

Collar Receiver (Gateway) User Manual

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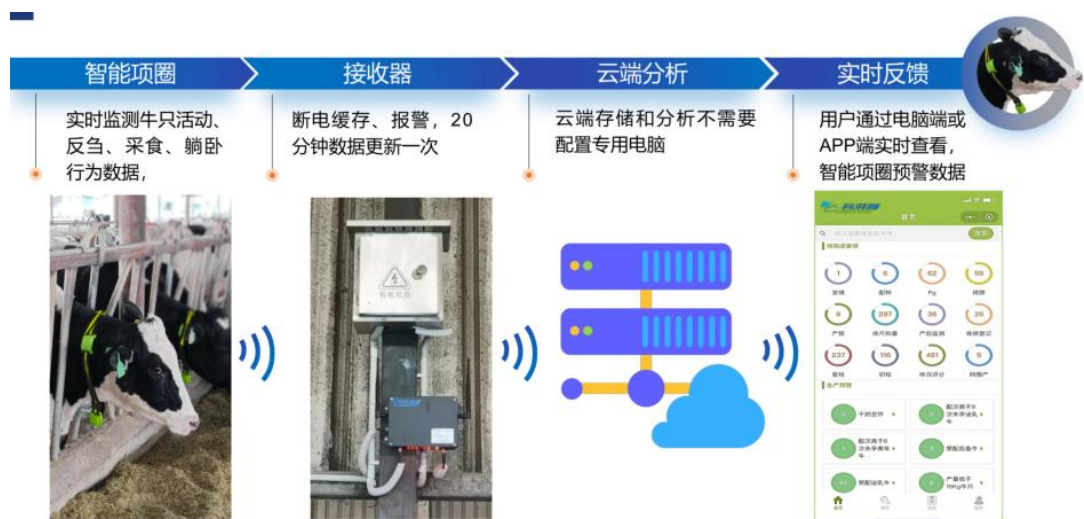
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Chapter 1: Overview of the Collar Receiver (Gateway)

The collar receiver (gateway) is a critical device for smart ranch management.

Its primary function is to receive and transmit data collected by sensors in the cow collars. By wirelessly communicating with the smart collars worn by the cows, it collects real-time information about the cows' health and activity. The gateway contains a Cat1 4G module, allowing it to connect directly to the cloud server and transmit the collar data to the cloud for analysis and processing.

The gateway typically has wide coverage capabilities and supports multiple device connections simultaneously, ensuring data stability and real-time performance.



Chapter 2: Components of the Collar Receiver (Gateway)

The collar receiver (gateway) mainly consists of the receiver body, two sets of antennas, and a power supply box.



① Receiver Body

The main body is shown below::



3D View



Front View

The receiver housing is made of aluminum.

On the front, there is a set of indicator lights for observing the operational status of the circuit board;

② Antennas

There are two SMA antenna sockets on both sides of the receiver, primarily for connecting external antennas with SMA connectors. When viewed from the front, the left socket is for the collar data communication antenna, and the right socket is for the 4G data communication antenna.

The 4G data communication antenna can be connected to a rubber stick antenna, as shown below.



There are currently three options for the collar data communication antenna:

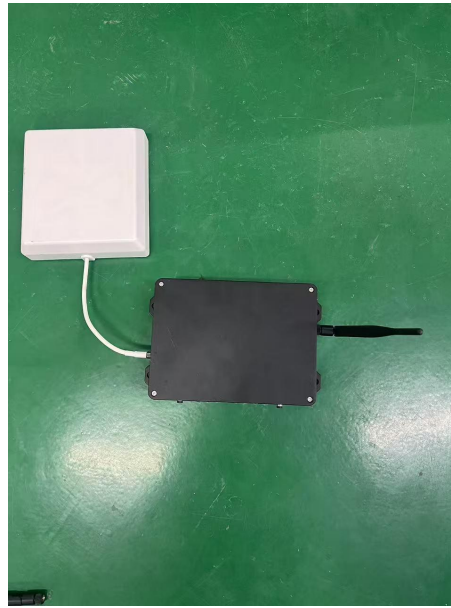
1. 1-meter suction cup antenna (standard)
2. Rubber stick antenna
3. Directional antenna



Option 1



Option 2



Option 3

③ Power Supply Box

On the side of the receiver, there are two sets of sockets: a three-pin power socket for connecting a 9V-12V power supply, and a six-pin communication socket for connecting external devices (currently unused).

For detailed installation instructions, please refer to the deployment specification document.

Chapter 3: Daily Operation and Maintenance

1. Operational Status



The LED lights are mainly located on the left 1, right 3, and right 2 positions, with the rest currently reserved.

During normal operation, the left 1 and right 2 lights will flash regularly. If the lights stop flashing, the device is not functioning properly.

The right 3 light is the charging indicator: blue indicates fully charged, red indicates charging, and no light indicates that the external power supply is disconnected.

2. Maintenance

The proper operation of the gateway is essential for the real-time reporting of collar data. If the ranch notices a decrease in the reception rate or the device going offline, it is necessary to promptly check the gateway to avoid data delays.

- 1). Log in to the platform regularly to monitor the reception rate. If the reception rate drops, check if the receiver is offline.

脖环管理							
脖环佩戴数	泌乳牛未佩戴	异常脖环数	应关联脖环	佩戴异常脖环	2h接收率	6h接收率	接收器数量
520	4	2	5	9	99	99	2

- 2). If the gateway is offline, first check if the power supply box's circuit breaker is tripped. If not, check if the AC power supply at the power point is functioning normally.
- 3). If the gateway is not offline, check if the installed antenna is functioning properly.

Revision History

Version	Revision Date	Revision Description
1.0	2025-3-19	Initial version

FCC Caution:

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 interference received, including interference that may cause undesired operation.

Any 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 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.