

WHEAT SCAB MONITORING STATION



Product Introduction

The Zhice Yunlian Wheat Scab Monitoring Station is specially developed for real-time prevention and control of wheat scab. Equipped with high-precision integrated sensors, it monitors key field meteorological parameters around the clock, including wind speed, wind direction, rainfall, air temperature & humidity, and atmospheric pressure.

The system embeds a dedicated wheat scab prediction model. Combining historical data and real-time environmental parameters, it automatically calculates the probability of disease occurrence and outbreak risk level.

Configuration and Functions

Precise monitoring

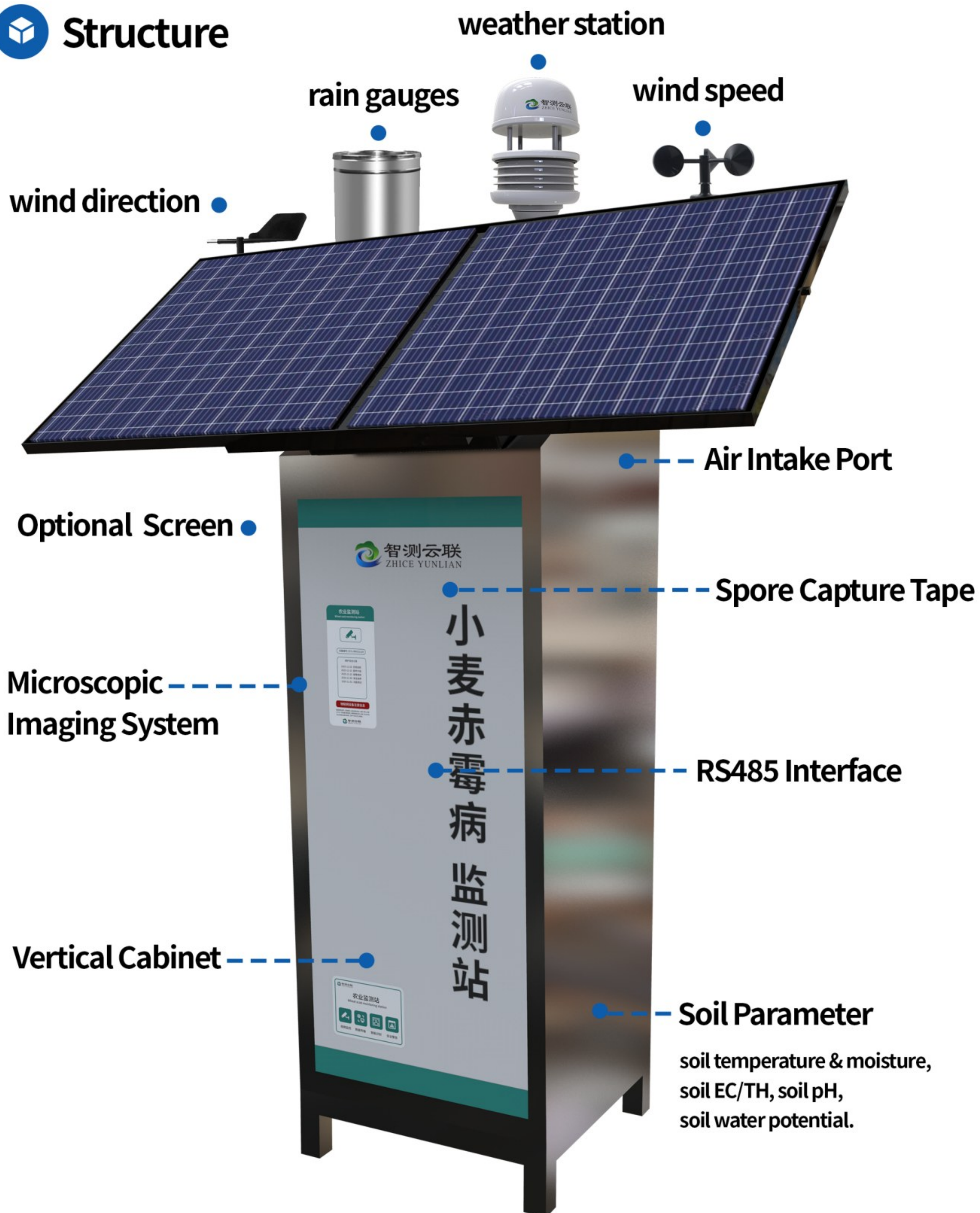
Integrated all-in-one design

Data visualization platform

Reliable data transmission



Structure



Installation Instructions

1. Select an accurate installation site for the wheat scab station (keep away from shelters and interference sources). Precast a concrete load-bearing platform with thickness no less than 10cm, ensuring horizontal error $\leq \pm 2^\circ$ to meet load and stability requirements for long-term outdoor operation.
2. Place the equipment base flat at the center of the precast cement platform. Drill holes vertically at the reserved fixing holes of the four base feet via impact drill, with evenly distributed hole spacing.
3. Take 8 expansion bolts from accessories, insert each into the drilled hole and fix tightly. Align the base holes precisely with bolt positions, then tighten nuts sequentially with torque wrench as specified to ensure the base is firmly fixed without shaking.
4. After installation, test base level with level gauge and shake manually to check stability. Once confirmed qualified, lift the equipment with hoisting tools or multiple workers and place it evenly above the base. Align mounting holes and fasten with special fixing bolts to complete rigid connection between equipment and base.

Parameters

Function Category	Specific Description
Communication Interface	1 MODBUS-RTU master interface, compatible with 485 transmitters
Supported Monitoring Elements	Wind speed, wind direction, soil temperature & moisture, soil EC/TH, soil pH, soil water potential, air temperature & humidity, noise, air quality, atmospheric pressure, illumination, rainfall, snowfall, ultraviolet radiation, total radiation, CO, O ₃ , NO ₂ , SO ₂ , H ₂ S, O ₂ , CO ₂ , evaporation capacity, negative oxygen ions, NH ₃ , TVOC, etc.
Rainfall Pulse Input	1 pulse signal input for tipping bucket rain gauge; default pulse equivalent 0.2mm; can upload hourly / daily / current / cumulative rainfall (default 2-way rainfall input)
Power Supply Scheme	1. Matches solar panel + storage battery for off-grid field power supply 2. Supports mains power + solar dual power supply to ensure uninterrupted operation under harsh environments
Measurement Configuration	Free combination of multiple monitoring elements
Display Function	Optional 7-inch touch screen, real-time display of all collected parameters
Data Application	1. Multiple data viewing forms, supports multi-terminal shared scab analysis data 2. Automatically analyze scab infection data, generate infection curves and environmental factor curves
Data Collection Modes	4G; RJ45 Ethernet; ModBus-RTU slave port; main RS485 interface
Data Upload Interval	Adjustable from 20s to 60000s