



# Tracker Control Unit

## Product Description

The Tracker Control Unit (TCU) is the motor drive device of the solar tracking control systems and the core executive mechanism of the tracking system. TCU can calculate the sun's trajectory in real time and calculate the optimal tracking angle based on time, longitude, and latitude, ensuring that photovoltaic modules always run at the optimal angle. TCU can communicate with NCU in real time, transmit operating data and accept control instructions.

## Product Features

- Supports Sub-1GHz, Bluetooth, RS485 and other communication methods. It is reliable operation and low power consumption.
- Supports multiple power supply methods. The string power supply uses a current source, which saves cables and is easy to install.
- Proprietary backtracking algorithm. Designed to optimize the most challenging terrains.
- Suitable for harsh environments, high tracking accuracy (<1°)
- Configured with NCU and backend SCADA quickly to improve power station operation and maintenance management level.
- Compatible with all kind of trackers (1P,2P,3L, dualrow)

Basic Parameters		
Product Number	SurgeTrack TCU S350	
Power Supply	24VDC/ String Power Supply	
Way of Communication	Sub-1GHz / RS485 / Bluetooth	
Letter of Agreement	Modbus RTU	
Protection Level	IP67	
Ambient Temperature	-30~60℃	
Altitude	< 4000m	
Tracking Parameters		
Tracking Accuracy	< ±1°	
Tracking Range	-60°~+60°	
Control Method	Astronomical Algorithm + Position Sensor	
Networking Method	Self-organizing network (No need to configure each TCU separately)	
Operating Mode	Automatic, Fault, Night, Fixed Angle, Heavy Rain, Strong Wind, Heavy Snow, Maintenance, Stop	
Debugging Mode	PC / Cell Phone / NCU	
Daily Power Consumption	0.05kWh/Day	
Motor Speed	Adjustable	
Protection Parameters		
Overcurrent Protection	Support	
Over/under Voltage Protection	Support	
Wind Protection	Optional	Requires Anemometer
Snow Protection	Optional	Requires Snow Depth Meter
Heavy Rain Protection	Optional	Rain Gauge Required
Night Return Mode	Support	
Reverse Tracking	Support	

