

RK600-02/02B Data Logger with data acquisition, storage, transmission and management, and other functions, is the core component of automatic weather station, which can connect 16 parameter at the same time, has the settings and LCD display, can communication with PC via cable or wireless connection, provide communication protocol, convenient for secondary development.

FEATURES

- Real-time display
- Multiple sensor interface
- Large storage
- Types of communication interface
- Udisk external storage optional
- Wireless optional
- Self-contained clock chip
- Solar power supply optional

SPECIFICATION

Item	Details
LCD	192 * 64
Internal storage	12M (If set to store every 1 hours can store data for more than 4 years; If set to store every 10 minutes can store data for approx. 1 years; If set to store every 1 minute can store data for 30 days)
External storage	Use special U disk to store data (optional function)
Data interface	RS232, RS485, USB
Communication mode	Ethernet(add RS232 to ethernet converter); GPRS(add RS232 to GPRS converter),data flow consumption: <100MB/month WIFI(add RS232 to WIFI converter)
Communication protocol	MODBUS-RTU(Open communication protocol, the user can convenient for
Supply	12VDC, AC110V, AC220V, solar power supply system optional
Record interval	1min-240min adjustable
Input parameter	16 max.
Power consumption	<2W
Operating temperature	-40-+75℃
Weight(unpacked)	3.2kg
Dimension	310*218*120mm
Shell material	RK600-02:ABS(Installed in protective box,protective box is optional) RK600-02B:Aluminum alloy(outdoor use directly)
Meteorological monitoring	Use to display, analysis and storage data on the PC
software	

Guidelines for the Selection of Data logger:

If solar power supply is needed, RK600-02 is recommended, data logger, solar controller and battery can be installed in protective box.





RK600-02

RK600-02B



KEY INSTRUCTION

KEY	Function	KEY	Function
	Up	+	Value increases
	Down	Ι	Value decreases
	Left / Shift to the previous interface	ок	Enter the menu
	Right / Shift to the after interface	Esc	Exit menu

PARAMETER SETTINGS

Item	Function
Version	View data logger software version number
Time settings	Set data logger system clock
Other settings	Set electronic compass (optional function)
Communication settings	Set data logger address(0-255,RS232/RS485 communication)
Reset	After reset all parameters must be reset and clear the history data
Time interval	Set the data storage time interval(1-240min)
Language settings	Chinese/English
External storage	External storage type(U disk/No,If no external storage, set to no)

INTERFACE DESCRIPTION





COMMUNICATION MODE

- The AWS can communicate with the center workstation(meteorological monitoring software installed) by RS232 or RS485.
 If the communication distance is less than 20m, RS232 communication is recommended; if communication distance is within 20 to 800m, RS485 communication is recommended.
- GPRS wireless communication, when cable routing is inconvenient, data can be transferred by GPRS wireless communication, the center workstation can network with several RK900-01 AWS.
- LAN access, RK900-01 AWS is worked as a LAN node communication in the local network by transferring the RS232 with a LAN module. This mode can work under the network interface, the AWS can connect with the computer host directly.

METEOROLOGICAL MONITORING SOFTWARE INSTRUCTIONS

Meteorological Monitoring software is installed on the PC can be stored, download real-time, historical data, and through computer analysis of the meteorological data of the weather station passed, and has data transfinite alarm function.

Real-time data: instantaneous meteorological data for the current computer time.

Historical data: an automatic weather station records to the data collection instrument memory chips (collection instrument clock) acquisition cycle in accordance with the set.

Install

Install the software on the computer

Run

Double-click the icon to run Software

• Initial configuration

After the software is installed, the software is the default setting. Users can set the software according to the type of hardware collection instrument, only the software settings and hardware consistent to be able to properly communicate with the acquisition instrument.

There are two methods to set-up software. One is directly modify the relevant settings in the software, and another is loaded from a configuration file. The following describes the latter method:

1. Start the software. It need to load the configuration of the device, click "Administrator Configuration" menu under "modify configuration "submenu in the left side of the device list:

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Pop-up configuration window:

Device Config	Element Config	Sensor Parameters	Communication	Settings	Profiles
Device Name	e: 001				
Device Type	e: WeatherStation	(16 Channels Modbus)			
Communication	n: Serial Port		•	Serial S	ettings (S)
{ardware Addres:	s: 1				
Remark:	5:				*
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2.Enter the "Profile" page, click on the "loaded from a configuration file" button:

evice Config	Element Config	Sensor Parameters	Communication Settings	Profiles
Save the dev information	rice configuration into a file.	i	Save as Configuration	A File(E)
Load device a configurat	configuration fro ion file	m	Load from Configuration	A File(L)

3.Select a configuration file , and then click "Open" Button:

Select Configuration	n File		? X
查找范围(<u>I</u>):	🚞 Configurat	ion files 🔹 🗸 🧿 📂 🛄 🗸	
Recent 原面 我的文档 我的电脑	10425 Confi	g=20121031. PHF 震型: PHF 文件 修改日期: 2012-10-31 09:15 大小: 4.66 KB	
₩2 网上邻居	文件名 (M):	10425 Config=20121031	打开 (0)
	又作尖型 (I):	Configuration File (*. PHF)	取消



4. Modify the device configuration:

The actual situation of each client is not the same, we need to modify some of the basic configuration. Open the configuration window, as shown below:

)evice Config	Element Config	Sensor Parameters	Communication	Settings	Profiles
-					
Device Name	: 001				
Device Type	WeatherStation	(16 Channels Modbus)			
Communication	Serial Port		•	Serial S	ettings (S)
ardware Address	: 1				
Remarks	:				*

Hardware address

Acquisition Instrument Address.

Serial port settings window

Serial Port::	Com1	•
Baud Rate: :	9600	•
Parity: :	pNone	•
Data bits: :	8	•
Stop bit::	1	-

Serial number

Acquisition Instrument with a computer connected to the serial port number.

Save the settings

Choose to save the settings, set to take effect.



• Acquisition instrument parameter setting

As shown below, enter "the acquisition instrument set parameters page, click on the" read parameter "button: acquisition instrument configuration parameters window pops up:

Meacuerocacion(LC-RD1) - [C01]		
🔚 Settings(5) Data(D) View(₩) Menagemen	k(<u>A)</u>	. 6
Davica List(1)	Real-time Data Mistorical Data Farameter Sett	tings
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Wistorical data timing damples	in the second seco	
OMistorical data download cycle	Keset acquisition instrument	
<u></u>	Beset Instru	
Welcome?	Vser: admin(System Administrator)	Current Device: 001

Language setting window

In language settings window, users can set the system's language, There are Chinese and English, the two languages to choose from.

2012-11-1 16:28:46 📄	🔽 PC time	
Instrument parameters:		
Parameter name	Parameter value	-
🥝 Historical data record interval	10 minute	
🥝 Language	English	

Save the settings

Choose to save the settings, set to take effect.

• Data Query

Real-time data window

In real-time data window can download to view real-time weather station data; data and can be stored in the database.



🛸 WeatherStation(LC-RJ1) - [001]	
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Device List(1)	Real-time Dats Historical Dats Parameter Settings
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O01: Real-time Data - Data is returned	0 bastanduntun

Download real-time data

Select refresh data manually download a meteorological data.

Periodically refresh

If you need to automatically download data from time to time, set a timer refresh cycle and select refresh timer can automatically download data in accordance with the set cycle.

Historical data window

Users can download weather station storage of historical data in historical data window view; data and can be stored in the database.

/eatherStation(LC-RJ1) - [001]										
Settings(<u>S)</u> Data(<u>D)</u> View(<u>W</u>) Menagement	(<u>A</u>)									
ice List(1)	Real-time Data His	storical Data Pag	rameter Settings							
001	A total of 23 histor	ical data:			Period	0 min 🔷 5 s 🔶	Start with integr	al point 🔄 Timing	Download Down	Load Historic
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Historical data timing downlos	2012-10-21 11:22:00	0.0(0)	0.0			60.0 60.4	0(0)	0.0	0.0	
listorical data download cycle	2012-10-31 11:36:00	0.0(0)	0.0			0.0	0.00	0.0	0.0	
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	2012-10-31 13:04:00	0.0(0)	0.0			0.0	0.00	0.0	0.0	
	2012-10-31 13:04:00	0.0(0)	0.0		101	0.0	0.00	0.0	0.0	
	2012-10-01-10:10:00	0.0(0)	0.0	19.0		20.0	0.00	0.0	0.0	
	2012 11 01 03:31:00	0.0(0)	0.0	10.0	205	0.0	0(0)	0.0	0.0	
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	2012-11-01 10:50:00	0.0(0)	0.0	370	173	0.0	0(C)	0.0	0.0	376
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	2012-11-01 16:00:00	0.0(0)	0.0	100	101	0.0	0 (C)	0.0	0.0	100
	2012-11-01 16:10:00	0.0(0)	0.0	()	100	0.0	0 (C)	0.0	0.0	5.50
	2012-11-01 16:20:00	0.0(0)	0.0	100	17.1	0.0	0 (C)	0.0	0.0	1.000
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	<									

Download Data

Select refresh data manually download a meteorological data.



Periodically refresh

If you need to automatically download data from time to time, set a timer refresh cycle and select refresh timer can automatically download data in accordance with the set cycle.

Data Query

Click the "data query" sub-menu under the menu of "data processing", "Data Query menu pops up:



Set the query, click the Query (Q) "button, the query results will be displayed on the lower side of the list; Click "delete (D)" button, the list displayed in the data will be deleted from the database;

Click "Export (E) button to save the list to a file;

Click on the "print (P)" button to print the list displayed data;

Click on the "data backup (B)" button backup list.

• Sensor configuration parameters

Wind Bracket angle

Due to the north is set for "zero degree", the greater the angle more to the "clockwise" direction, the angle of a maximum of 359 °;

Due to the installation of the wind direction sensor's deviation, which makes the acquisition instrument panel on wind direction readings and the actual value is slightly inconsistent. In order to improve the Winds accuracy, we need data collected Winds correction processing performed, the specific method is as follows:

After installing the bracket, the wind direction sensor pointing due north (zero degree), read the wind the acquisition instrument panel on reading: x $^{\circ}$

Wind the bracket angle V has a value of: V = 360 - x $^{\circ}$

Click "administrator configures modify the device configuration" menu under "sub-menu, pop-up configuration window, enter the" sensor parameters "page:



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Device Config	Element Cor	ig Sensor Parameter	s Communication Sett	ings Profiles
Element Name		meter Name	Parameter Value	
wina Direction	Dra	ket Angle	U	
				Save (S)

Wind Bracket angle V above, resulting in wind direction sensor bracket angle "Enter, click the" Save the bracket angle "button to save your settings.





AC100-240V/DC12V supply





AC100-240V & solar power supply

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