

Frigga Data Center

User Manual

Table of Contents

I	Introduction	1
1.1	Overview	1
1.2	Installation environment requirement	1
II	Install & Start	2
2.1	Install	2
2.2	Start	3
2.3	Uninstall	4
III	Functions	5
3.1	Toolbar	5
IV	Download Data	6
4.1	Connect data logger	6
4.2	Read data	6
4.3	Store data	6
V	Summary	7
5.1	Device information	7
5.2	Statistical information	7
5.3	Summary - Graph	8
5.4	Summary-Data Sheet	10
5.5	Data Filter	9
5.6	Export Data	11
VI	Configure Devices	12
6.1	Basic parameters	12
6.2	Advanced parameters	13
6.3	Parameter template	13
VII	Database	14
7.1	History Data	14
7.2	Filter data	15
7.3	Data Operation	16
7.4	Analyze data	17
VIII	System Settings	18
8.1	Preferences Setting	18
IX	21 CFR	18
9.1	FDA 21 CFR Part 11 Module	18
9.2	Activate the Module	19
9.3	Initializing Administrator	20
9.4	User Management	21
9.5	Power Management	22
9.6	Endorsement Management	23
9.7	Security Policy	24
9.8	Audit Log	25
9.9	Digital Signature	26
X	Cloud Platform Services	27
10.1	Cloud Users Registration	27
10.2	Cloud Users Login	28
10.3	Login	28
10.4	Data Uploading	29
10.5	Transfer List	31

I Introduction

1.1 Overview

Frigga Data Center Software is comprehensive desktop software designed for analyzing and managing the temperature and humidity data recorded by Frigga data loggers.

The software integrates the most dependable temperature and humidity sensing technology and the most advanced system kernel to date. It is characterized of reliable data, quick response, simple operation and other strong functions, enabling users to track and collect temperature and humidity data of sensitive products timely and accurately in their testing, production, transport and storage, so that the whole cold chain can be monitored and traced with product safety guaranteed.

1.2 Installation environment requirement

Pentium 1GHz or above, 2G or more

A hard drive with 1GB available disk space

Windows 10 / 11

Mouse or other pointing device

A VGA monitor with display resolution 1440 x 900 pixels or better

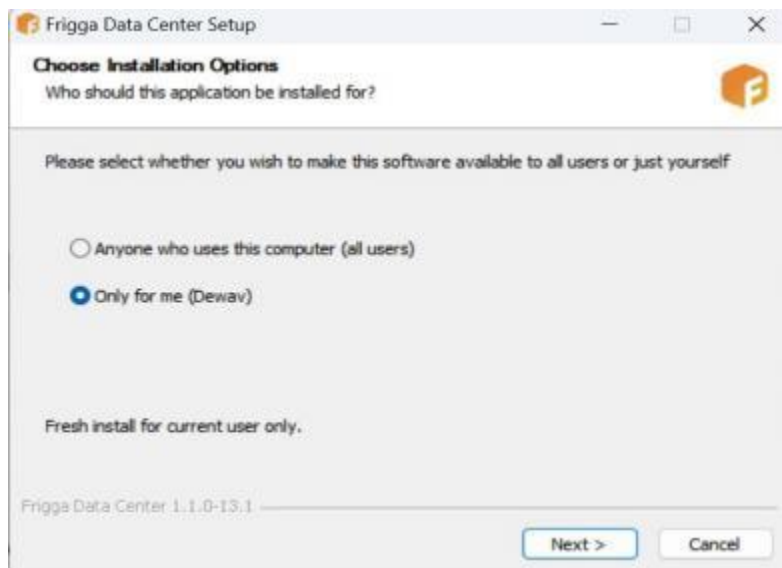
Computer administrator account

II Install & Start

2.1 Install

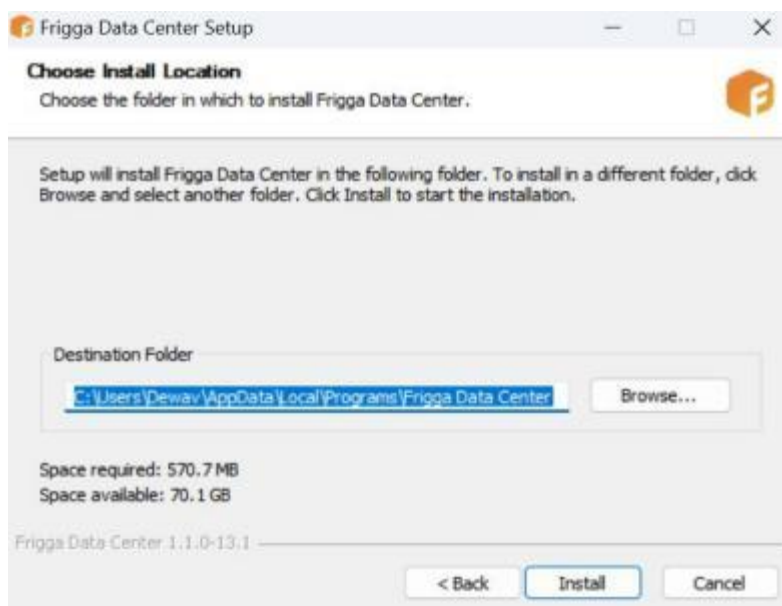
Installation link : Go to <https://www.friggatech.com/application>, download “Frigga Data Center”.

1) Double click installer to start installation.



2) Select destination folder


3) Click Install.

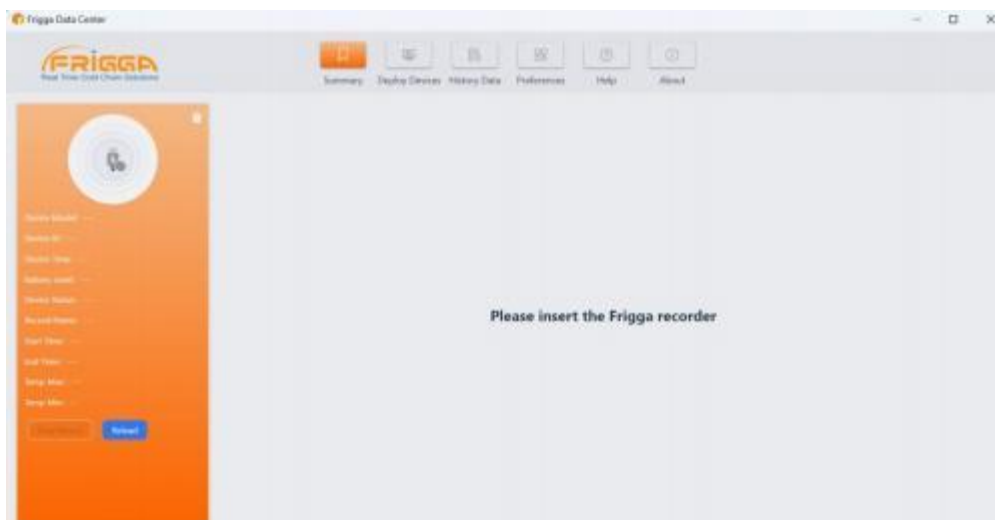


4) Click Finish and installation completes.



2.2 Start

Double click  on your computer desktop to start the software.

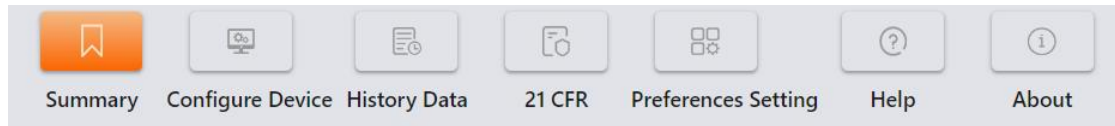


2.3 Uninstall

- 1) Open Windows start menu, find this software.
- 2) Right click Uninstall to enter Add or Remove Programs.
- 3) click Uninstall.
- 4) Wait until uninstallation completes.

III Functions

3.1 Toolbar



Summary: After successfully downloading the data, the software will show the logger's basic information, statistics.

Configure Devices: Users can set the parameters of a connected data logger, including log interval, start delay, Shipment ID, Shipment Note and alarm settings.

History Data: The data downloaded from the logger is automatically saved to the database, so users can view the data anytime. Data can also be filtered as needed. Users can also view data of a selected time range, filter alarm data, drag and select multiple lines of data. The data of multiple devices can be viewed and compared at the same time. It supports multi-graph drawing, parameter comparison and other functions.

21 CFR: FDA 21 CFR Part 11 Module

Preferences Setting: Includes Basic Settings and Cloud Settings. Basic Settings includes four tabs: Option to change date/time format, language and temperature unit. Cloud Settings supports two methods of uploading.

Help: User Manual.

About: About us.

IV Download Data

4.1 Connect data logger

Connect the data logger to a computer for downloading data. Only one logger can be connected to the software at a time. It does not support simultaneous operation of multiple loggers.

4.2 Read data

Click "Reload" on the toolbar to read and download the data in the logger. If the data logger is connected for the first time, the software will automatically read and download the data.

4.3 Store data

After downloaded, the data will be saved to the database automatically. The data can be viewed in "Database" interface.

V Summary

5.1 Device information

Device ID: The unique ID of the data logger. It cannot be changed.

Device Time: the current time of the device.

Battery Level: The current remaining power of the device.

Device Status: The current working status of the logger.

Record Points: The amount of readings the software downloads from the logger.

Start Time: The time when the logger starts running.

End Time: The time when the logger stops running.

Temp Max: The maximum value of the recorded temperature readings.

Temp Min: The minimum value of the recorded temperature readings.

Humi Max: The maximum value of the recorded humidity readings.

Humi Min: The minimum value of the recorded humidity readings.

Reload: Refresh data.

Calibration Report: Click to get the calibration report of the device.

5.2 Statistical information

Start Mode: The mode the logger to be started, including manual start, timing start, immediate start.

Stop Mode: The logger's actual stop mode, including temporary stop, stop via software, manual stop.

Record Interval: The interval time between two successive points of data.

Start Delay: The time from the logger started to the first point saved.

Repeated Start: The logger is started repeatedly, and the previously recorded data is cleared after a new startup.

Display Time: The logger's on screen display time.

Firmware Version: The logger's internal program version number.

High Temp Alarm: The maximum of temperature threshold.

Low Temp Alarm: The minimum of temperature threshold.

Humi Threshold max: The maximum of humidity threshold.

Humi Threshold min: The minimum of humidity threshold.

Shipment ID: Customized options designed for logistics, cold chain transportation companies.

Shipment note: Customized options designed for logistics, cold chain transportation companies.

Note: The specific configuration items may vary depending on the device model.

5.3 Summary - Graph

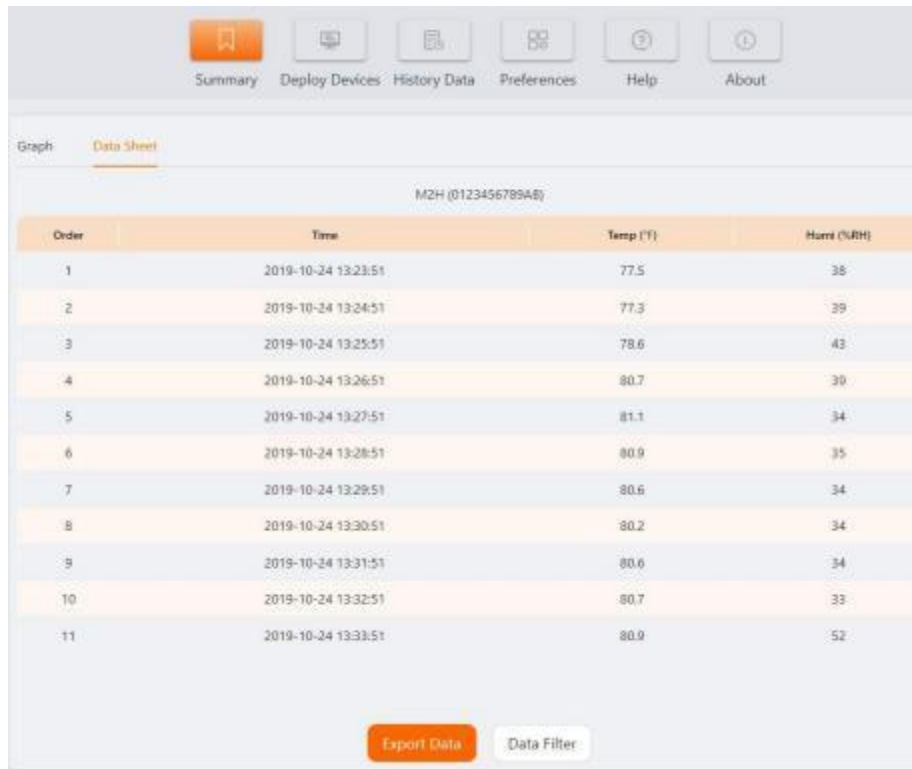


Click the "Graph" tab to display currently selected data of the logger. It can be the data of a currently connected logger or the historical data stored in the database.

The red one of the graph shows the temperature scale value and the blue one shows the humidity scale value.

The graph supports zoom functions, allowing the user to zoom in and zoom out.

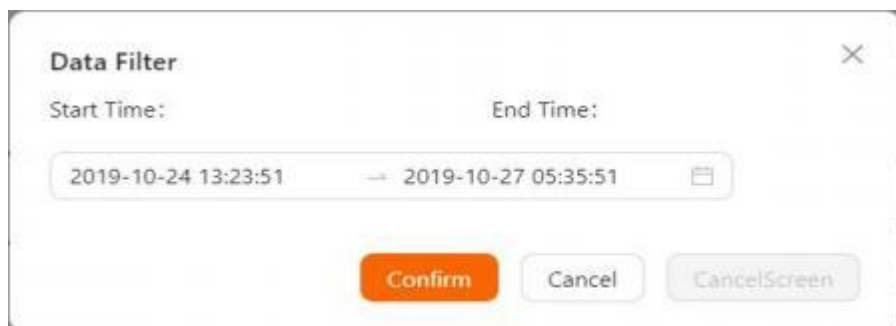
5.4 Summary-Data Sheet



Order	Time	Temp (°F)	Humid (%RH)
1	2019-10-24 13:23:51	77.5	38
2	2019-10-24 13:24:51	77.3	39
3	2019-10-24 13:25:51	78.6	43
4	2019-10-24 13:26:51	80.7	30
5	2019-10-24 13:27:51	81.1	34
6	2019-10-24 13:28:51	80.9	35
7	2019-10-24 13:29:51	80.6	34
8	2019-10-24 13:30:51	80.2	34
9	2019-10-24 13:31:51	80.0	34
10	2019-10-24 13:32:51	80.7	33
11	2019-10-24 13:33:51	80.9	52

Click the "Data sheet" tab to display currently selected data of the logger. It can be the data of a currently connected logger or the historical data stored in the database.

5.5 Data Filter



Click the "Data Filter" button at the bottom right. Select "Start time" and "End time", and click "Confirm", the software will automatically filter the data within specified time period. After data filtered, the software will automatically redraw the graph, table, and summary.

5.6 Export Data

The screenshot shows a dialog box titled "Export Data" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Date:** A date range selector showing "2019-10-24 13:23:51" to "2019-10-27 05:35:51" with a calendar icon on the right.
- Sensor Data:** Two checked radio buttons for "Temp" and "Humi".
- Export As:** A dropdown menu currently set to "PDF".
- PDFLanguage:** A dropdown menu currently set to "English".
- Temp:** A dropdown menu currently set to "°F".
- TempThreshold:** Two input fields with a tilde (~) between them, containing "32.0" and "86.0", followed by "(°F)".
- HumiThreshold:** Two input fields with a tilde (~) between them, containing "0" and "100", followed by "(%RH)".
- Buttons:** A "Cancel" button and an orange "Export Data" button at the bottom right.

Click the "Export Data" button at the bottom left to export report to PDF or Excel format.

VI Configure Devices

6.1 Basic parameters

Recording Interval: The interval time between two successive points of data

Time Zone: Set the required time zone

Start Mode: The mode the logger to be started

Temp threshold min: The minimum of temperature threshold

Temp threshold max: The maximum of temperature threshold

Humi threshold min: The minimum of humidity threshold

Humi threshold max: The maximum of humidity threshold

Start Delay: The time from the logger started to the first point saved

Shipment ID: Customized options designed for logistics, cold chain transportation companies

Shipment Note: Customized options designed for logistics, cold chain transportation companies

The screenshot shows the 'Configure Device' page with a navigation bar at the top containing icons for Summary, Configure Device (highlighted), History Data, 21 CFR, Preferences Setting, Help, and About. Below the navigation bar, there are two tabs: 'Basic parameters' (selected) and 'Advanced parameters'. The 'Basic parameters' section includes the following fields:

- Recording Interval:** A dropdown menu set to '1' and a unit selector set to 'M'.
- Time Zone:** A dropdown menu set to 'UTC+08:00'.
- Time:** A date and time field showing '2024-04-09 10:13:50' with a calendar icon.
- Start Mode:** A dropdown menu set to 'Button Start'.
- Temp threshold min:** A text input field with '32.0' and a unit selector set to '°F'.
- Temp threshold max:** A text input field with '32.0' and a unit selector set to '°F'.
- Start Delay:** Three dropdown menus for days (set to '0'), hours (set to '0'), and minutes (set to '2').
- Humi threshold min:** A text input field with '0' and a unit selector set to '%RH'.
- Humi threshold max:** A text input field with '100' and a unit selector set to '%RH'.
- Shipment ID:** A text input field.
- Shipment Note:** A large text area.

At the bottom of the form, there are three buttons: 'Save parameters' (highlighted in orange), 'Import Template', and 'Export Template'.

6.2 Advanced parameters

Temperature unit: Celsius / Fahrenheit.

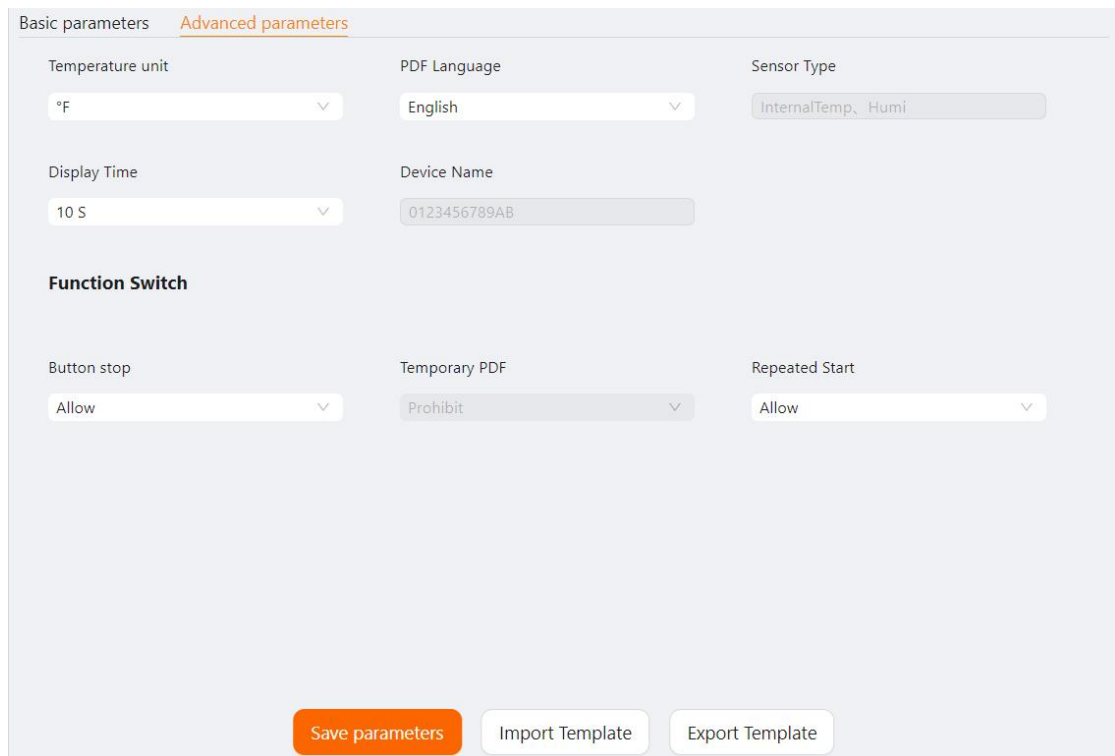
PDF Language: The PDF report generated is in English / Chinese.

Display Time: The logger's on screen display time

Device Name: Device ID

Button Stop: The way that the logger is stopped

Repeated Start: The logger is started repeatedly, and the previously recorded data is cleared after a new startup.



The screenshot displays the 'Advanced parameters' configuration page. At the top, there are two tabs: 'Basic parameters' and 'Advanced parameters', with the latter being selected. The page is organized into several sections:

- Temperature unit:** A dropdown menu set to '°F'.
- PDF Language:** A dropdown menu set to 'English'.
- Sensor Type:** A text input field containing 'InternalTemp, Humi'.
- Display Time:** A dropdown menu set to '10 S'.
- Device Name:** A text input field containing '0123456789AB'.
- Function Switch:** A section containing three dropdown menus:
 - Button stop:** Set to 'Allow'.
 - Temporary PDF:** Set to 'Prohibit'.
 - Repeated Start:** Set to 'Allow'.

At the bottom of the page, there are three buttons: 'Save parameters' (highlighted in orange), 'Import Template', and 'Export Template'.

6.3 Parameter template

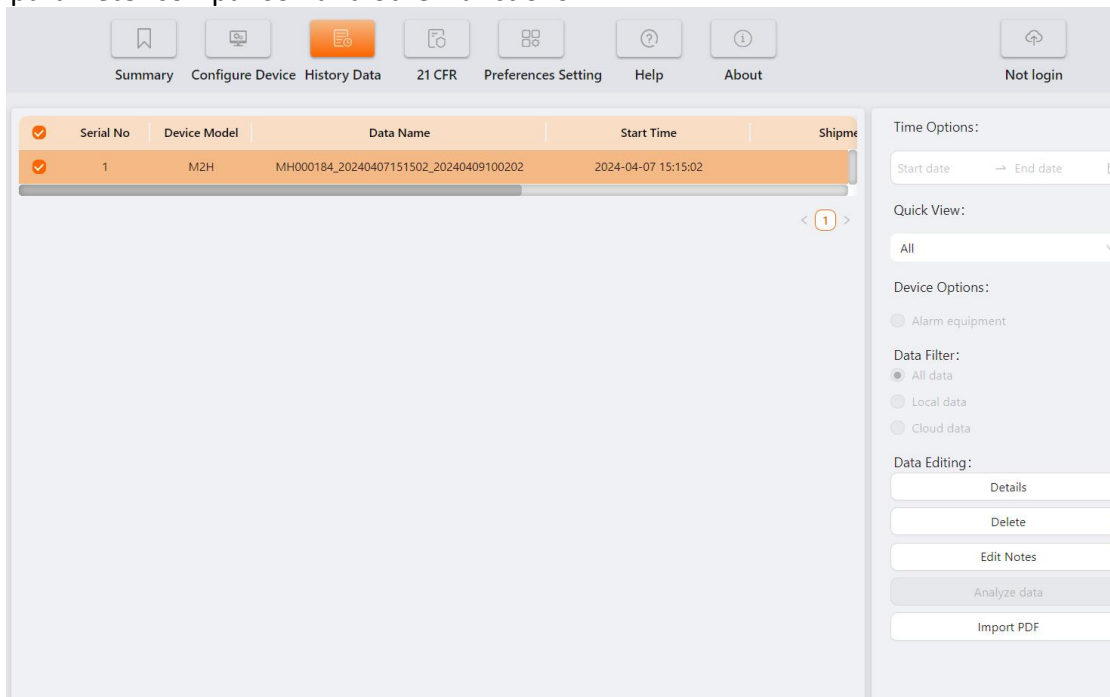
Export template: The parameter values in current page are saved as a file.

Import template: Reads the specified parameter template file and loads the parameter values in the file into the interface.

VII Database

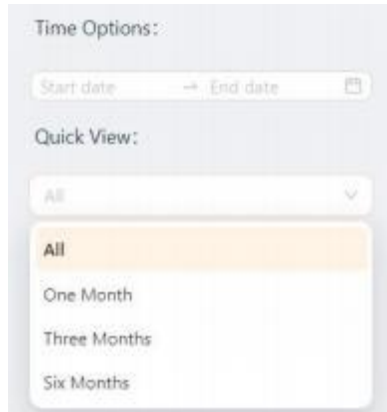
7.1 History Data

Click " History Data" on the toolbar to query historical data. The data downloaded from the logger is automatically saved to the database and can be filtered as needed. Default display all the data. Users can also view data of a selected time range, filter alarm data, drag and select multiple lines of data. The data of multiple devices can be viewed and compared at the same time. It supports multi-graph drawing, parameter comparison and other functions.



7.2 Filter data

Select the time range in certain month(s), the software will automatically filters out the historical data for that time period and displays the data in the table.



7.3 Data Operation

View the details: Click the "Detail" button in the right sidebar to view the data details in graph, table or summary.

Order	Device Model	Data Name	Start Time	Shipment ID
1	M2H	0123456789AB_20191027100822_20191027110022	2019-10-27 10:09:22	
2	M2H	0123456789AB_20191024132251_20191027053551	2019-10-24 13:23:51	

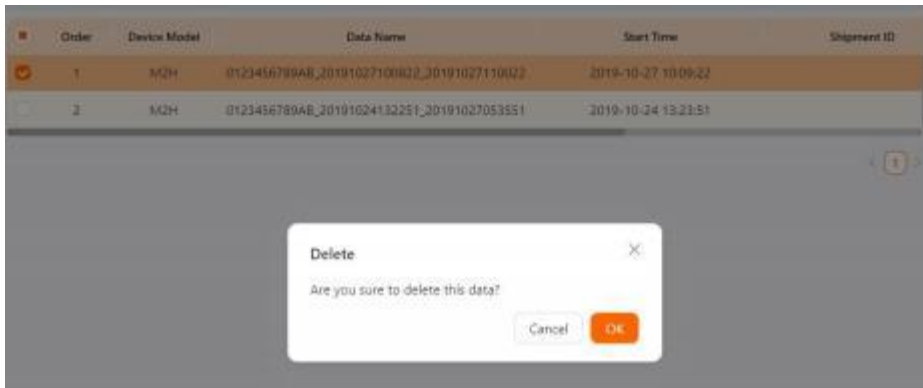
Data Editing:

Detail

Delete

Edit Notes

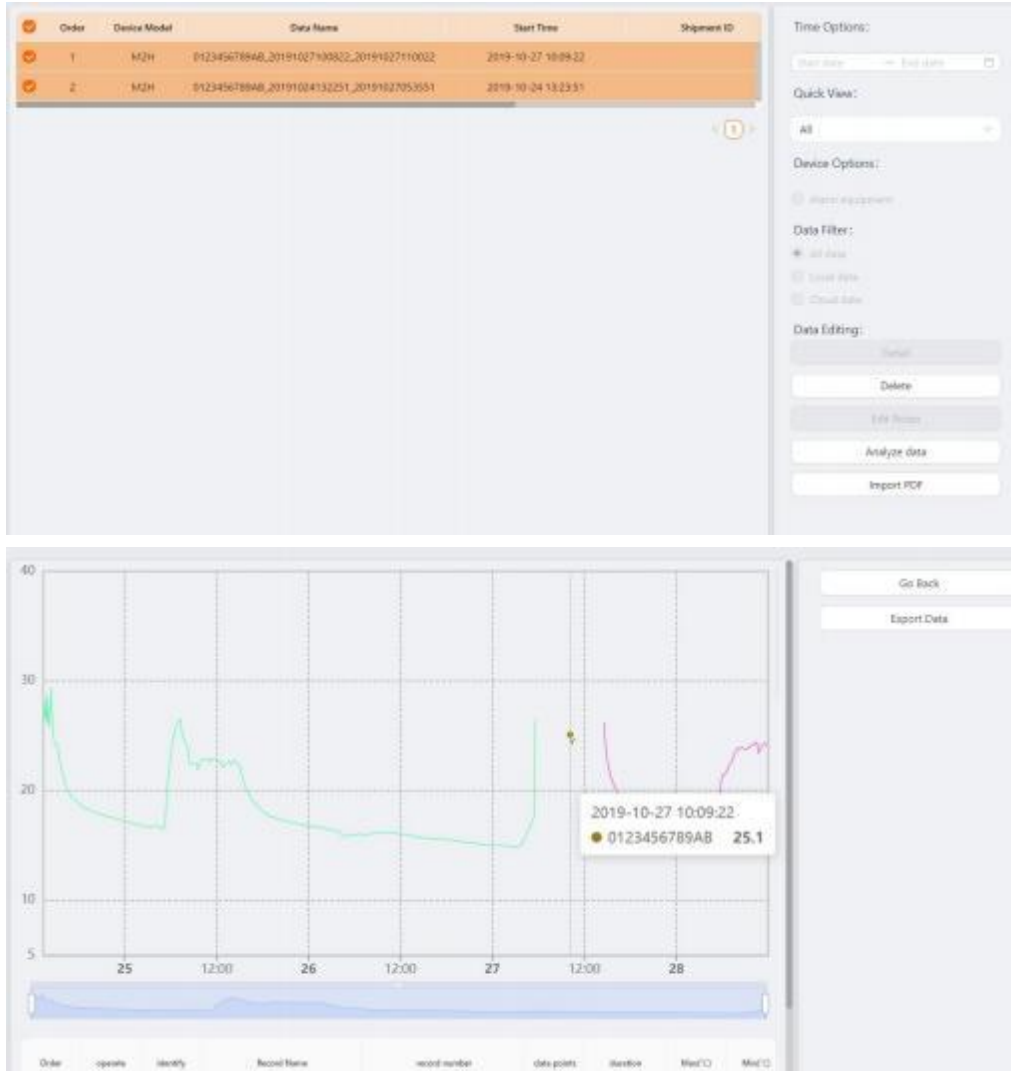
Delete the data: Click the "Delete" button in the right sidebar to delete the data.



Edit notes: Click the "Edit" button in the right sidebar to edit the notes.

7.4 Analyze data

Analyze data: Click on the required two or more data, and click "Analyze data" button in the right sidebar, the chart can be generated automatically.



VIII System Settings

8.1 Preferences Setting

Click “Preferences” on the toolbar to set the date/time format and system language. The latest date and time format will be automatically updated for your use next time.

Preferences Setting ×

Basic Settings Cloud Settings

Date Format: Example 2024-04-09

Time Format: Example 10:18:26

System Language:

Temperature unit:

IX 21 CFR

9.1 FDA 21 CFR Part 11 Module

What is FDA 21 CFR Part 11 compliance?


The US Food and Drug Administration (FDA) issued Chapter 21, Part 11 of the Code of Federal Regulations (21CFR Part 11) in 1997 and issued industry guidelines in 2003 to refine the rules. In 21 CFR Part 11 regulations, electronic records are considered to have the same legal effect as written records and handwritten signatures, and are applicable to any records managed by existing FDA rules, created, modified, maintained, archived, retrieved, transmitted, or stored in persistent storage media using computers.

21 CFR Part 11 is widely accepted and followed by bio-pharmaceutical companies, hospitals, research institutes, and laboratories in the United States. Since its promulgation, it has been promoted globally and although not mandatory, it is widely accepted and used by countries in Europe, Asia, and other regions. Drugs, bio-pharmaceutical related equipment, or information systems exported to the United States should comply with the provisions of 21 CFR Part 11. If violated, the FDA will deprive the right to export to the United States in accordance with regulations.

9.2 Activate the Module

Click “Enable” to activate the module. After FDA 21 CFR 11 module is enabled, program will restart for the changes to take effect. Click “OK”.



 This operation will be irreversible.
Do you want to continue opening it?



9.3 Initializing Administrator

After FDA 21 CFR Part 11 module enabled, you are required to create an administrator account for login.

InitializeAdministrator ✕


* User name

* Real name

* Password

* Confirm password

* Position



FDA 21 CFR

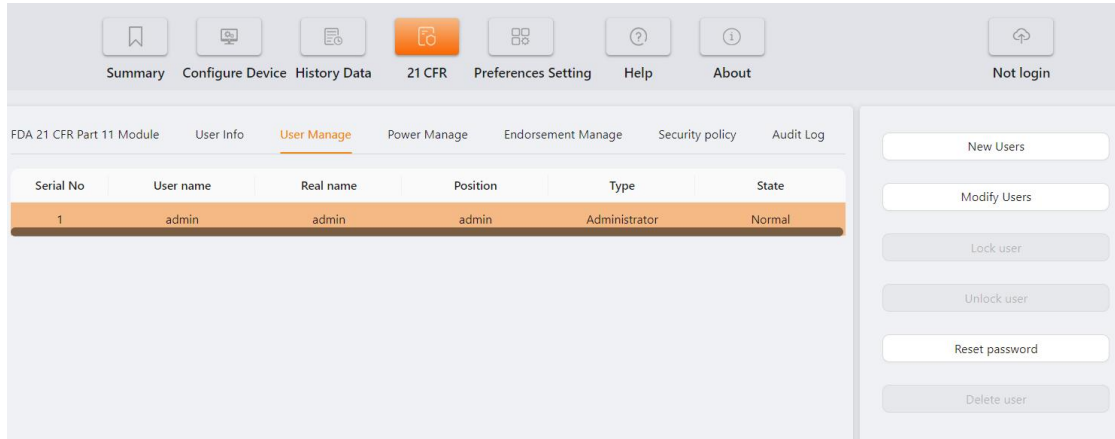
* User name

* Password

Language:

9.4 User Management

Administrator account can be used to create user accounts, change user info, lock/unlock user and reset passwords.



Serial No	User name	Real name	Position	Type	State
1	admin	admin	admin	Administrator	Normal

New Users ✕

* User name

* Real name

* Password
 🔍

* Confirm password
 🔍

* Position

9.5 Power Management

Administrator: All system privilege.

Ordinary users: permissions are granted or withdrawn by the administrator as needed.

The screenshot displays the 'Power Manage' section of the Frigga Data Center interface. At the top, there is a navigation bar with icons for Summary, Deploy Devices, History Data, 21 CFR (highlighted), Preferences, Help, and About. Below this is a sub-navigation bar with links for FDA 21 CFR Part 11 Module, User Info, User Manage, Power Manage (highlighted), Endorsement Manage, Security policy, and Audit Log. A table displays user information with columns for User name, Real name, Position, Type, and State. The table contains one row for 'admin' with the role of 'Administrator' and 'Normal' state. Below the table are two panels: 'System permissions' showing '0 item' and 'No data', and 'Permission obtained' showing '5 items' with a list of permissions: 'Configure device parameters', 'Signature data', 'Modify preference settings', 'Delete data', and 'View audit trail'.

User name	Real name	Position	Type	State
admin	admin	admin	Administrator	Normal

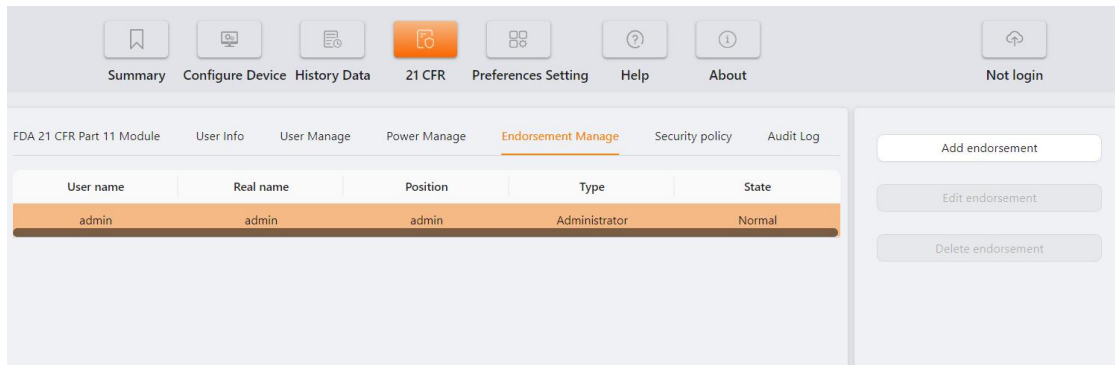
System permissions: 0 item, No data

Permission obtained: 5 items

- Configure device parameters
- Signature data
- Modify preference settings
- Delete data
- View audit trail

9.6 Endorsement Management

Endorsement: When digitally signing, the user must select an endorsement to digitally sign, and that endorsement information is linked to that data record.



Add endorsement:

Enter endorsement, click "OK" , it will be saved to database.

Add endorsement ✕

Cancel
OK

Available endorsements:

The list of endorsements shows all available endorsements.

User Endorsements:

The available endorsements for users are managed by the administrator.

9.7 Security Policy

Number of attempts to log in:

If login attempts exceeds the set times, the account will be locked. Please contact administrator to unlock the account.

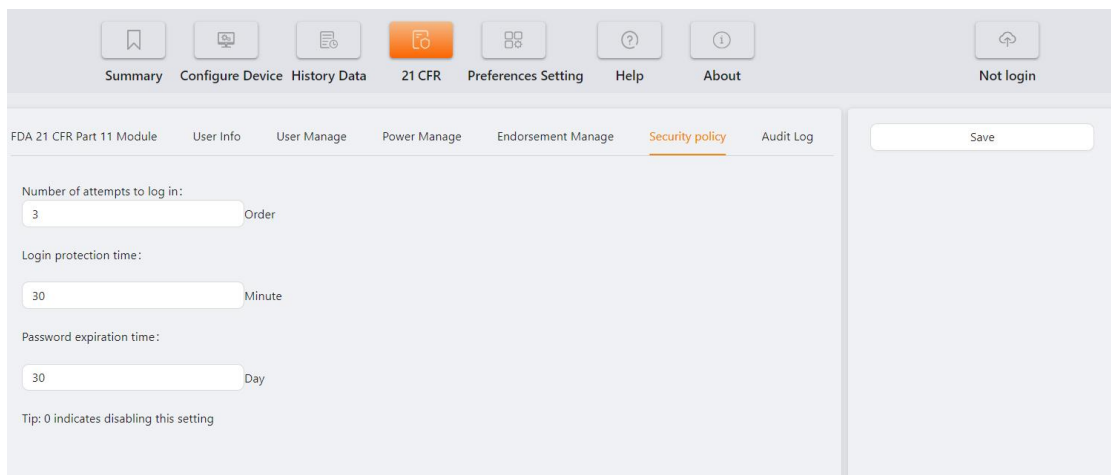
Login protection time:

If the system stays inactive after login for a period that exceeds the set time, it will be locked. User must log in again to operate the system.

Password expiration time:

This setting indicates the password is valid before a certain period of time. If the password expires, the system will remind the user of changing it .

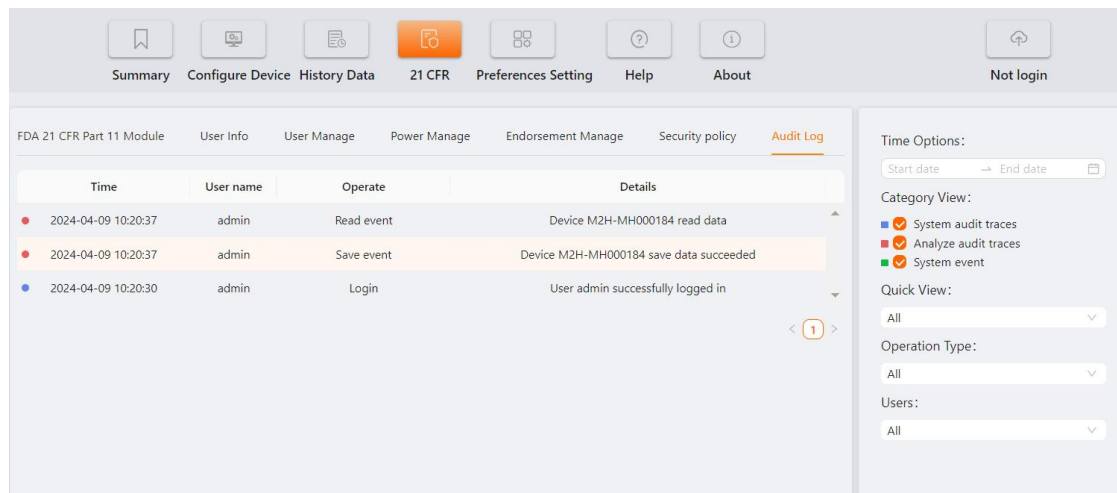
Tip: 0 indicates that this setting is disabled.



The screenshot shows the 'Security policy' configuration page. At the top, there is a navigation bar with icons for Summary, Configure Device, History Data, 21 CFR (highlighted), Preferences Setting, Help, About, and Not login. Below this is a sub-navigation bar with links for FDA 21 CFR Part 11 Module, User Info, User Manage, Power Manage, Endorsement Manage, Security policy (highlighted), and Audit Log. A 'Save' button is located on the right side of the page. The main content area contains three input fields: 'Number of attempts to log in:' with a value of 3 and a unit of 'Order'; 'Login protection time:' with a value of 30 and a unit of 'Minute'; and 'Password expiration time:' with a value of 30 and a unit of 'Day'. A tip at the bottom states: 'Tip: 0 indicates disabling this setting'.

9.8 Audit Log

Audit log records the process of the user's operating system, including the log time and operation information, providing a variety of data filtering methods such as: time period query, audit type query, operation type query, user name query and so on.



Time	User name	Operate	Details
2024-04-09 10:20:37	admin	Read event	Device M2H-MH000184 read data
2024-04-09 10:20:37	admin	Save event	Device M2H-MH000184 save data succeeded
2024-04-09 10:20:30	admin	Login	User admin successfully logged in

Time Options: Start date → End date

Category View:

- System audit traces
- Analyze audit traces
- System event

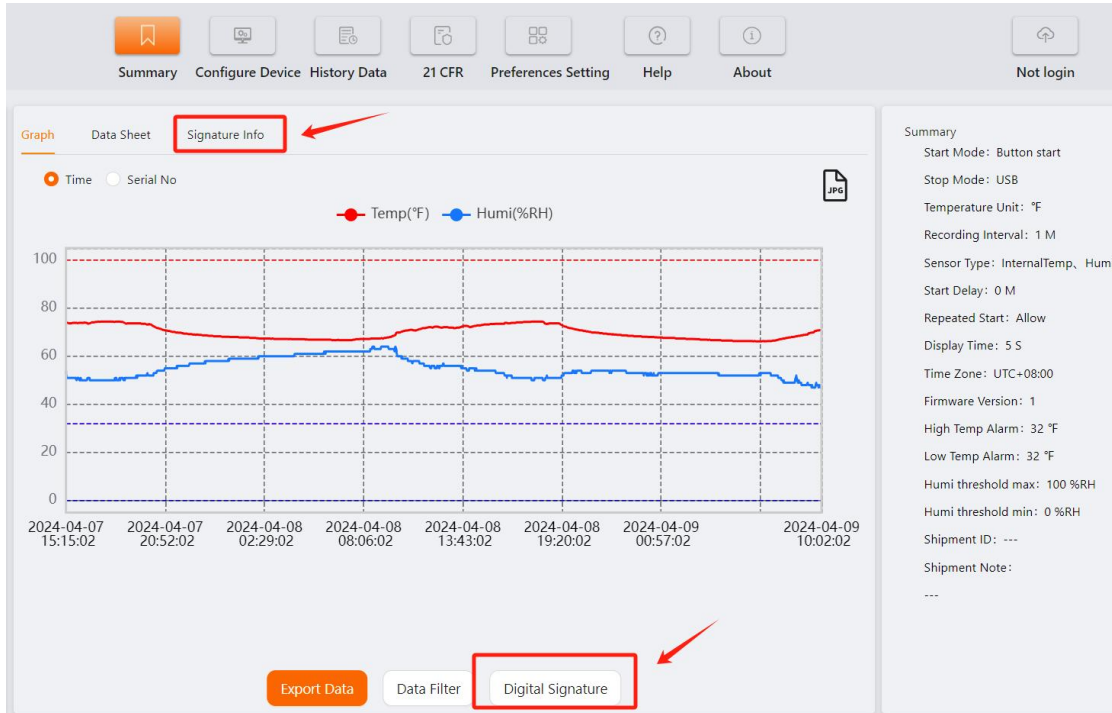
Quick View: All

Operation Type: All

Users: All

9.9 Digital Signature

After the data logger is connected to a computer and its data is downloaded to the database successfully, you may click "Graph" icon in the toolbar and then "Digital Signature" to sign.



Enter the user name and password in the popup interface as follows:

Signature Authorization ✕

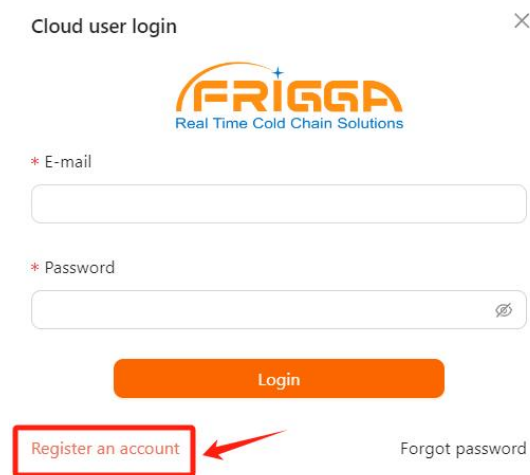
User name:

Password:

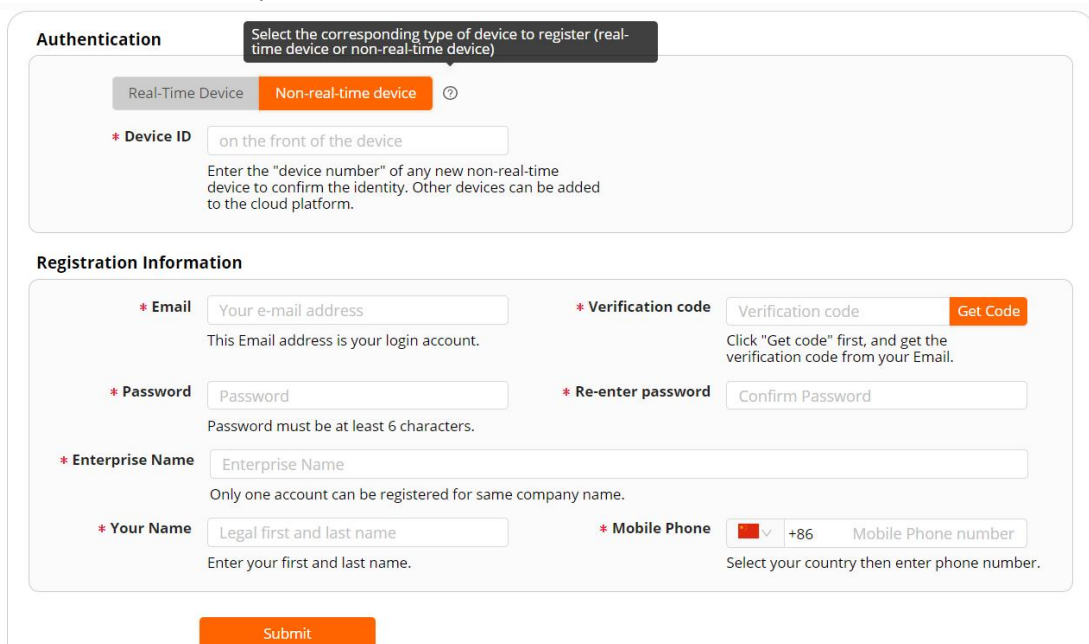
X Cloud Platform Services

10.1 Cloud Users Registration

Click "Register" at the left bottom of the screen, then go to the Frigga Cloud Platform registration center.



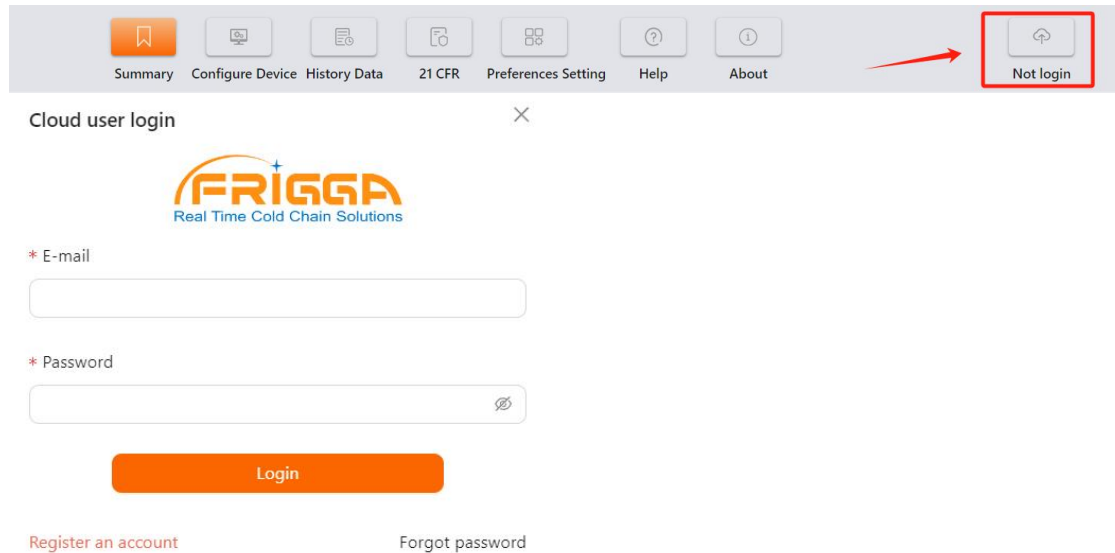
Tips: Please select the corresponding type of device to register (real-time device or non-real-time device).



10.2 Cloud Users Login

Click the "Not login" button in the upper right corner of the toolbar, see below:

Enter your email and password, click "Login" to complete the login.
If you have forgotten your password, please click "Forgot Password" to retrieve your password.



10.3 Login

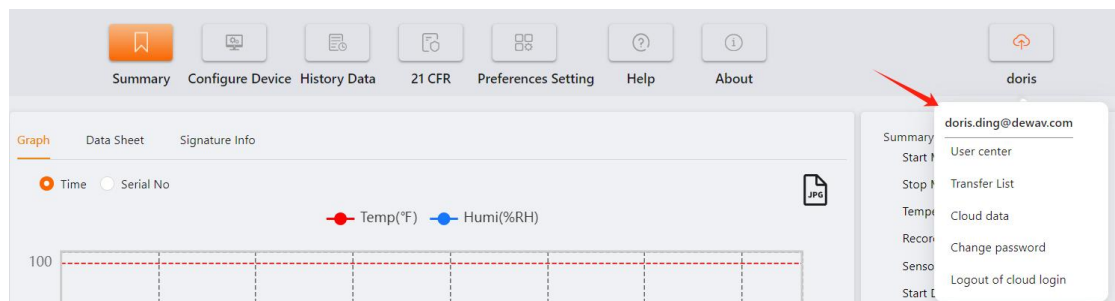
User Center: Click to go to Platform User Center

Transfer List: Click to open the data upload list

Cloud Data: Click to go to Platform Device Center

Change Password: Click to go to Platform User Center to modify

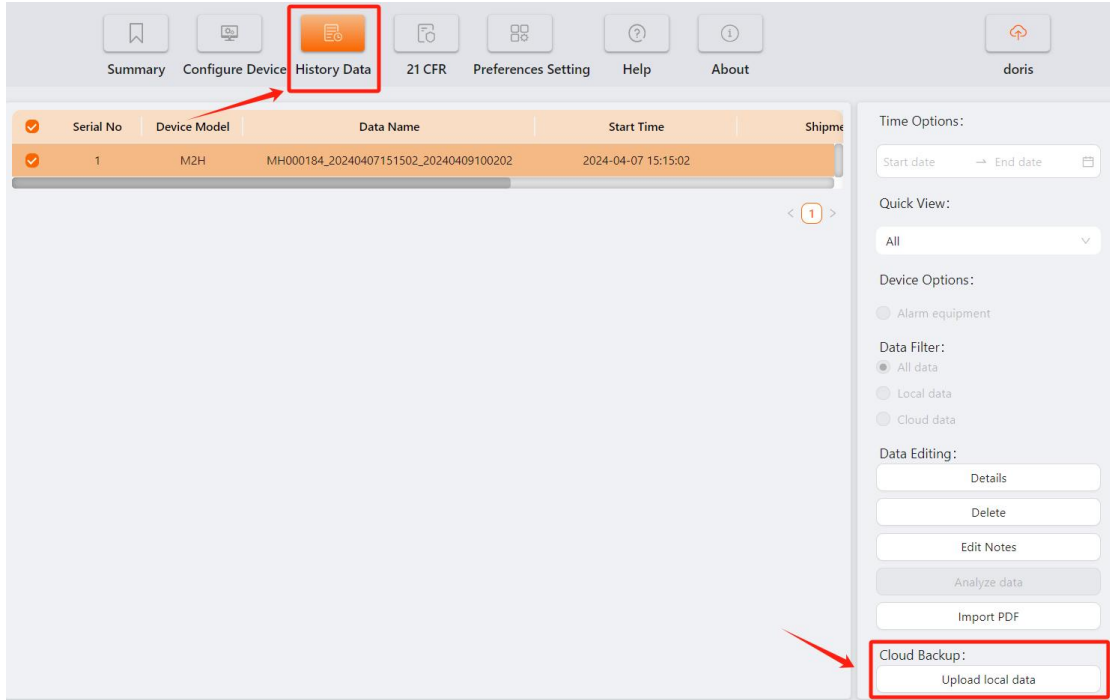
Logout of cloud login: Log out



10.4 Data Uploading

Manual Data Uploading

Click the "History Data" button of the toolbar, select the data you want to upload, and then click "Upload local data".



The interface of successful data upload is as follows:

Transfer List ×

To be uploaded Uploading **Completed** Other

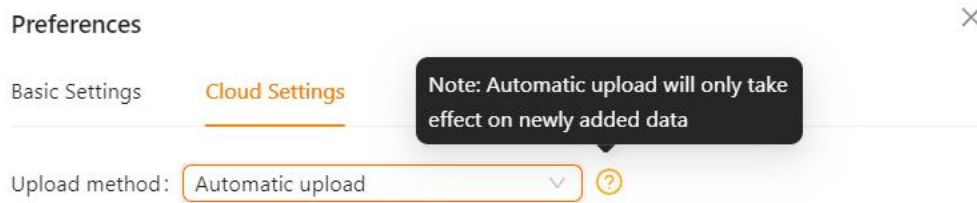
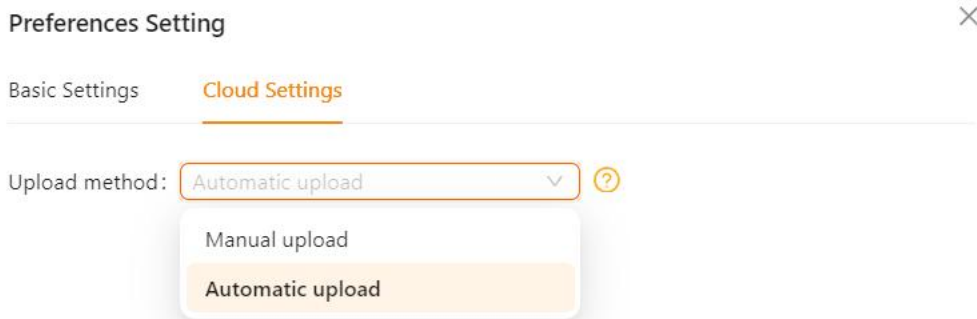
Device Model	Data Name	Task time	Transfer Status	Operate
M2H	MH000184_20240402164656_20240402164856	2024-04-02 18:54:00	Complete	

< 1 >

Automatic Data Uploading

Configurable in “Preferences Setting”, effective after cloud user login.

Please note: Automatic upload will only take effect on new data.



10.5 Transfer List

To be uploaded: Data that is waiting to be uploaded

Uploading: Data being uploaded

Completed: Data that have been uploaded and can be viewed on the platform

Other: Data that failed to be uploaded and can be retried.

Transfer List ✕

Device Model	Data Name	Task time	Transfer Status	Operate
M2H	M2H_MH46000390_20231213171424	2024-04-03 11:03:09	Device not supported	Retry Delete
M2H	M2H_MH46000390_20231213174400	2024-04-03 11:03:08	Device not supported	Retry Delete
M2H	M2H_MH46000390_20231215153020	2024-04-03 11:03:08	Device not supported	Retry Delete
M2H	M2H_MH46000390_20231220111653	2024-04-03 11:03:07	Device not supported	Retry Delete
M2E	M1000002_20240229161134_20240229161234	2024-04-03 11:03:07	Model does not exist	Retry Delete
M2D	0123456789AB_20240115090405_20240115151705_20240124122627	2024-04-03 11:03:02	Model does not exist	Retry Delete
M2D	0123456789AB_20240122062144_20240122120244	2024-04-03 11:03:01	Model does not exist	Retry Delete
M2D	0123456789AB_20240130113102_20240130154302	2024-04-03 11:03:01	Model does not exist	Retry Delete
M1D	0123456789AB_20240304015957_20240304034657	2024-04-03 11:03:00	Model does not exist	Retry Delete
M2D	M2D_0123456789AB_20231219191029	2024-04-03 11:03:00	Model does not exist	Retry Delete

< 1 2 3 >

Transfer List ✕

Device Model	Data Name	Task time	Transfer Status	Operate
M1H_Reacon	MC000007_20240327115200_20240327163700_20240402143932	2024-04-03 11:19:28	Complete	
M2H	MH5C0183_20240327163921_20240327164021_20240327164424	2024-04-03 11:19:27	Complete	
M2H	MH5C0183_20240327164521_20240327170821_20240327171450	2024-04-03 11:19:26	Complete	
M2H	M2H_MH5C0183_20240122142716	2024-04-03 11:19:25	Complete	
M2H	M2H_MH5C0183_20240129192659	2024-04-03 11:19:24	Complete	

< 1 >



Shanghai Dewav IoT Technology Co., Ltd

Phone : +86-21-58820022

Website : <https://www.friggatech.com>

<http://www.dewav.com>

Add : No.3 Building, Lane 739 of Kangwei Road, Pudong New Area, Shanghai,
201315, P.R.China