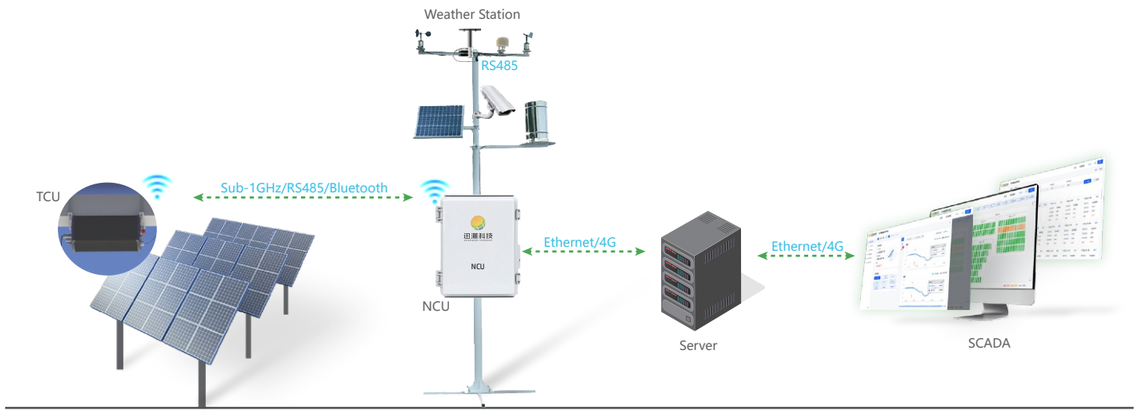
Network Control Unit (NCU)

The control unit enables real-time data collection and transmission from devices like controllers, weather stations, and motors. It also provides real-time fault monitoring, allowing users to remotely manage and maintain the PV power plant.

The NCU wirelessly monitors all TCUs in real time, enabling individual or group control while distributing critical weather data across the network. It also collects and transmits TCU performance metrics and environmental data to the SCADA system via wired or wireless networks, while executing remote control commands for optimized solar energy harvesting.

- Supports Sub-1GHz/4G/RS485/Ethernet and other communication methods, ensuring stable and reliable operation.
- Enables easy wireless networking without individual TCU configuration, saving time and effort.
- GPS connectivity ensures reliable and precise system operation.
- Compatible with intelligent weather stations to improve power generation efficiency and system safety.
- Supports bulk parameter modification for simplified control and easy debugging.
- Simple background configuration for effortless smart power plant operation and maintenance.

Basic Parameters		
Product Type	NCU	
Power Supply	220VAC / 24VDC	
Communication Method	Sub-1GHz / RS485 / Bluetooth	
Communication Protocol	Modbus RTU / MQTT	
IP Rating	IP65	
Ambient Temperature	-30℃-60℃	
Altitude	＜ 4000m	
Tracking Parameters		
Tracking Accuracy	＜ ±1°	
Control Method	Astronomical Algorithm + Position Sensor	
Networking Method	Self-Forming Mesh Network	
Meteorological Type	Wind Speed, wind direction, rainfall, snow depth, temperature, humidity, irradiation, etc.	Requires Sensors
Operating Mode	Auto/Fault/Night/Fixed Angle/Heavy Rain/Strong Wind/Heavy Snow/Maintenance/Stop/Farm	
Reverse Tracking	Supported	
Wind Speed and Direction Protection Logic	Optional	
Broadcast Control	Supported	
Other		
NCU OTA	Supported	Direct Connection to PC
TCU OTA	Supported	Support Wireless Upgrade
Historical Data Query	Supported	



The Solar Tracking Control Systems Communication Method