



AGRICULTURAL METEOROLOGICAL STATION

Introduction

ZHICE YUNLIAN Agricultural Meteorological Station is an integrated intelligent meteorological monitoring device developed for agricultural production, applicable to diversified scenarios including field farming, greenhouse cultivation, orchards & tea plantations, livestock breeding and agricultural scientific research.

Functions

- Multi-parameter synchronous monitoring
- Cloud-based data management
- Intelligent threshold early warning
- Unattended operation

Technical Features

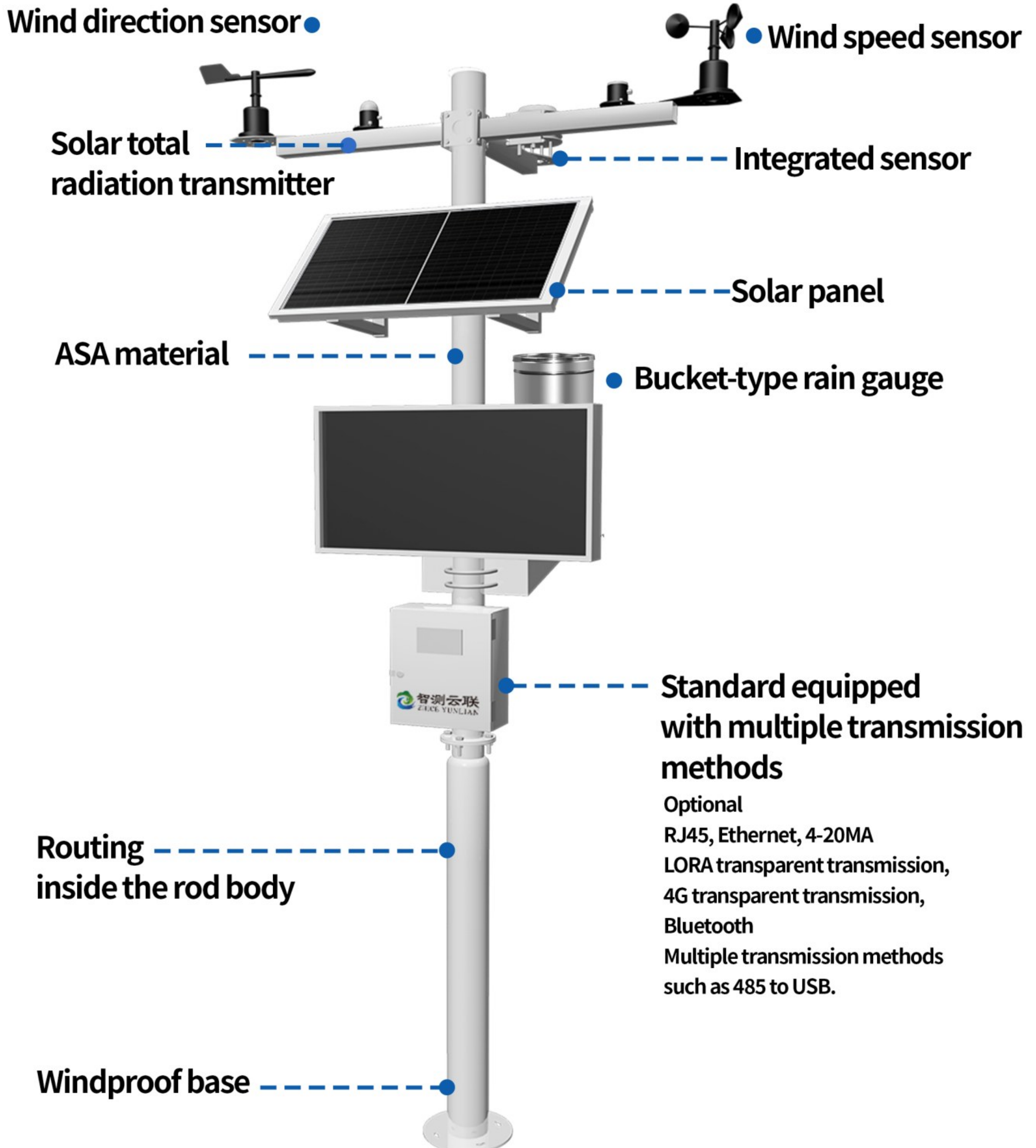
- High protection grade:
- Convenient and flexible installation
- Diversified communication methods
- Stable and reliable data

Standard Configuration

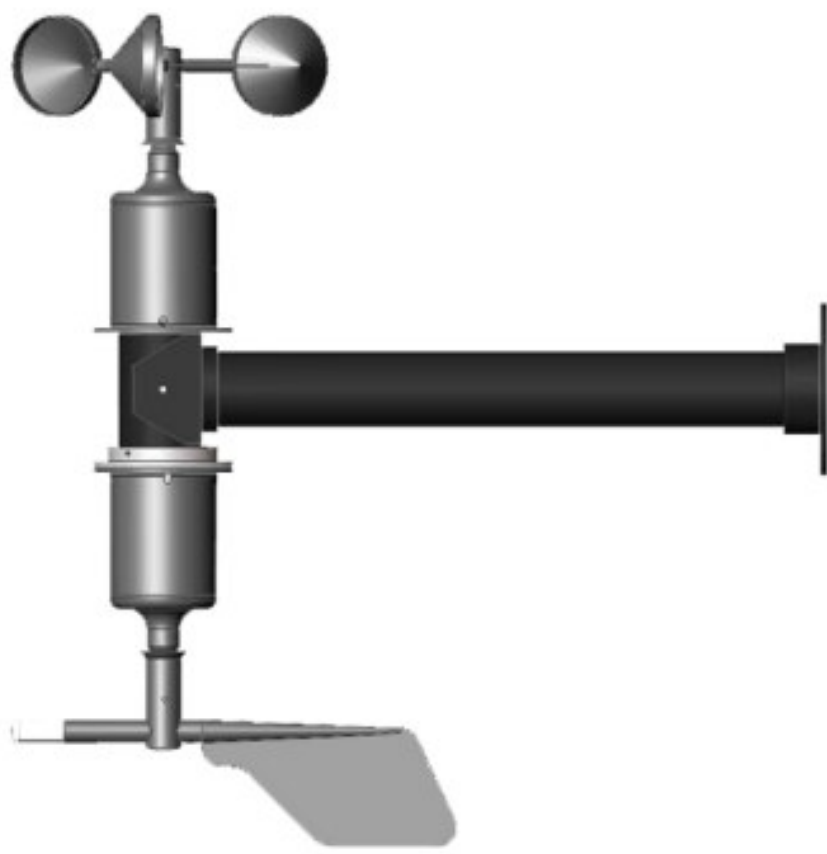
Meteorological station host, air temperature & humidity sensor, wind speed & direction sensor, rainfall sensor, illuminance sensor, solar power supply system, installation pole and bracket, cloud platform management system authorization



Product structure



ANEMORUMBOMETER



Wind speed sensor: The top part consists of three hemispherical wind cups, which sense the wind speed through the rotation of the cups.

Wind direction sensor: The bottom part is a tail-wing type wind vane that can rotate with the wind direction and indicates the direction of the wind.

Connection and installation structure: The two are integrated through a metal rod and combined with a transverse installation arm, which can be fixed on the meteorological station bracket or other supporting structures.

Ultrasonic meteorological sensor



Ultrasonic meteorological sensors use the ultrasonic time-difference method with no moving parts, ensuring maintenance-free, high stability and strong anti-interference performance.

They can simultaneously monitor wind speed, wind direction, temperature, humidity, barometric pressure, rainfall and other parameters with high accuracy and fast response. Featuring an integrated and compact design, they are easy to install and adapt to harsh environments.

Bucket-type rain gauge



The tipping bucket rain gauge is a special instrument for accurately measuring rainfall. Rainwater flows into the tipping bucket, triggering alternating tipping to generate pulse signals that record rainfall events. Rainfall volume, intensity, and duration are calculated accordingly.

It features stable structure, high precision, and strong adaptability. It is widely used in meteorology, water conservancy, agriculture, and environmental protection, providing reliable rainfall data for flood control, hydrological monitoring, and production management.



Introduction to the upper computer software

Function Category	Specific Description
Core Functions	Realize integrated management of data reception, storage, viewing and analysis in the PC standalone environment
Data Reception and Processing	1. Support data reception via serial port, as well as data processing and visual display 2. Compatible with communication methods such as JSON string and MODBUS485
Parameter Configuration	1. Allow independent setting of data storage time 2. Support custom collection time in MODBUS485 collection mode
Monitoring Parameter Management	Support users to independently add, delete and modify monitoring parameters, including information such as parameter protocols, names and icons
Data Processing Expansion	1. Equipped with data post-processing function 2. Support external running of JAVASCRIPT scripts



Introduction to Cloud Platform

Function Category	Specific Description
Architecture & Access Method	Adopts a CS architecture software platform, supporting direct access and observation via mobile phones and PC browsers without additional software installation
Account & Device Management	Supports multi-account and multi-device login, meeting the collaborative management needs of multiple users and terminals
Data Display Function	1. Provides dashboards for real-time data display and historical data display 2. Supports data curve analysis 3. Supports map display and device information viewing
Data Storage & Stability	Implements cloud data storage based on cloud servers, featuring stability, reliability, easy scalability and load balancing
Alarm & Threshold Management	Supports SMS alarm function, allowing custom alarm threshold settings to respond to abnormal data in a timely manner
Data Processing & Output	1. Supports data export in table format 2. Has data post-processing function 3. Supports external running of JAVASCRIPT scripts to enhance customization capabilities
Data Forwarding Function	Supports data forwarding via multiple protocols, including HJ-212 protocol, TCP forwarding, HTTP protocol, etc.

