



RK600-07C Data Logger



Overview

RK600-07C Data Logger with data acquisition, storage, transmission and management, and other functions, is the core component of automatic weather station, which can connect 32 parameters at the same time, has the settings and color LCD display, can communication with sever or cloud via cable or wireless connection, provide communication protocol, convenient for secondary development.

Features

Local real-time display
Multiple sensor interface
Large storage
Multiple communication interfaces
Wireless optional

Data cloud platform
Self-contained clock chip
Solar power supply optional
Custom display interface
Free app and PC remote monitoring software

Advantage

Real time data display and storage
Adjustable data storage interval
Real time viewing of data tables
Support remote viewing and exporting CSV format data
Support wireless connection between data loggers and cloud servers
Support U-disk local data export
Support exporting data within a specified time period
The connector supports blind insertion, with no risk of incorrect insertion
Compatible with both DC and AC power sourcesLow power design, supporting solar power supply
RIKA provides cloud platform open services for multi device management
Third party software APP、Mini programs and other applications can directly embed HMI screens, instantly possessing remote control capabilities for devices
Support custom display interfaces (including logos, languages, etc.)



RK600-07C Data Logger

Technical Parameter

Item	Details
Display	7" color touch screen with backlight
Resolving power	1024*600
Touch type	Resistive type
Screen sleep	Support
Backlight adjustable	Support
Communication status indication	Support
Internal storage	4GB+1G
Communication interface	COM1:RS232/COM2:RS485/COM3:RS485
Network	Ethernet (standard), 4G, WIFI ,LoRaWan(optional)
Communication protocol	Modbus-Rtu、Modbus-TCP、HTTP、MQTT
Supply	DC12-24V, AC100-240V(adapter)
Measurement parameters	32 max
Recording interval	1-240min settable
U_disk download	Support
Relay output	Customized
Average consumption	<7W
CPU	Quad core A7 processor
Power protection	Equipped with surge protection and anti reverse protection
Withstanding voltage	500VAC
Insulation impedance	Exceeding 50M Ω @ 500VDC
Working temperature	-10~+60°C
Storage environment	-20 ~70°C
CE	EN55022 & En55024
Shell	400*500*200mm, Support solar power supply

Display Interface

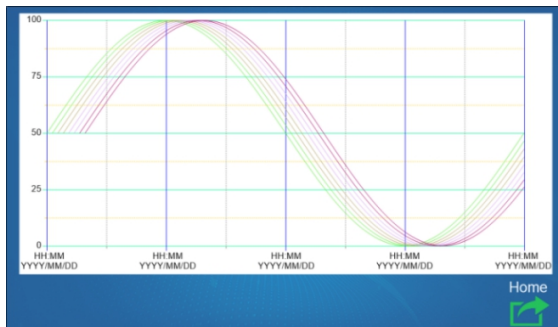


Real-time data

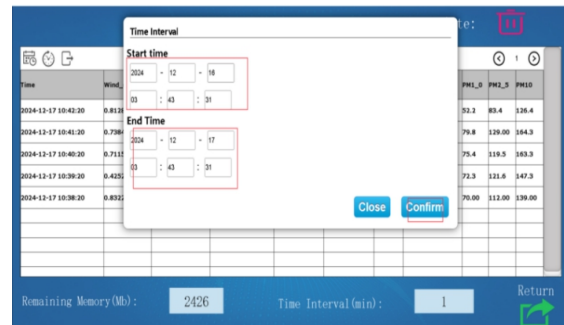
The data form display interface shows a table of recorded data with columns for Time, Wind_speed, Wind_direction, Air_temperature, Air_humidity, Air_pressure, Rainfall, Solar_radiation, PM1_0, PM2_5, and PM10. The table contains five rows of data. At the top right, there is a 'Delete' button with a trash icon. At the bottom, there are two status bars: 'Remaining Memory(Mb): 2426' and 'Time Interval(min): 1'. A green return button labeled 'Return' is at the bottom right.

Time	Wind_speed	Wind_direction	Air_temperature	Air_humidity	Air_pressure	Rainfall	Solar_radiation	PM1_0	PM2_5	PM10
2024-12-17 10:42:20	0.812832	192	0.815721	85.9276	1009.47	0.00	0.00	52.2	83.4	126.4
2024-12-17 10:41:20	0.798437	144	0.815721	85.8406	1009.48	0.00	0.00	79.8	129.00	164.3
2024-12-17 10:40:20	0.711562	310	0.830833	85.775	1009.49	0.00	0.00	75.4	119.5	163.3
2024-12-17 10:39:20	0.425215	270	0.845094	85.6967	1009.5	0.00	0.00	71.3	121.6	147.3
2024-12-17 10:38:20	0.852296	190	0.862896	85.6433	1009.49	0.00	0.00	70.00	112.00	139.00

Data form



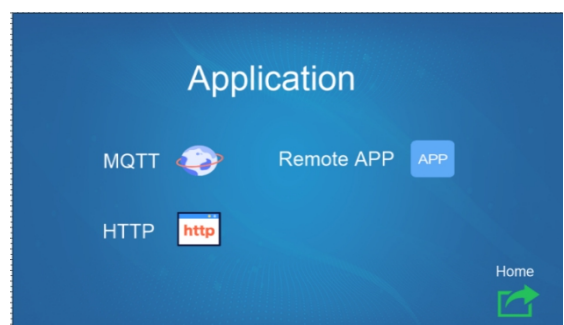
Historical curve



Historical data export

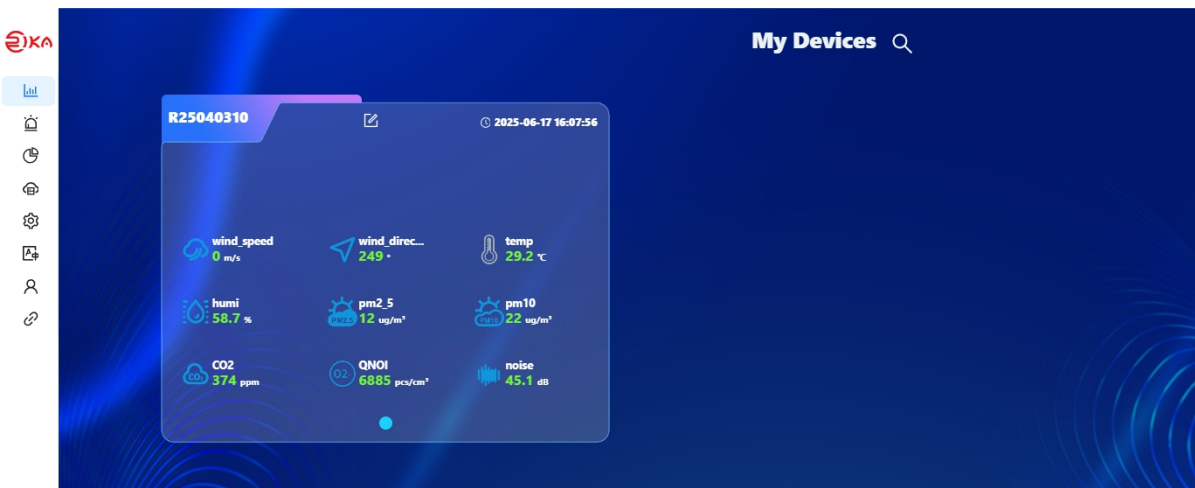


Setting interface

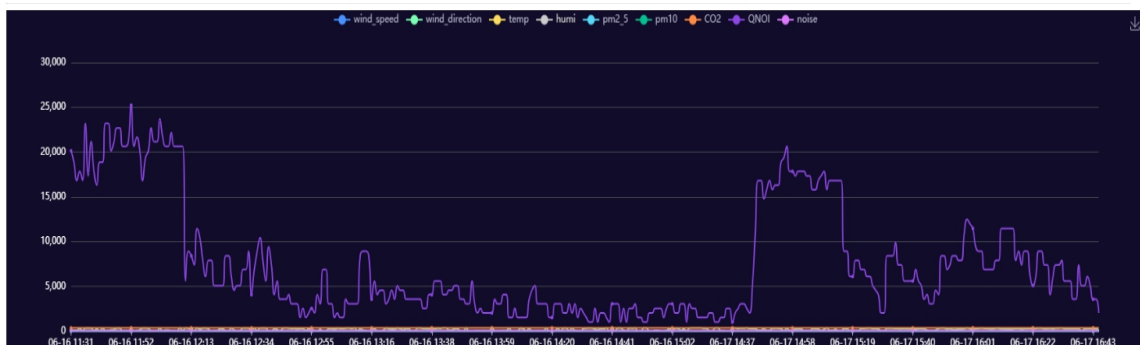


Server configuration

RIKA Cloud

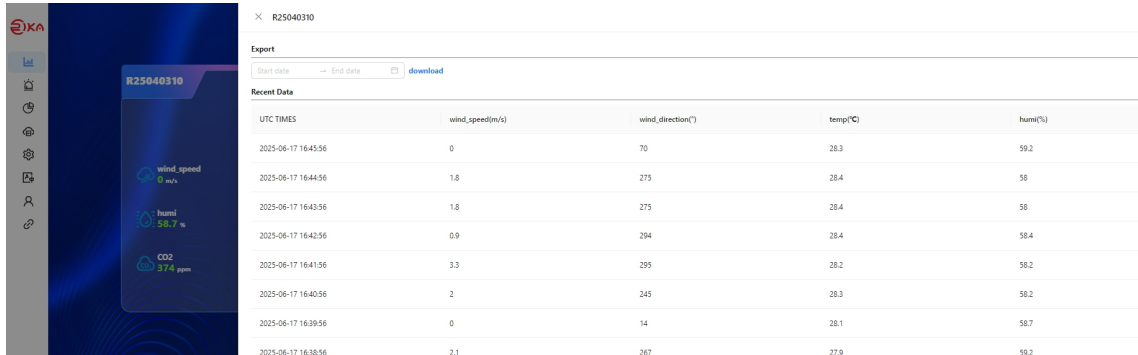


Real-time Data Interface



Data Curve Interface

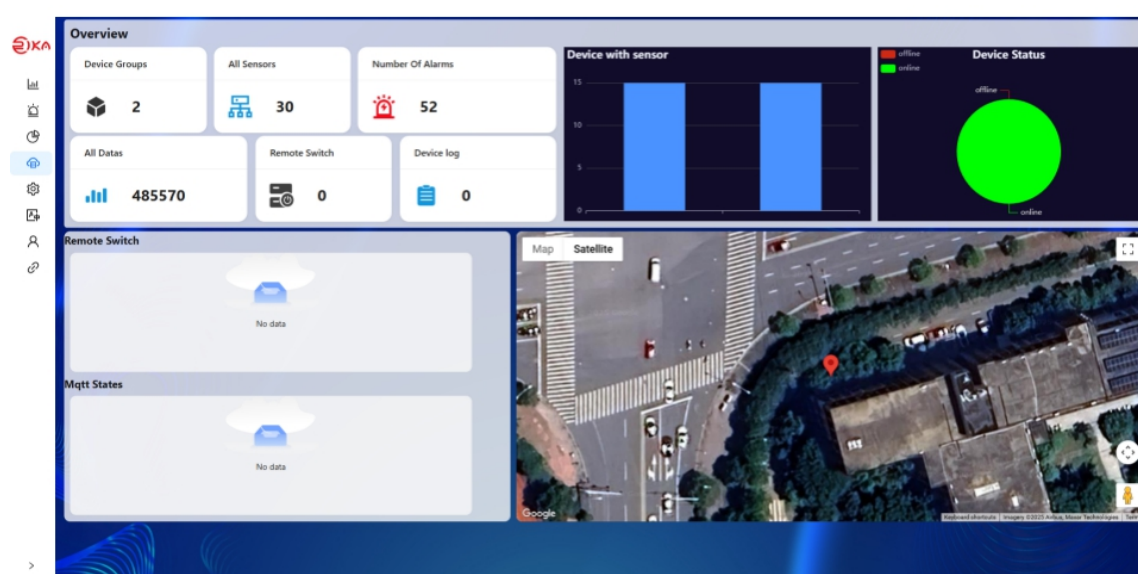
RIKA Cloud



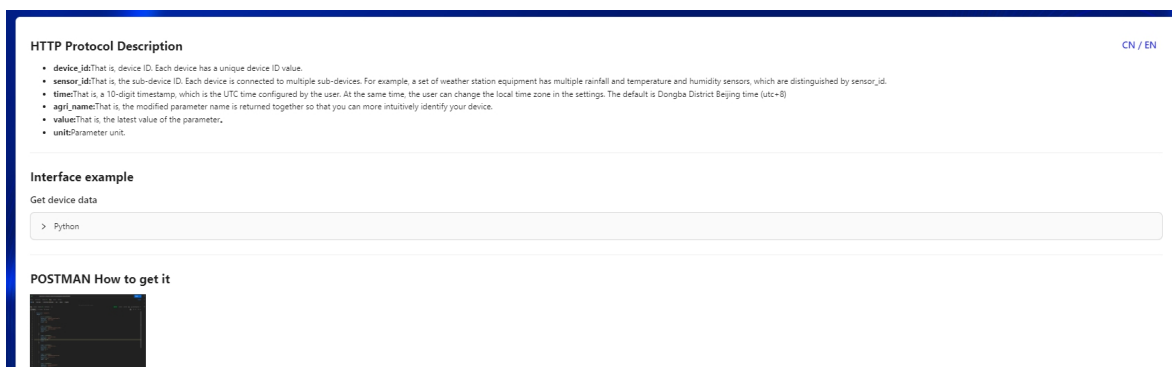
The interface shows a sidebar with navigation icons and a main content area. The main area displays a summary of data for device R25040310, including wind speed (0 m/s), humidity (58.7%), and CO2 (374 ppm). Below this is a table of recent data with columns for UTC TIMES, wind_speed(m/s), wind_direction(°), temp(°C), and humi(%).

UTC TIMES	wind_speed(m/s)	wind_direction(°)	temp(°C)	humi(%)
2025-06-17 16:45:56	0	70	28.3	59.2
2025-06-17 16:44:56	1.8	275	28.4	58
2025-06-17 16:43:56	1.8	275	28.4	58
2025-06-17 16:42:56	0.9	294	28.4	58.4
2025-06-17 16:41:56	3.3	295	28.2	58.2
2025-06-17 16:40:56	2	245	28.3	58.2
2025-06-17 16:39:56	0	14	28.1	58.7
2025-06-17 16:38:56	2.1	267	27.9	59.2

Data Export Interface



Data Statistics and Map Display



The API interface provides documentation for the HTTP protocol. It includes a 'HTTP Protocol Description' section with details on device_id, sensor_id, time, api_name, value, and unit. An 'Interface example' section shows a 'Get device data' endpoint with a Python example. A 'POSTMAN How to get it' section includes a screenshot of a POSTMAN request.

HTTP Protocol Description

- device_id**: That is, device ID. Each device has a unique device ID value.
- sensor_id**: That is, the sub-device ID. Each device is connected to multiple sub-devices. For example, a set of weather station equipment has multiple rainfall and temperature and humidity sensors, which are distinguished by sensor_id.
- time**: That is, a 10-digit timestamp, which is the UTC time configured by the user. At the same time, the user can change the local time zone in the settings. The default is Dongba District Beijing time (utc+8).
- api_name**: That is, the modified parameter name is returned together so that you can more intuitively identify your device.
- value**: That is, the latest value of the parameter.
- unit**: Parameter unit.

Interface example

Get device data

```
Python
```

POSTMAN How to get it



API Interface



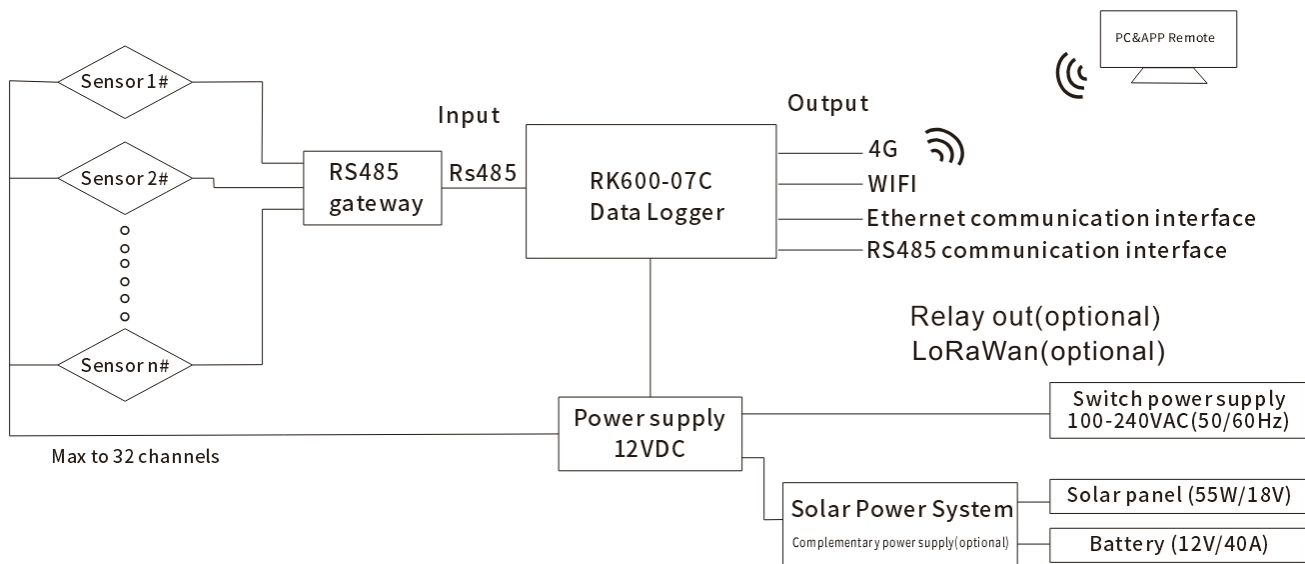
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Part List

Item	RK600-07C
Data logger	✓
Protection box	✓
Waterproof connector(to sensors)	✓
Power connection terminal	✓
USB-RS485 converter	✓
Power adapter(AC100-240V@12VDC)	✓
Solar charging controller	Optional
Solar panel	Optional
Lead acid battery①	Optional
Ethernet module	✓
GPRS/2G/3G/4G	Optional
Lora module	Optional
Relay module	Optional
Other parts	Customizable

①Since air transportation is not available, it is recommended that users purchase locally.

System Diagram



RK600-07C System Diagram

Revision time	Reviser	Current Version	Remarks
20250505	Lee	V5.0	