



RK600-08A Data Logger of Automatic Weather Station



Overview

The RK600-08A data logger has functions such as data acquisition, storage, transmission, and management, and is the core component of automatic weather stations. It can connect to 32 parameters simultaneously and is equipped with configuration settings and a color LCD display. The collected data can be uploaded to the cloud platform via Ethernet, Wi-Fi, or 4G. The data logger is with an optional relay control function available.

Features

Local real-time display	Data cloud platform
Multiple sensor interface	Self-contained clock chip
Large storage	Selection of battery power supply
Multiple communication interfaces	Custom display interface
Wireless optional	Free app and PC remote monitoring software

Applications

- 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 sources
- Low power design
- 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 customized display interfaces (including logos, languages, etc.)



RK600-08A Data Logger of Automatic Weather Station

Technical Parameter

Item	Details
Display	4.3"color touch screen with backlight
Resolving power	800*480
Touch type	Resistive type
Screen sleep	Support
Backlight adjustable	Support
Communication status indication	Support
Internal storage	4GB+512M
Communication interface	COM1:RS232/COM2:RS485/COM3:RS485
Network	Ethernet (standard), 4G, WIFI
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	<6W
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	270*213*55mm, 190*152*55mm

Display Interface



Real-time data

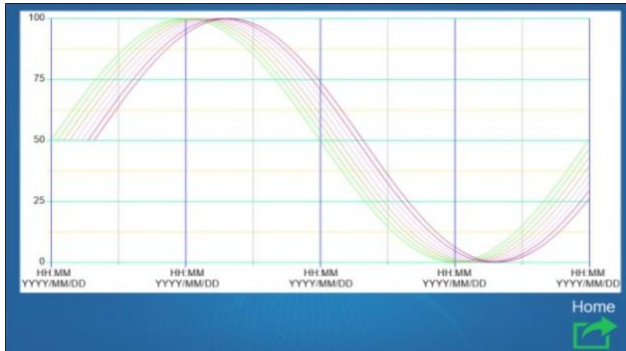
The 'Data form' interface shows a table of recorded data. The table has columns for Time, Wind speed, Wind direction, Air temperature, Air humidity, Air pressure, Rainfall, Solar radiation, PM1.0, PM2.5, and PM10. The data is recorded for the date 2024-12-17. At the bottom, there is a 'Remaining Memory (Mb): 2426' and a 'Time Interval (min): 1'.

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	0.813832	192	0.815721	85.9276	1009.47	0.00	0.00	53.3	83.4	126.4
2024-12-17 10:41:20	0.798427	144	0.813721	85.8406	1009.48	0.00	0.00	79.8	129.00	164.3
2024-12-17 10:40:20	0.711362	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	72.3	121.6	147.3
2024-12-17 10:38:20	0.832296	190	0.862896	85.6433	1009.49	0.00	0.00	70.00	112.00	139.00

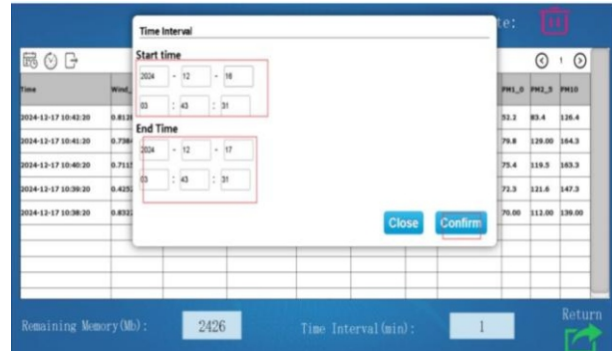
Data form



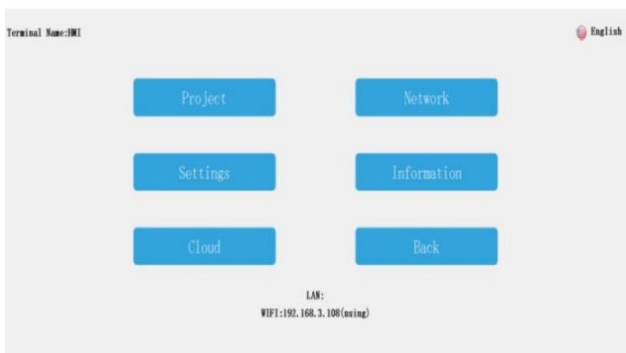
RK600-08A Data Logger of Automatic Weather Station



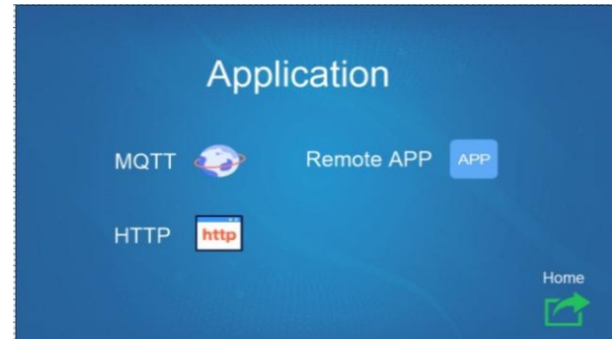
Historical curve



Historical data export



Setting interface



Server configuration

RIKA Cloud



Real-time Data Interface

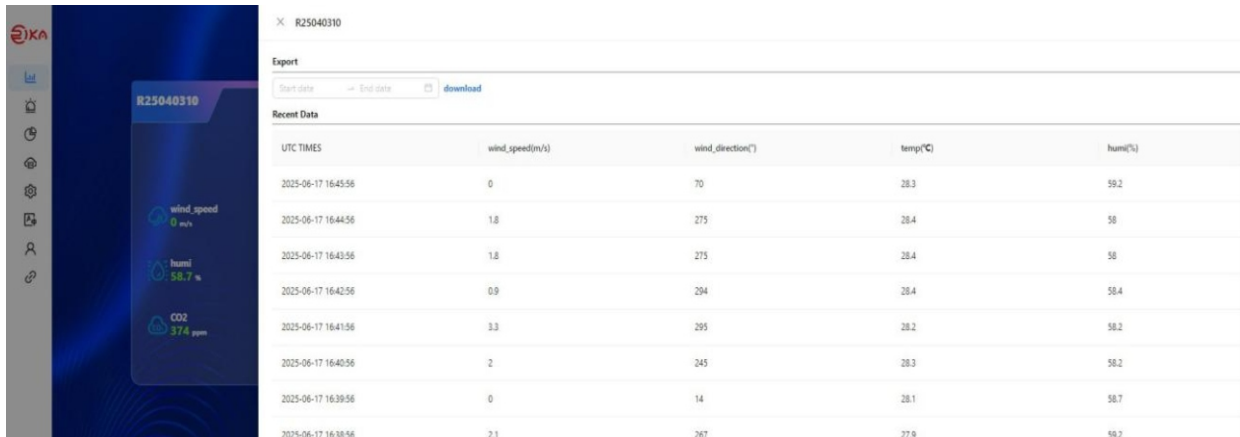


Real-time Data Interface



RK600-08A Data Logger of Automatic Weather Station

RIKA Cloud



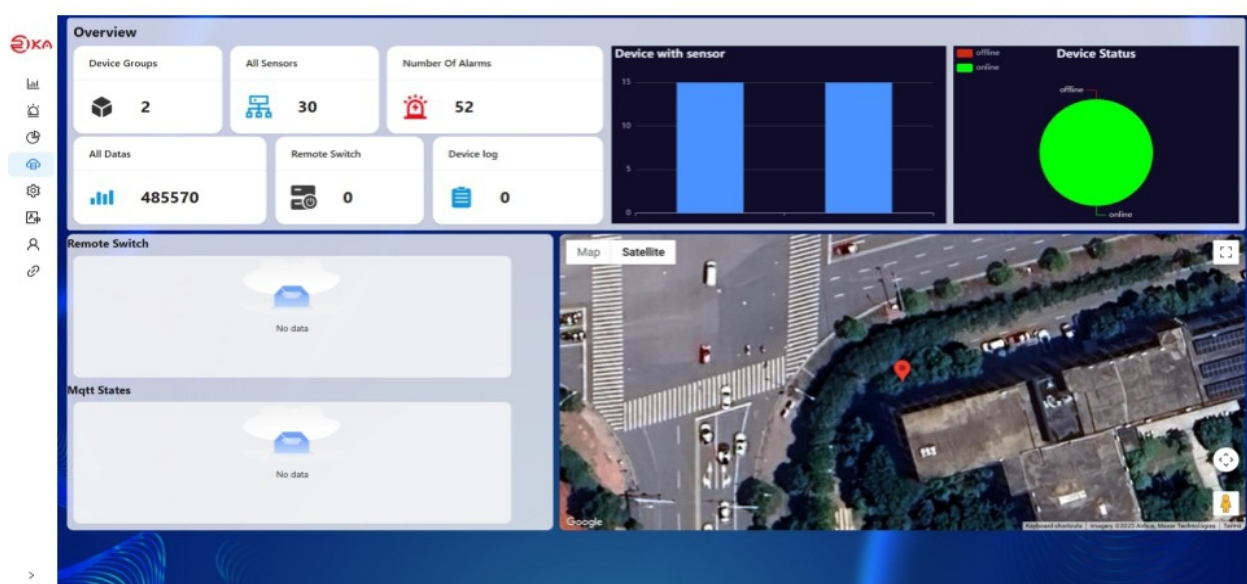
Export

Start date → End date [download](#)

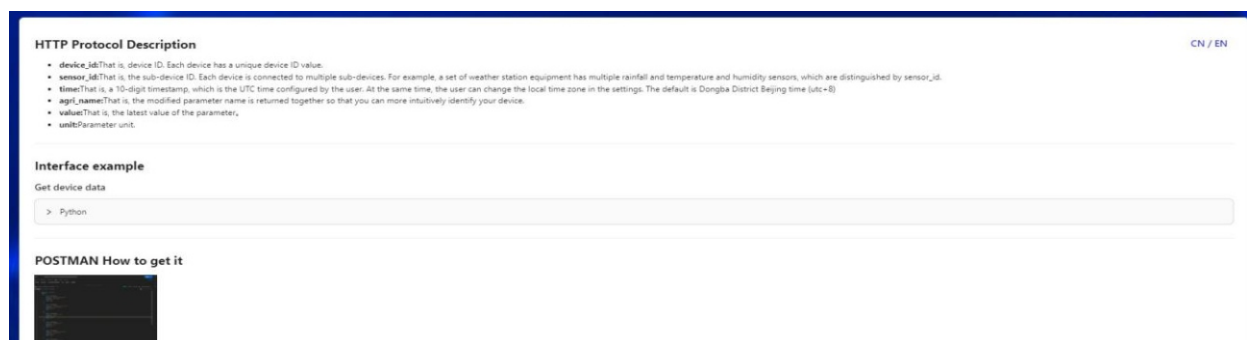
Recent Data

UTC TIMES	wind_speed(m/s)	wind_direction(°)	temp(°C)	humid(%)
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



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

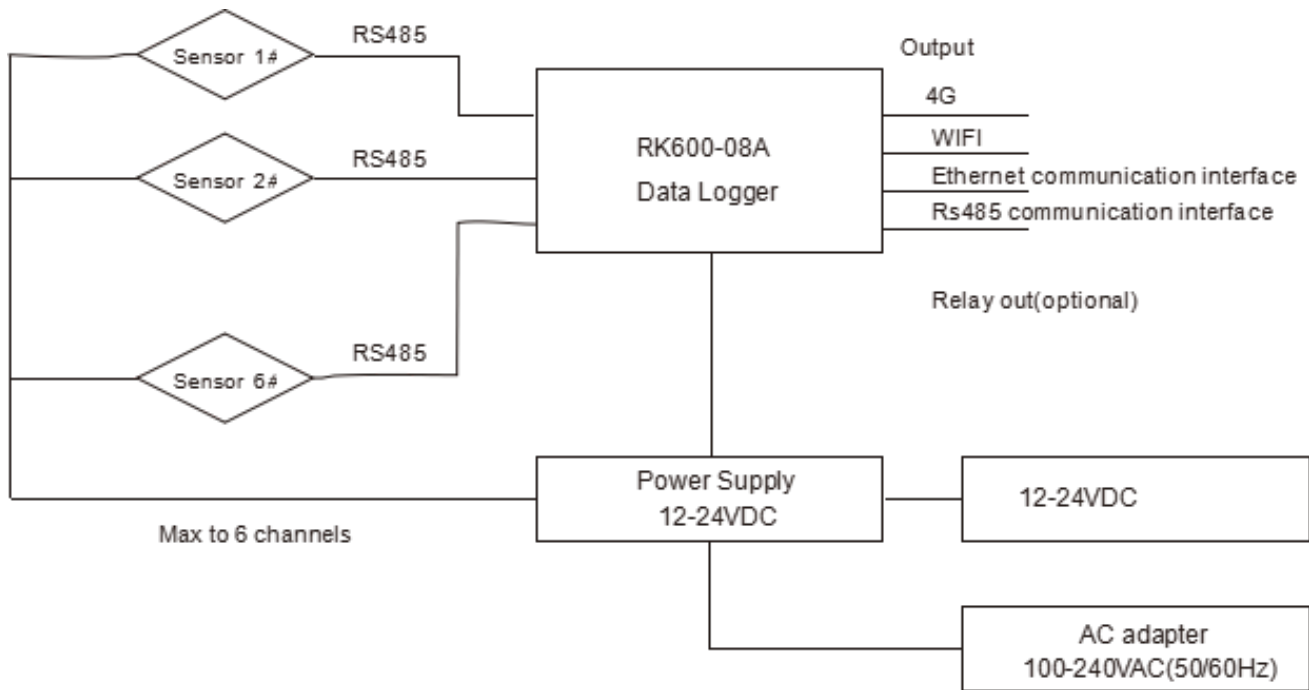
POSTMAN How to get it

API Interface



RK600-08A Data Logger of Automatic Weather Station

System Diagram



RK600-08A System Diagram

Revision time	Reviser	Current Version	Remarks
20250815	Lee	V5.0	