ports, 10/100/1000M full duplex, RJ45

3.13. Certifications and Standards:

- CE:

  EN 55032:2015/A11:2020,

  EN55035:2017/A11:2020,

  IEC61000-3-2:2019/A1:2021

  EN61000-3-3:2013/A2:2021/AC:2022-01

  IEC62368-1:2018

- EMC：

  EN301 489-1V2.2.3

  EN301 489-3V2.3.2

  EN301 489-17V3.2.4

  EN55032:2015/A11:2020/EN55035:2017/A11:2020

- FCC:

  FCC Part 15.407

  FCC Part 15.247

- MIC:

  MIC Notice No.88 Appendix No.45 Article 2 Paragraph 1 Item 19 ARIB STD-T71 V7.0

  MIC Notice No.88 Appendix No.43 Article Paragraph 1 Item 19-3 ARIB STD-T66 V3.7

- Vibration:

  IEC 60068-2-27

  IEC 60068-2-6

3.14. Working Environment: Shock and interference resistant design, suitable for various industrial environments

3.15. Data Transmission Capability: Efficient data processing and forwarding, ensuring stable communication between devices

3.16. Scalability: Connects to a variety of IoT devices through built-in interfaces or external AP, supports collection and processing of various data types

# 4. Interface Description


1 **Product Label**
- Model
- Test Results
- SN (Serial Number)
- MAC Address

2 Device Interfaces, including wired LAN ports, power ports, etc.

3 Device Mounting Positioning Holes


4 Power Interface

5 Wired LAN Port ETH0

6 Wired LAN Port ETH1

4.1. Wired Network Interface: Wired Ports ETH0/ETH1: Standard RJ45 interface, supports 10/100/1000 Mbps adaptive, suitable for wired network connections.

4.2. Wireless Network Interface Wireless Module: Supports 2.4 GHz and 5.0

GHz IEEE 802.11 b/g/n/ac.

4.3. USB Data Interface: Dedicated USB interface for local data transfer and device configuration.

4.4. Power Interface: Standard 24V DC industrial power input.

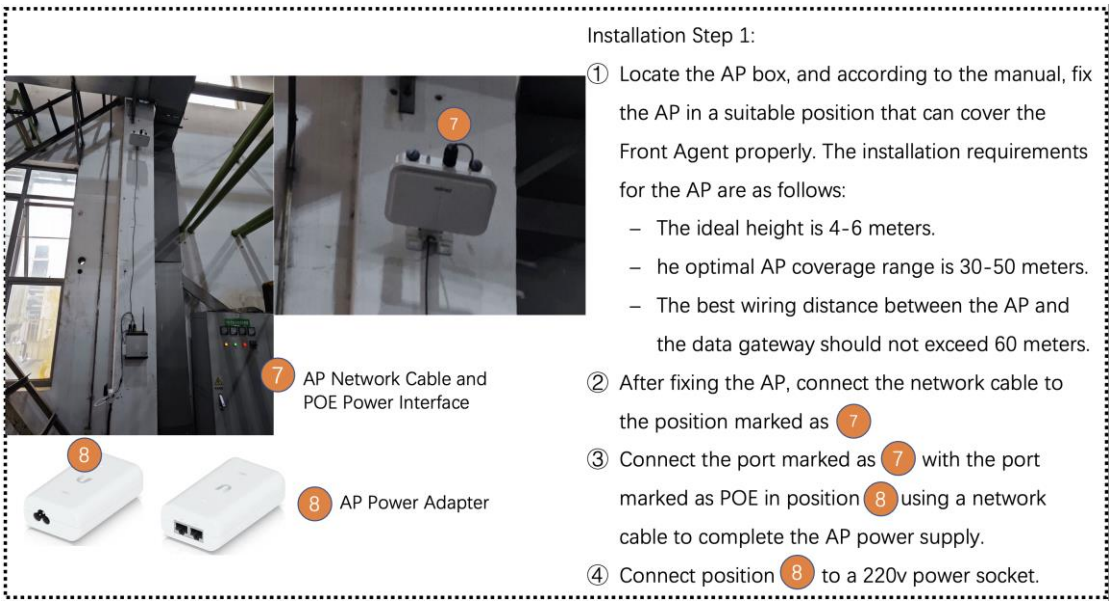
# 5. Installation and Debugging

## 5.1. Installation Preparation

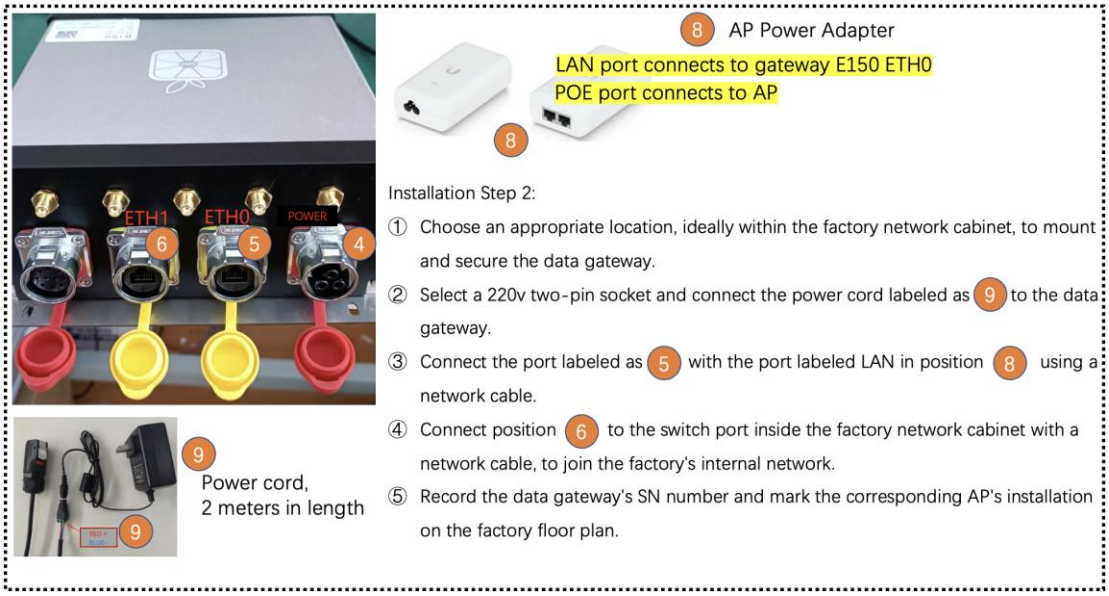
- Ensure a stable power supply and that the installation location is within the factory network interface range, with 24V DC power.
- It is recommended to install the device inside a cabinet.
- Take care to separate high and low voltage lines by more than 30cm to avoid interference; cables should be routed to avoid crossing and running parallel to each other.
- Factory network interface*1, must be capable of communicating with servers located within the factory server room.

## 5.2. Installation Steps

- Choose an appropriate location for installation, considering the relationship with the AP's position.




- Connect power and network interfaces, ensuring the device is securely fixed.



## 5.3. Installation Notes

- Power Supply Confirmation: Before installation, confirm the power source meets the device requirements (e.g., 220V AC to transformer or 24V DC) and ensure power stability.
- Environmental Adaptability: Ensure the installation location meets the working environmental conditions of the device, such as temperature and humidity.
- Safety Measures: Follow all safety regulations, especially when dealing with strong electric currents.
- Cable Management: Ensure installation complies with industrial safety standards, reasonably arrange power and network cables to reduce electromagnetic interference, maintain proper cable management and device spacing.
- Device Grounding: Ensure the device is properly grounded to prevent electromagnetic interference and static electricity.

## 5.4. Post-Installation Checks

- Power: Confirm the power connections are correct.
- Antenna: Ensure the antenna is tightened and in a reliable position for signal reception.
- Network Connection: Ensure wired network connections are secure and not loose.
- Remote Access Testing: The service provider conducts connection tests

to ensure remote control functions are normal.

- Safety Check: Confirm all installation components are stable, without any looseness or risk points.
- Documentation: Record installation details and configuration settings for future maintenance and troubleshooting.

# 6. Device Debugging and Maintenance

In cases where remote connection to the data gateway is not possible, on-site personnel must collaborate to resolve network connectivity issues, and the device service provider remotely accesses the network for E150 device configuration and debugging. During the debugging process, on-site cooperation is needed for the following:

- Antenna Position Adjustment
- Wired Network Connectivity Check
- Data Gateway Power Cycling Reboot

# 7. Common Troubleshooting

| | Issue | Possible causes and checks |
|---|---|---|
| 1 | Data gateway cannot be accessed remotely. | Check for loose power supply and network cables, try testing with a direct laptop connection, and attempt to reboot the device. |
| 2 | Cannot access E150 gateway AP. | Checks: Ensure the E150 gateway AP's PoE power supply and wiring are normal.<br>>Check if the E150 gateway AP's indicator lights are normal.<br>>Recommended PoE network cable length not to exceed 60 meters. |

FCC Warning
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any inte rference received, including interference that may cause undesired operation.

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

NOTE: 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 interferenceto 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.
Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.