

OVERVIEW

The Logger Analysis Software is used to configure R-TEL 300-series data loggers, read recorded temperature and humidity data, export reports, and manage historical records.

This guide covers:

- Installing the software
- Configuring your logger
- Reading and exporting data
- Using History Data
- Understanding device LCD behavior
- Alarm logic
- Error codes



Install & Launch the Software

1. Go to rte-usa.com/software-downloads
2. Download the ZIP file for your R-TEL Multi-Use Logger.
3. Run the installer.
4. Open the Logger Analysis Software from your applications.

Connect your logger via USB to begin.

Reading Logger Data

1. Connect the logger to your computer.
2. The software automatically reads data on first connection.
3. To re-read data, click **Reload** (See Figure 1).
4. Click **Save Data** to store the dataset in **History Data**.

This is the core workflow: **Connect → Read → Save → View**.

Summary Screen (What You're Seeing)

Summary

Configuration

History Data

21 CFR

System Settings

The Summary tab displays:

- 1) **Device Information** - Model, serial number, firmware, timezone, record status
- 2) **Statistical Data** - Start/end time, max/min/avg values, MKT
- 3) **Configuration Parameters** - Log interval, log period, start mode, start delay, temperature unit
- 4) **Advanced Parameters** - Loop records, repeated start, temporary report, button stop
- 5) **Alarm Settings** - High/low limits, alarm type, alarm delay

This screen gives you a complete snapshot of the trip.

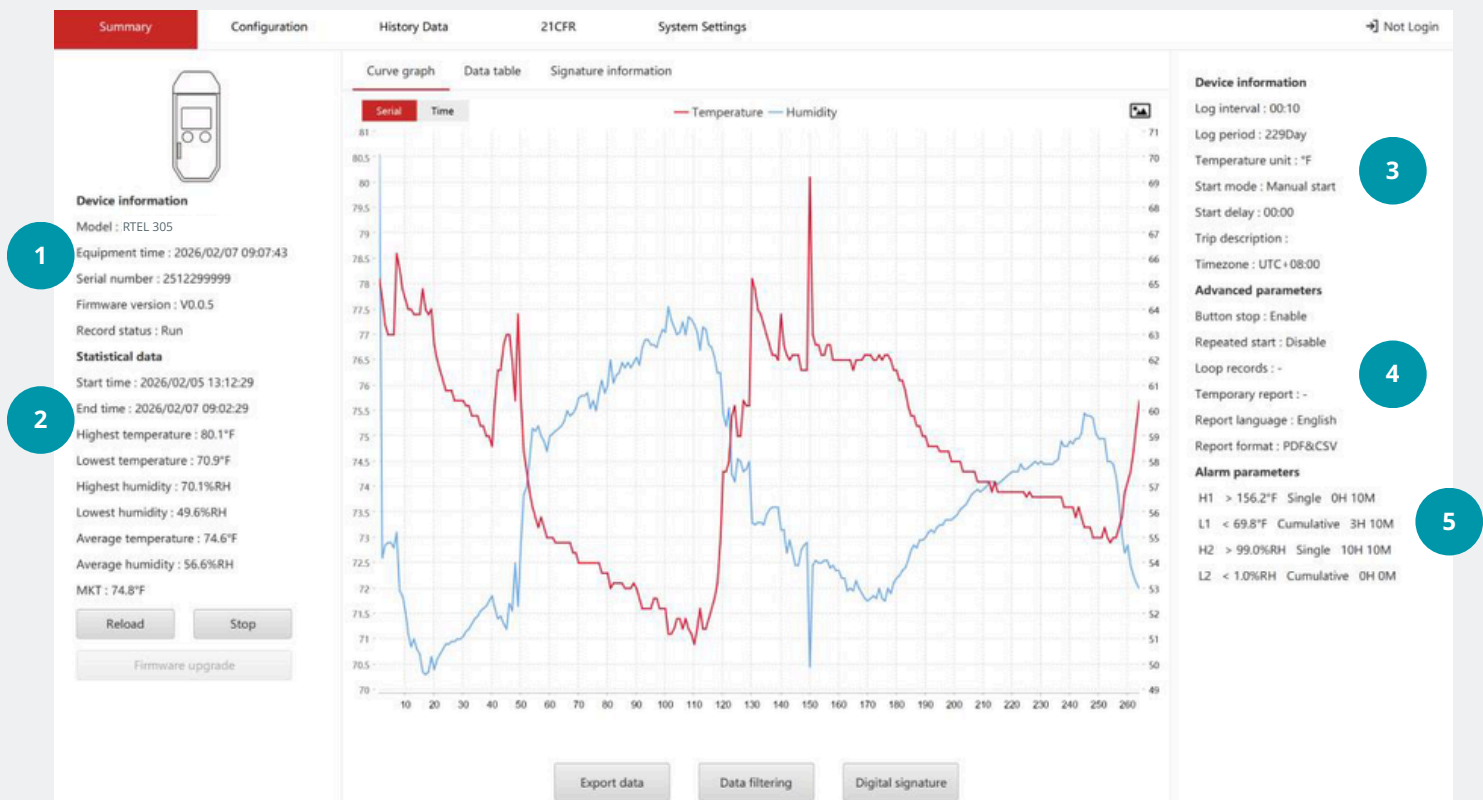


Figure 1

Configuring Your Logger

Go to Configuration Tab to set:

Summary **Configuration** History Data 21 CFR System Settings

Reset the following values as needed:

Recording Parameters

- **Log Interval** 1 minute to 24 hours
- **Log Period** Auto-adjusts based on interval
- **Start Mode** Manual or Auto Start
- **Start Delay** 0 min to 24 hours
- **Trip Description** Up to 64 characters
- **Timezone** Sets timestamp reference

Advanced Options

- **Repeated Start** Allows restarting logging after STOP (clears old data)
- **Loop Records** Overwrites oldest data when memory full
- **Temporary Report** Allows viewing data mid-trip without stopping logging
- **Button Stop** Enables/disables physical STOP button

Alarm Settings

- **High/Low Limits**
Up to 3 High / 3 Low (305/309)
Up to 2 High / 2 Low (315)
- **Alarm Type**
Single: alarm triggers once threshold exceeded for delay duration
Cumulative: alarm triggers when total out-of-range time meets delay
- **Alarm Delay**
Duration required to trigger alarm

Saving & Applying Configurations

- 1) **Load Configuration** - Loads a saved template
- 2) **Export Configuration** - Saves your settings as a template
- 3) **Configure Device** - Writes settings to the logger

Wait until **ConF** appears on the logger screen before disconnecting.

The screenshot displays the RTel Configuration interface with the following sections:

- Summary Tab:** Shows device information (Model: RTel 305, Equipment time: 2026/02/13 15:33:11, Serial number: 2512080002, Firmware version: V0.0.5, Record status: Stop) and statistical data (Start time: 2026/02/02 21:56:31, End time: 2026/02/03 21:56:31, Highest temperature: 80.1°F, Lowest temperature: 64.8°F, Highest humidity: -, Lowest humidity: -, Average temperature: 70.0°F, Average humidity: -, MCT: 70.5°F). Buttons for Reload, Stop, and Firmware upgrade are present.
- Configuration Tab:**
 - Log interval:** 0 H 2 M
 - Temperature unit:** °C / °F
 - Start delay:** 0 H 1 M
 - Trip Description:** (text input)
 - Timezone:** UTC+08:00
 - Button stop:** Disable
 - Loop records:** (dropdown)
 - Report language:** English
 - Report format:** PDF&CSV
 - Alarm parameters:** Multiple alarm limits / No alarm
 - Alarm range:** H3 > 80.0°F, H2 > 70.0°F, H1 > 60.0°F, L1 < 50.0°F, L2 < 40.0°F, L3 < 30.0°F
 - Alarm type:** Single / Cumulative
 - Alarm delay:** 0 H 2 M, 0 H 4 M, 0 H 6 M, 0 H 8 M, 0 H 10 M, 0 H 12 M
 - Buttons:** Load configuration, Export configuration, Configure device
- 21 CFR Tab:** (Empty)
- System Settings Tab:**
 - Log period:** 40 Day
 - Start mode:** Manual start
 - Start time:** 2024/07/18 14:30:37
 - Start delay:** 00:01
 - Trip description:** (text input)
 - Timezone:** UTC+08:00
 - Advanced parameters:** Button stop: Disable, Repeated start: Disable, Loop records: -, Temporary report: -
 - Alarm parameters:** H3 > 80.0°F Single 0H 2M, H2 > 70.0°F Single 0H 4M, H1 > 60.0°F Single 0H 6M, L1 < 50.0°F Cumulative 0H 8M, L2 < 40.0°F Cumulative 0H 10M, L3 < 30.0°F Cumulative 0H 12M
- Device information:** Log interval: 00:02, Log period: 40Day, Temperature unit: °F, Start mode: Manual start, Start delay: 00:01, Trip description: (text input), Timezone: UTC+08:00

Figure 2

Error Codes (During Configuration)

Do not disconnect your R-TEL device from the computer until CONF is displayed on the device's LCD screen. Once your R-TEL device LCD reads CONF, it can be safely undocked from your computer. READY will appear on the screen.



Error Message:

If an error message appears after configuration, please adjust the corresponding parameters according to the error message and configure again.

If configuration still fails and the device screen displays "Err", the device may not support one of the functions or the host computer software configuration. Please contact your device supplier for confirmation.

Please refer to the Logger Analysis Software Management Instruction Manual included with the downloaded software ZIP file for detailed configuration and exporting information.

Viewing Data

Curve Graph (Figure 3)
Shows temperature (left axis)
and humidity (right axis).
Supports zooming and dragging.

Data Table (Figure 4)
Shows:

- Serial number
- Timestamp
- Temperature
- Humidity (315 only)

Data Filtering (A)

- Set a **Start Time** and **End Time** to isolate a specific range.

Exporting Data (B)
Choose

- PDF
- CSV
- PDF & CSV



Figure 3

Serial	Time	Temperature(°F)
1	2026-02-02 21:56:31	74.3
2	2026-02-02 22:06:31	73.6
3	2026-02-02 22:16:31	72.9
4	2026-02-02 22:26:31	72.5
5	2026-02-02 22:36:31	72.5
6	2026-02-02 22:46:31	72.5
7	2026-02-02 22:56:31	72.5
8	2026-02-02 23:06:31	72.5
9	2026-02-02 23:16:31	72.5
10	2026-02-02 23:26:31	72.7
11	2026-02-02 23:36:31	73.0
12	2026-02-02 23:46:31	72.9
13	2026-02-02 23:56:31	73.0
14	2026-02-03 00:06:31	73.8
15	2026-02-03 00:16:31	73.4
16	2026-02-03 00:26:31	73.2

Figure 4

History Data

Go to History Data Tab:

Summary

Configuration

History Data

21 CFR

System Settings

Saved datasets appear here automatically

You can:

- **Filter** by date range
- **View Details** (full device + data info)
- **Delete** datasets
- **Import** CSV files from other computers
- **Quick View** recent logs

[illegible]

System Settings

Go to System Settings Tab:

Summary

Configuration

History Data

21 CFR

System Settings

Set:

- **Date Format**
- **Temperature Unit** (for exported reports)

Click **Save System Settings** to apply.

History Data

21CFR

System Settings

Not Login

Date format

YYYY/MM/DD

Example:2026/02/13

Language

English

Temperature unit

°C

Operation buttons

Save system settings

Help

About

21 CFR Part 11 Module (Optional)

Summary Configuration History Data **21 CFR** System Settings

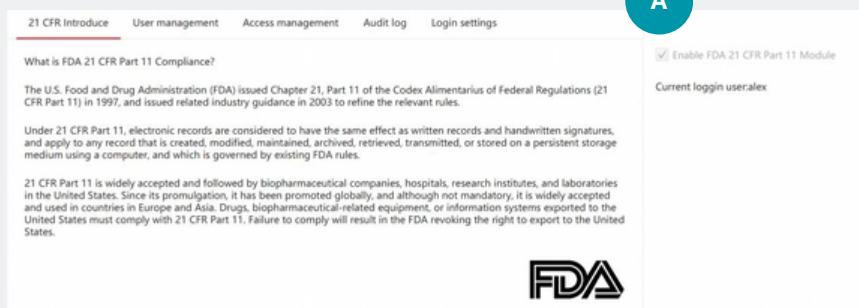
For customers operating in regulated environments (pharma, biotech, CRO, clinical supply), the Logger Analysis Software includes a **21 CFR Part 11 compliance module**. When enabled, the software enforces electronic records and electronic signatures requirements. This section explains only the practical, user-facing functions.

Enabling the Module

Go to **21 CFR** in the top navigation and toggle **Enable 21 CFR Part 11**. (A)

Once enabled

- Login is required
- User roles apply
- Audit logs activate
- Digital signatures become mandatory for exported reports



User Management

Administrators can create and manage user accounts with defined permissions. User roles typically include:

- **Admin** – full access, can manage users and signatures
- **Standard User** – can configure devices, read data, export reports
- **Reviewer / Approver** – can sign reports

Each user has:

- Username
- Password
- Role
- Signature ID

21 CFR Introduce	User management	Access management	Audit log	Login settings
Username	Real name	Position	Type	State
SpringfieldT	Tom Springfield	QC	User	Normal
JonesM	Margaret Jones	QA	Manager	Normal

New users Edit user
Locked users Unlock user
Reset passw... Signature m...

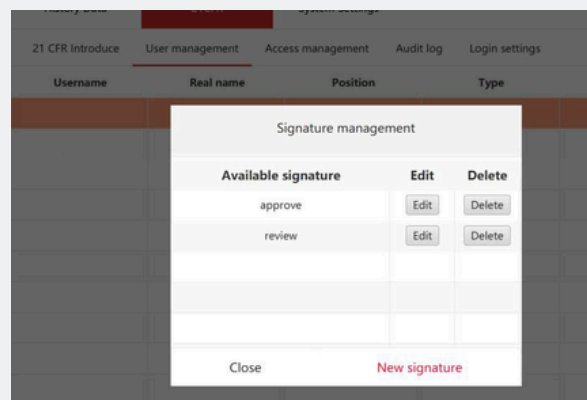
Data Signature Workflow

When exporting a report under 21 CFR mode:

1. User selects **Export Data**
2. Software prompts for **signature password**
3. Signature is applied to the PDF/CSV
4. Signature details appear in the **Signature Information** tab and in the exported file

Each signature includes:

- User name
- Timestamp
- Meaning (e.g., Approved)
- Signature ID



21 CFR Part 11 Module (Optional) - Continued

[Summary](#)
[Configuration](#)
[History Data](#)
[21 CFR](#)
[System Settings](#)

Audit Log

The audit log records all regulated actions, including:

- Logins / logouts
- Configuration changes
- Data reads
- Data exports
- Signature events
- User management actions

Each entry includes:

- Timestamp
- User
- Action
- Result (success/failure)

Audit logs cannot be edited or deleted.

21 CFR Introduce

User management

Access management

Audit log

Login settings

Category

Time

User

Operate

Details

1

2026-02-13 16:05:19(UTC+08:00)

JonesM

New users

New users: SpringfieldT

3

2026-02-13 15:39:32(UTC+08:00)

JonesM

Device connection succ...

RTEL 305 Device (Serial Numbe...

2

2026-02-13 15:39:32(UTC+08:00)

JonesM

Read data

Reading data from RTEL 305 'd...

2

2026-02-13 15:39:32(UTC+08:00)

JonesM

Save data

Save Report (2512080002_2602070223)

3

2026-02-13 15:36:10(UTC+08:00)

JonesM

Device disconnected

RTEL 305 Device (Serial Numbe...

2

2026-02-13 15:28:57(UTC+08:00)

JonesM

Save data

Save Report (2512080002_2602070223)

3

2026-02-13 15:28:56(UTC+08:00)

JonesM

Device connection succ...

RTEL 305 Device (Serial Numbe...

2

2026-02-13 15:28:56(UTC+08:00)

JonesM

Read data

Reading data from RTEL 305 'd...

3

2026-02-13 15:28:22(UTC+08:00)

JonesM

Device disconnected

RTEL 305 Device (Serial Numbe...

2

2026-02-13 15:23:11(UTC+08:00)

JonesM

Save data

Save Report (2512080002_2602070223)

3

2026-02-13 15:23:10(UTC+08:00)

JonesM

Device connection succ...

RTEL 305 Device (Serial Numbe...

2

2026-02-13 15:23:10(UTC+08:00)

JonesM

Read data

Reading data from RTEL 305 'd...

1

2026-02-13 15:22:45(UTC+08:00)

JonesM

Log in

User: JonesM Log In

1

2026-02-13 15:20:56(UTC+08:00)

JonesM

Log in

User: JonesM Log In

2

2026-02-12 20:55:23(UTC+08:00)

JonesM

Save data

Save Report (2512080002_2602070223)

3

2026-02-12 20:55:22(UTC+08:00)

JonesM

Device connection succ...

RTEL 305 Device (Serial Numbe...

2

2026-02-12 20:55:22(UTC+08:00)

JonesM

Read data

Reading data from RTEL 305 'd...

1

2026-02-12 20:55:08(UTC+08:00)

JonesM

Log in

User: JonesM Log In

Time filtering

2026/02/13 15:22:32

2026/02/13 15:22:32

View...

☐ 1-System audit trail

☐ 2-Analyze audit logs

☐ 3-System events

Opera...

Username...

Print

Export

Login Settings

Admins can enforce:

- Password complexity
- Password expiration
- Session timeout
- Automatic logout

These settings ensure compliance with Part 11 security expectations.

Login attempts

3

Times

Login protection time

0

Minutes

Password expiration time

30

Days

Note: Selection 0 means that the feature is disabled!

OPERATION INSTRUCTIONS

ACTIVATION

READY screen indicates your R-TEL logger is waiting for a manual start.

Press and hold the START/STOP button for 3 seconds. The screen will flash GO.



START Delay

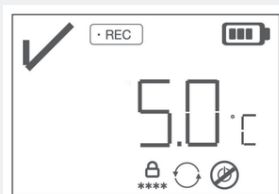
(Optional Setting)

If configured, and after activation, the LCD will display the countdown time until startup. For example (10m = 10 minutes until startup; h=hours; d=days)



OPERATION

When your R-TEL logger enters logging mode, the LCD displays **REC** at the top of the screen to indicate data logging is in progress.



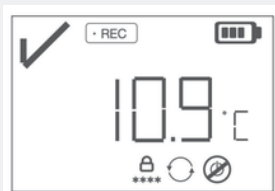
OVER LIMIT ALARM

An 'X' indicates the recorded temperature has exceeded the alarm limit; the alarm remains even if the ambient temperature returns to range.



VIEW RECORDED DATA DURING OPERATION

Press VIEW button to toggle through recorded data



Current
Temperature



Maximum
Temperature



Minimum
Temperature

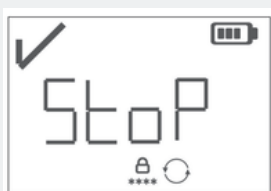


Average
Temperature

VIEW RH% (315 ONLY) - Continue pressing VIEW to access: Current RH% | Max RH% | Min RH% | Avg RH%

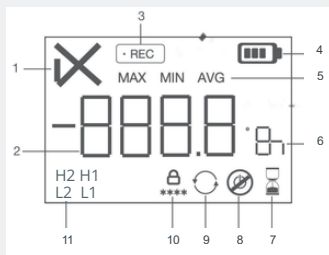
STOP RECORDING

- Press and hold the START/STOP button for 3 seconds;
- 'STOP' will flash on LCD for 3 seconds, then a static display 'STOP';
- Release the STOP/START button.



LCD SCREEN

1. Alarm status
2. Temperature values, system information
3. Record Status
4. Battery indicator
5. Statistical info; Max, Min, & Avg temperatures
6. Temperature in °C/°F, time in d,h,m
7. Startup delay marker
8. Disable Push Button Stop Function
9. Repeat start, long-press the START button after a round of recording to restart recording
10. Password protection: You need to enter the password when configuring.
11. Alarm intervals. If an interval is exceeded, the number of the interval is displayed



BATTERY REPLACEMENT

1. Insert a coin into the groove, turn the battery cover counterclockwise to remove, take out the old battery.
2. Short press START until the LCD turns completely off; battery level cannot be calibrated if screen is not fully off.
3. Insert a new CR2450 battery with the positive side facing up, setting it against the Y-shaped tabs (Fig. ①). Do not press down on the tabs.
4. Replace battery cover (Fig. ②), turning clockwise until the arrows align (Fig. ③).



Specifications (Condensed)

Battery Life	Up to 2 yrs (1yr storage / 1yr useful life) @25°C, 5 min log interval
Operating Range	-30°C~70°C (305/315) -50°C~70°C (309) 0-100%RH (315)
Accuracy	±0.5°C ±3%RH@20-80%RH; ±4%RH@other (315)
Resolution	0.1°C / (0.1%RH - Model 315)
Alarm Limits	3High / 3Low (305/309) 2 High / 2 Low (315)
Logging Interval	1 min-24hr optional (Default 5 min)
Memory Space	Up to 33,000 data points (25k for combined PDF/CSV Report)
Start Delay	0 min-24hr optional (Default 10min)
Start Mode	Manual/ Auto Start
Report Format	PDF / CSV / PDF&CSV (Optional)
Rating	IP65
Battery Type	3.0V CR2450
Connection	USB2.0

RTE