Frigga V5-CO2

Frigga V5-CO2 4G/5G Real-Time CO2 Monitor User Manual

Model: V5-CO2

1. Introduction

This manual provides essential instructions for the safe and effective operation of your Frigga V5-CO2 4G/5G Real-Time CO2 Monitor. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage. The Frigga V5-CO2 is designed for multi-use monitoring of CO2 levels, temperature, humidity, light, vibration, and location, primarily for applications in food logistics, greenhouses, and other environments requiring precise atmospheric control.

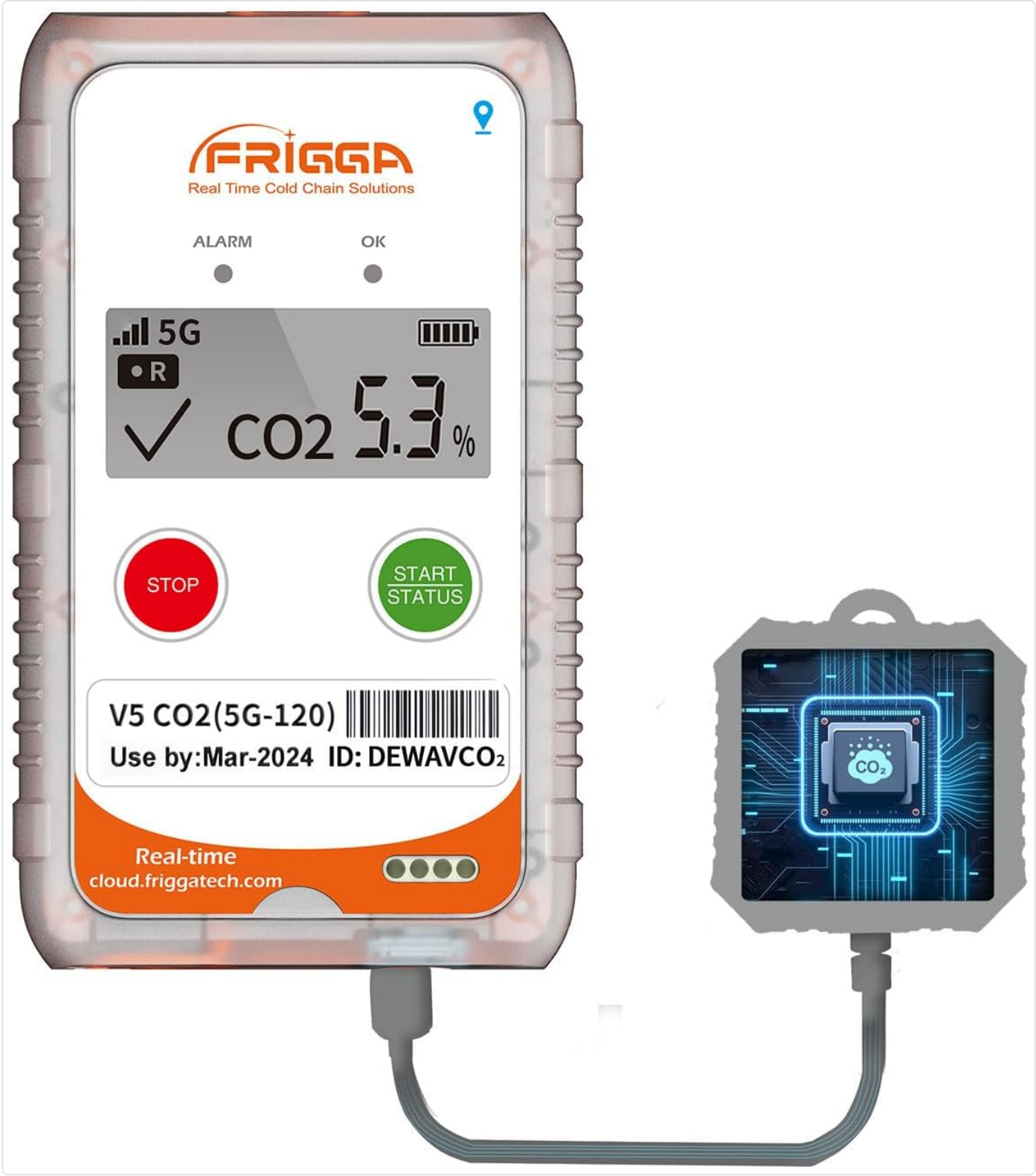

Figure 1: The Frigga V5-CO2 Real-Time CO2 Monitor, showcasing its compact design and external sensor.

2. Product Overview

The Frigga V5-CO2 monitor is a comprehensive device equipped with high-accuracy sensors to track multiple environmental parameters in real-time. It features a built-in 4G/5G SIM card for global connectivity and data transmission.

2.1 Key Features

The V5-CO2 monitor offers a range of features for robust environmental monitoring:

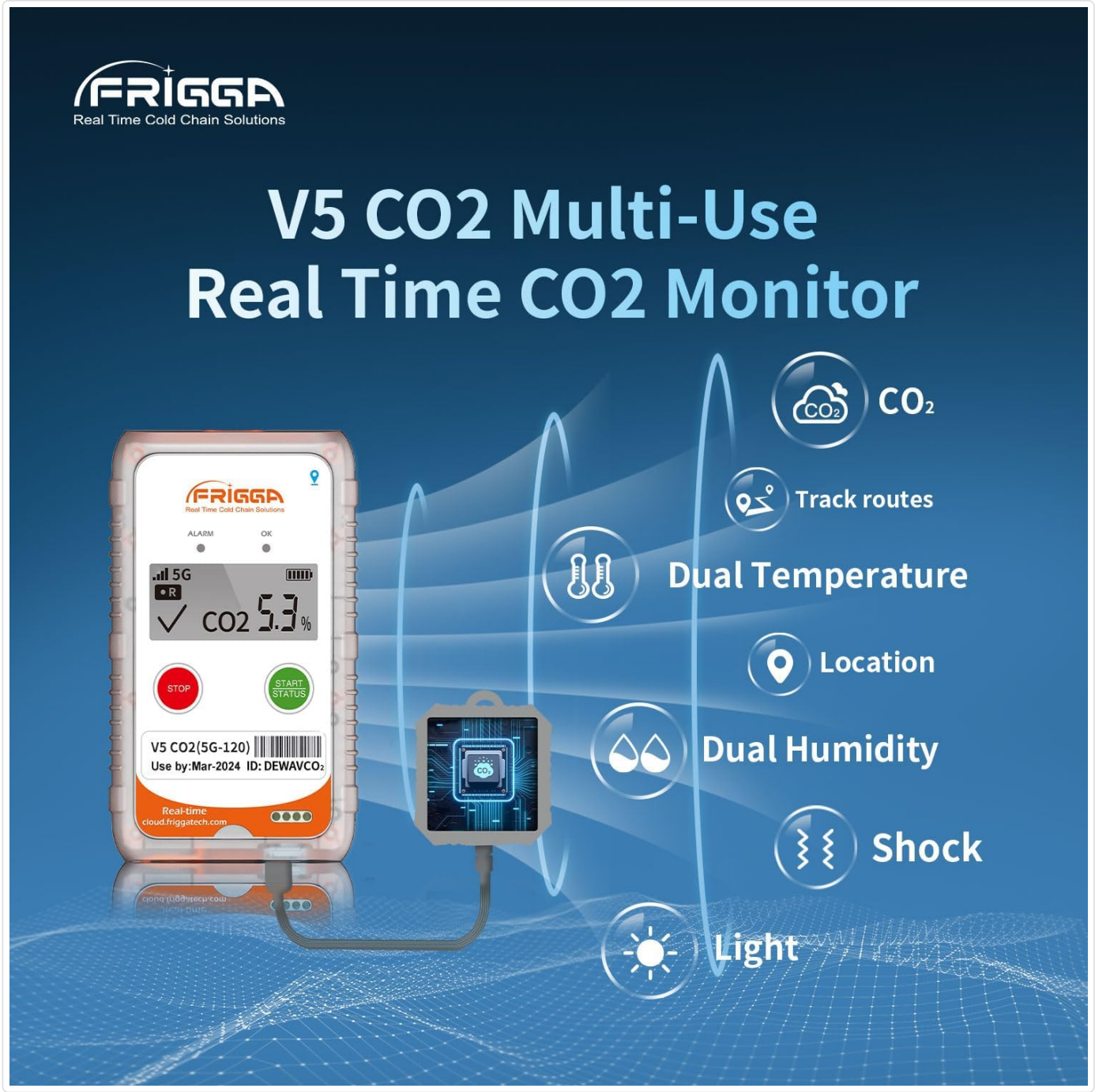

Figure 2: Visual representation of the Frigga V5-CO2 monitor's multi-use capabilities, including CO2, dual temperature, location, dual humidity, shock, and light monitoring.

- **6-in-1 Real-Time Monitoring:** Simultaneously monitors CO2 levels, dual temperature, dual humidity, light, vibration, and location throughout the transit process.
- **Accurate Measurement:**
  - CO2: 0-100 VOL% (Accuracy: ±2% of reading)
  - Temperature: -22°F to +158°F (-30°C to 70°C) (Accuracy: ±0.5°C for -20°C to +40°C, ±1°C for other ranges)
  - Humidity: 5% to 95%RH (Accuracy: ±3% for 20% to 80%RH, ±5% for other ranges)
- **Dual PDF Report System:** Data is stored in the cloud for traceability and can be downloaded via USB for backup.
- **LED Alarm Indicator:** Visual alerts for deviations from pre-set thresholds for temperature, humidity, and CO2.
- **Integrated Connectivity:** Built-in 4G+2G SIM card for global LTE 4G/5G and fallback 2G network, providing real-time data upload.
- **Extended Battery Life:** Operates up to 120 days on a full charge with a 1-hour uploading interval.

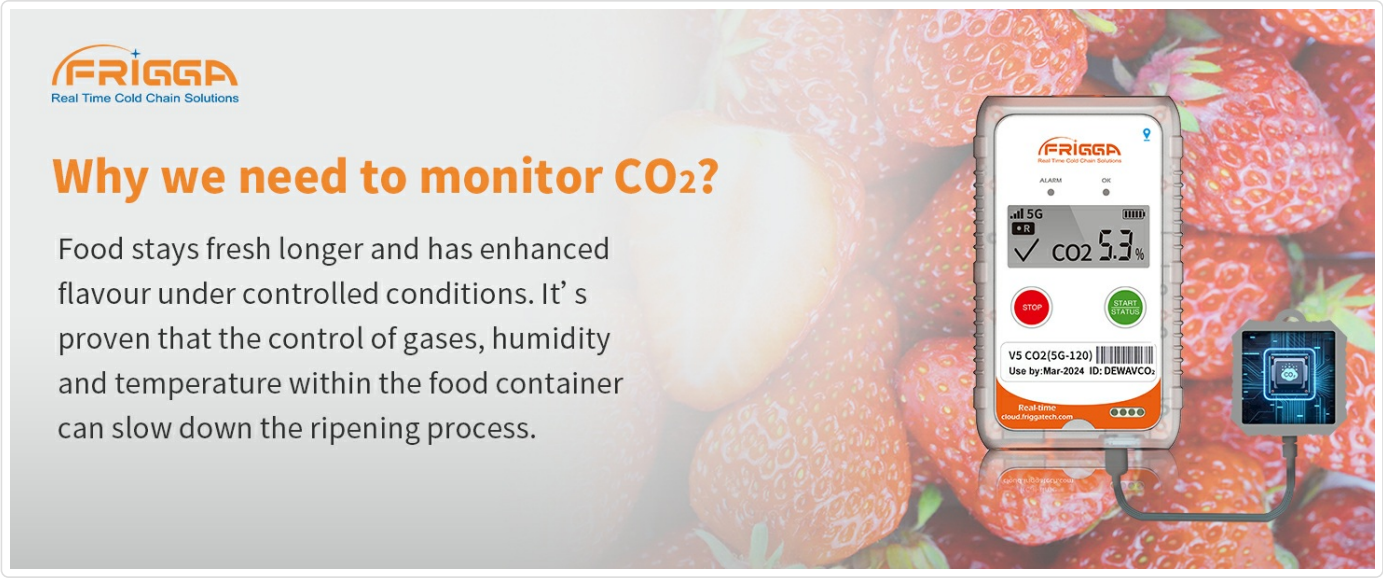

Figure 3: A summary of the Frigga V5-CO2 monitor's capabilities, including high accuracy, offline backup, dual power supply, mobile data export, app monitoring, alarm function, built-in IoT card, report function, account management, and cloud platform real-time monitoring.

2.2 Device Components

Familiarize yourself with the main components of the Frigga V5-CO2 monitor:

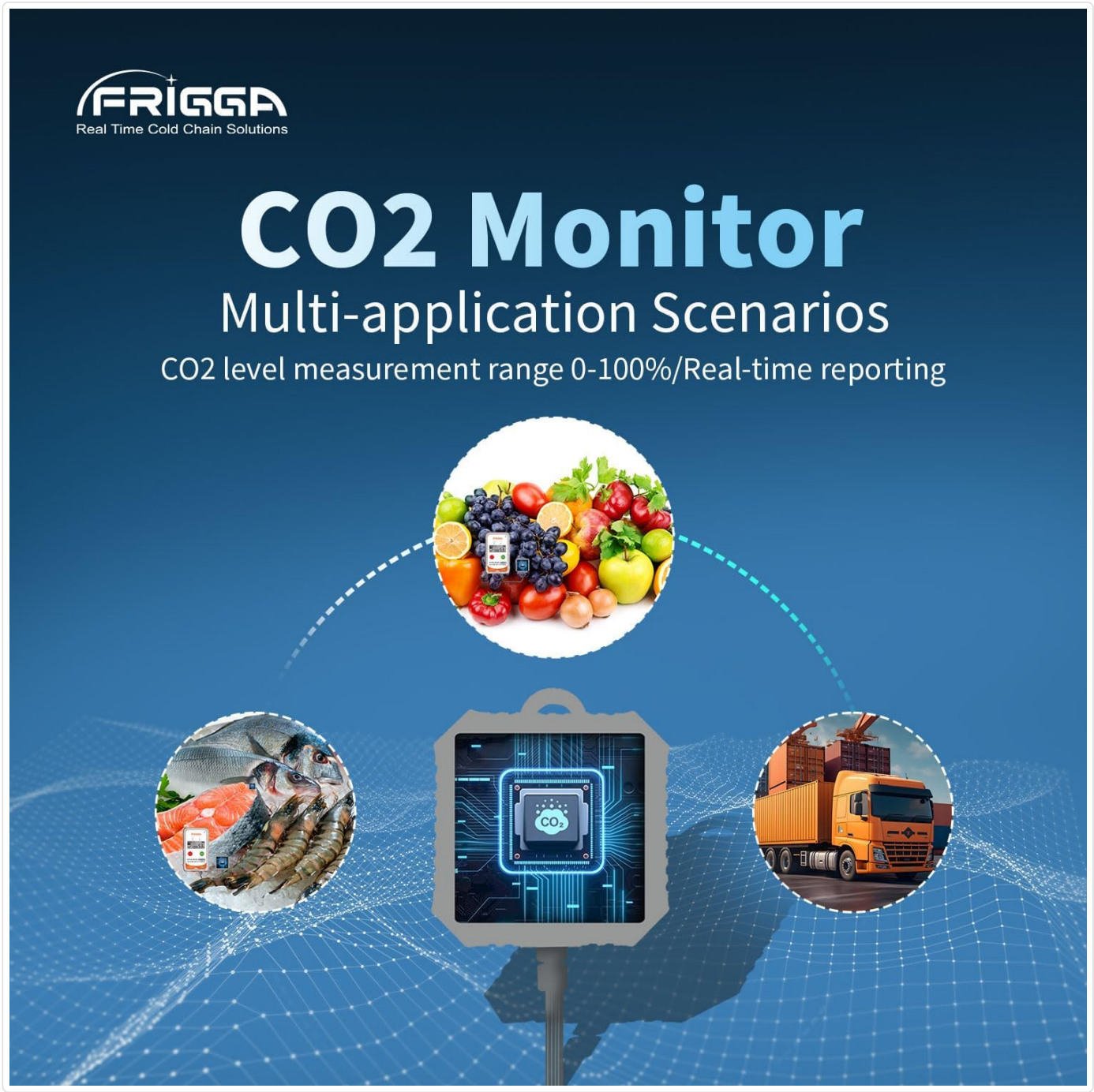

Figure 4: Frigga V5-CO2 Monitor with key components labeled. This image shows the main unit with its display screen, LED indicator, Stop button, Start/Status button, display information area, device ID, humidity hole, and the external sensor connected via a 39-inch cable.

- **LED Indicator:** Provides visual status and alarm notifications.
- **Display Screen:** Shows real-time readings and device status.
- **Stop Button:** Used to stop monitoring.
- **Start/Status Button:** Used to start monitoring or check current status.
- **Display Info Area:** Shows model, usage period, and device ID.
- **Device ID:** Unique identifier for the monitor.
- **Humidity Hole:** Sensor opening for humidity measurement.
- **External Sensor:** Connected via a 39-inch cable for CO2, temperature, and humidity sensing.

3. Setup Instructions

Follow these steps to prepare your Frigga V5-CO2 monitor for operation.

3.1 Initial Charging

1. Connect the provided USB connector to the monitor's charging port.
2. Plug the USB connector into a standard USB power adapter (not included) or a computer's USB port.
3. Allow the device to charge fully before first use. The LED indicator will show charging status.

3.2 Device Activation and Configuration

The Frigga V5-CO2 monitor comes with a built-in SIM card for real-time data transmission. Specific activation and configuration details, including setting data logging intervals and alarm thresholds, are typically managed through the Frigga cloud platform or mobile application. Refer to the digital user manual accessible via the QR code on your warranty card for detailed instructions on platform setup.

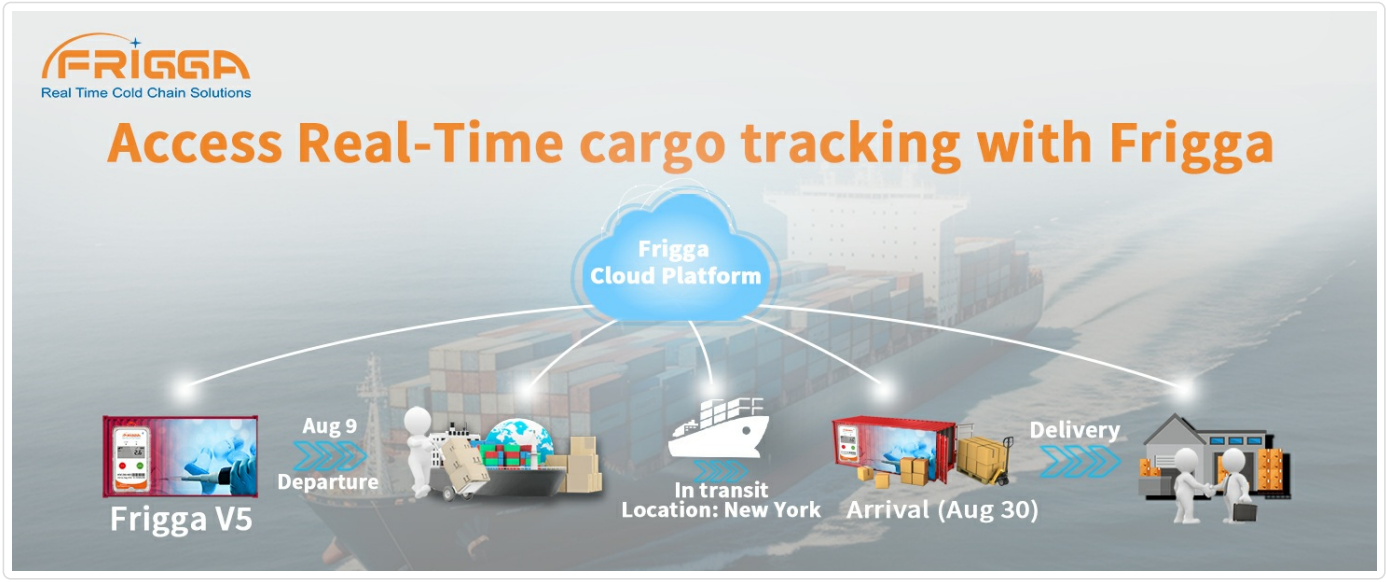

Figure 5: Contents of the Frigga V5-CO2 monitor package, including the monitor, user manual, calibration certificate, and USB connector. The warranty card with a QR code for the digital manual is also shown.

4. Operating Instructions

This section outlines the basic operation of your Frigga V5-CO2 monitor.

4.1 Starting Monitoring

1. Ensure the device is adequately charged.
2. Press and hold the **START/STATUS** button until the display activates and indicates monitoring has begun.
3. Place the monitor in the desired environment for data collection. Ensure the external sensor is positioned correctly to capture accurate readings.

4.2 Real-Time Data Display

The device's display screen shows current CO2 levels, temperature, humidity, and network status. The 5G indicator confirms network connectivity for real-time data upload.

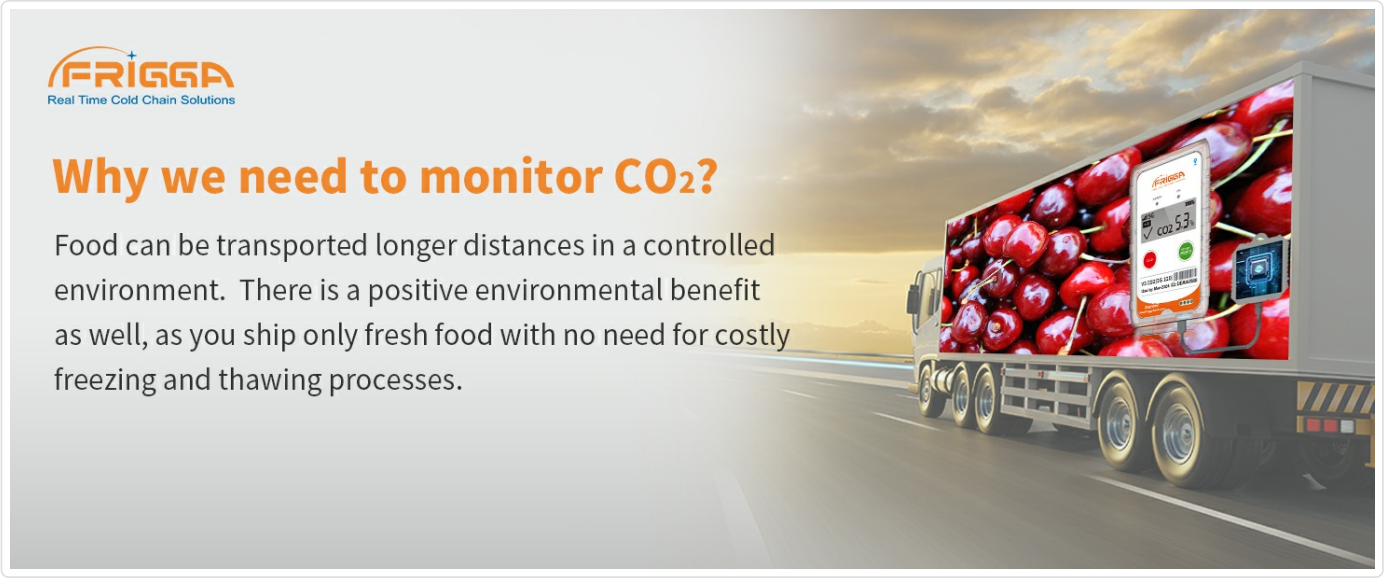

Figure 6: The Frigga V5-CO2 monitor's display showing real-time CO2 percentage, network signal strength (5G), battery level, and other environmental parameters like maximum and current temperature, serial number, and date/time.

4.3 Alarm Notifications

The LED indicator provides visual alerts. Additionally, the device can send notifications via app, email, and text messages if pre-set thresholds are exceeded. These thresholds are configurable through the Frigga cloud platform.

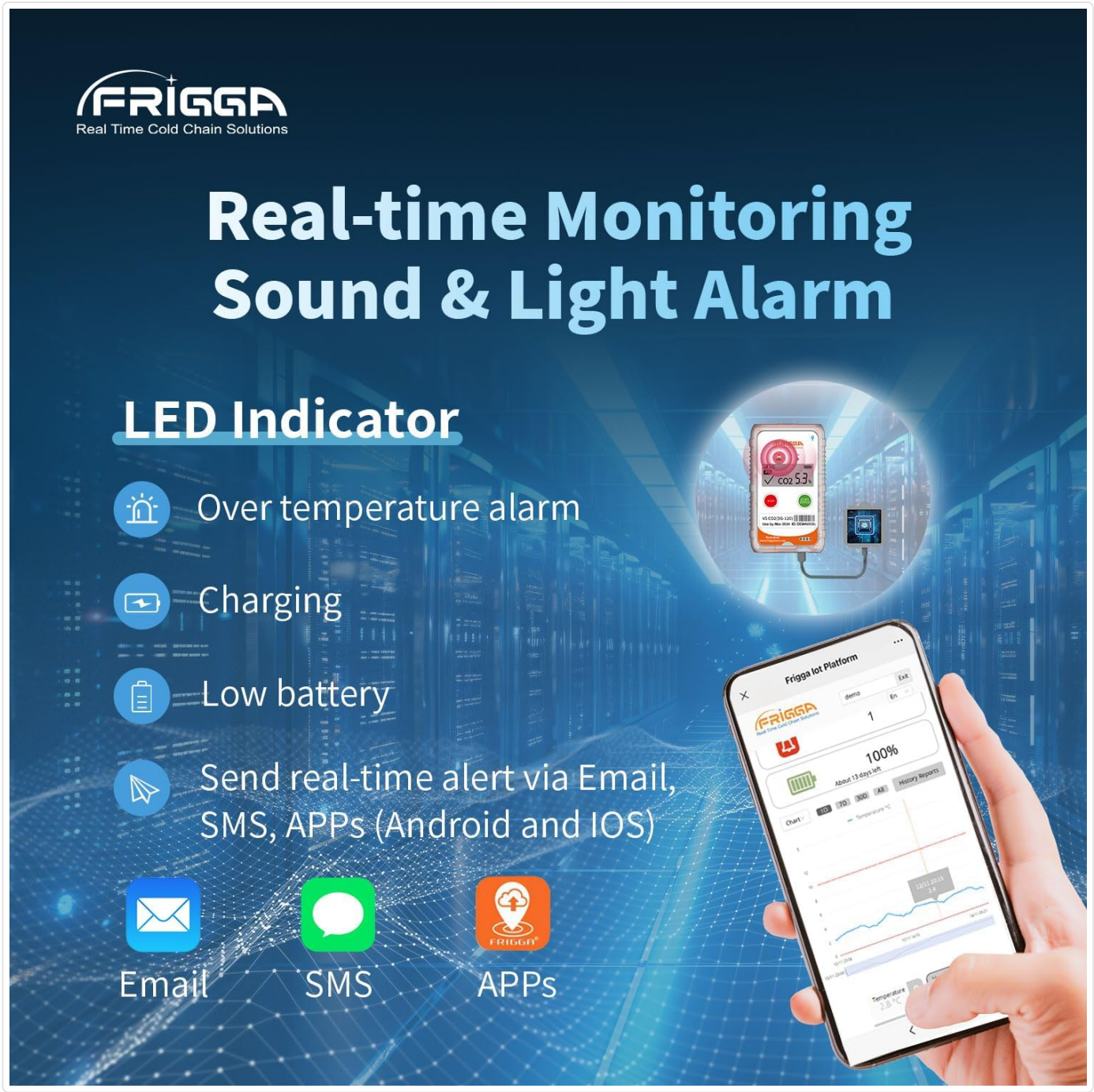

Figure 7: The Frigga V5-CO2 monitor highlighting the LED indicator for alarms (e.g., over temperature, charging, low battery) and illustrating how real-time alerts are sent via email, SMS, and mobile applications.

4.4 Stopping Monitoring

To stop data logging, press and hold the **STOP** button until the device indicates that monitoring has ceased.

4.5 Data Access and Reporting

Data can be accessed and reports generated in two ways:

- **USB Download:** Connect the monitor to a PC via the USB port to download backup PDF data. No special software installation is required.
- **Cloud Platform/APP:** Remotely access and download data reports (PDF, Excel) through the Frigga cloud platform or mobile application.

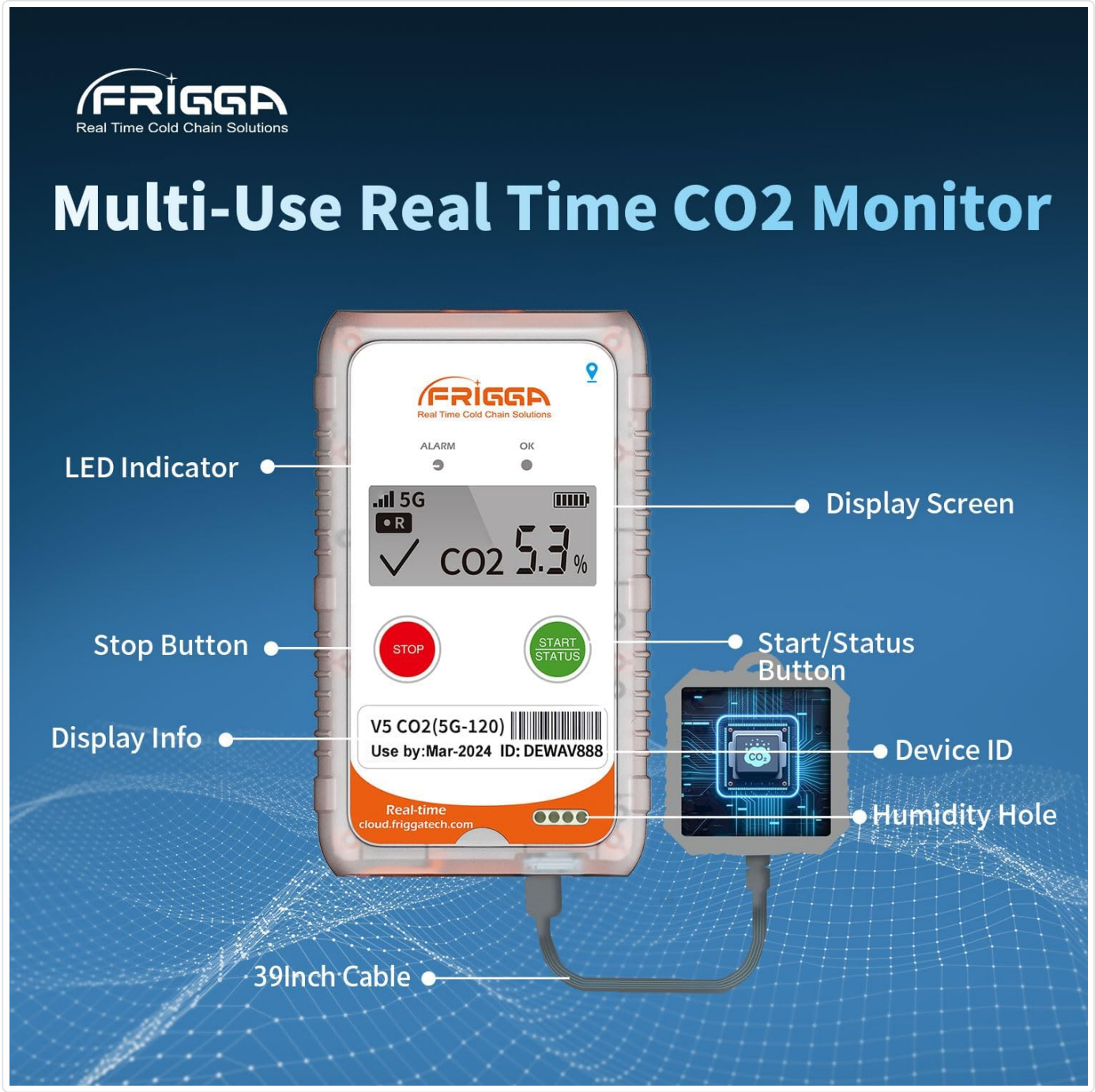

Figure 8: Illustration of data export methods, including direct USB connection to a PC for PDF reports and remote access via the Frigga Cloud Platform and mobile applications (phone, tablet, PC) for various report formats.

Figure 9: Diagram illustrating the dual system backup for data reports, showing both local USB download to a computer and cloud platform access via mobile devices and PCs.

The device supports offline data backup of up to 28,800 points. Data is retransmitted once the signal is restored, ensuring no data loss.

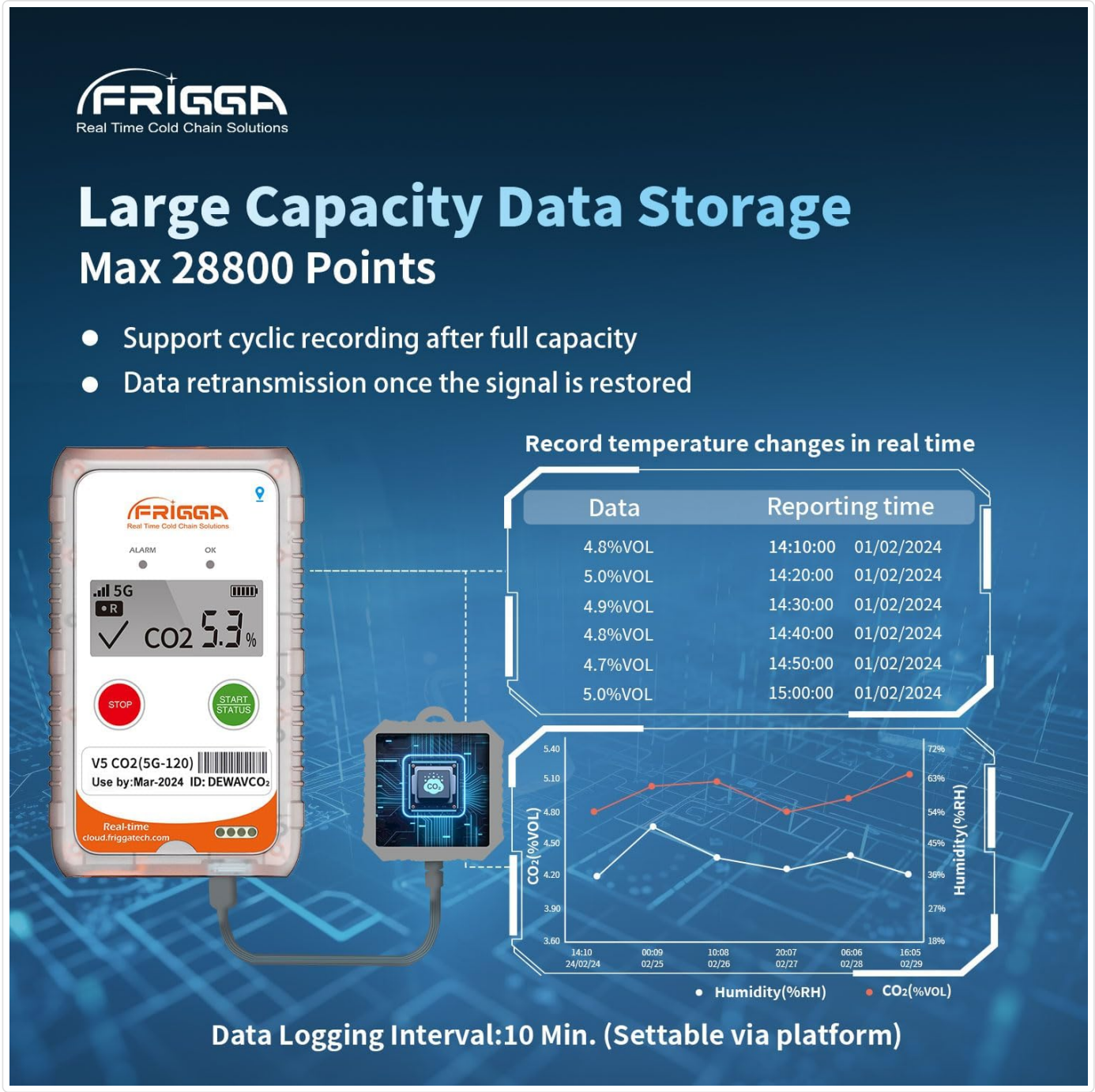

Figure 10: The Frigga V5-CO2 monitor illustrating its large data storage capacity (Max 28800 points) and cyclic recording capabilities, along with a sample data table and graph showing CO2 and humidity changes over time.

Figure 11: Illustration of the Frigga V5-CO2 monitor's offline data backup capability, highlighting its ability to record and store data even without a signal, with retransmission occurring once connectivity is restored.

5. Maintenance

Proper maintenance ensures the longevity and accuracy of your Frigga V5-CO2 monitor.

5.1 Battery Management

The device is powered by a rechargeable Lithium-Ion battery. Recharge the device when the low battery indicator appears on the display or via app notification. A full charge provides up to 120 days of operation with a 1-hour data uploading interval.

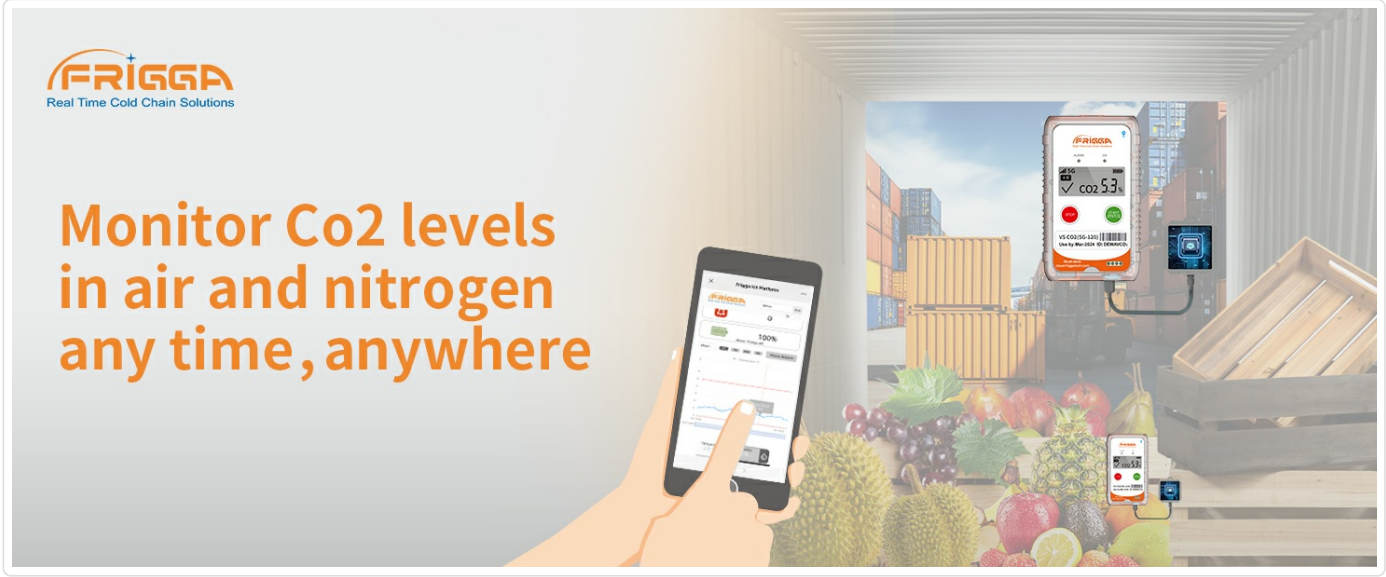

Figure 12: Illustration of the Frigga V5-CO2 monitor's low power consumption, highlighting its standby time of 120 days and a 120-minute (2-hour) uploading interval for extended use.

5.2 Cleaning and Storage

- Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Store the monitor in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- Ensure the humidity hole and external sensor are kept clear of obstructions.

6. Troubleshooting

If you encounter issues with your Frigga V5-CO2 monitor, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
Device not turning on	Low battery or device malfunction.	Charge the device for several hours. If it still doesn't turn on, contact support.
No data transmission	No network signal, SIM card issue, or platform configuration error.	Check the 5G indicator on the display. Move to an area with better network coverage. Verify platform settings.
Inaccurate readings	Sensor obstruction, environmental interference, or calibration required.	Ensure sensors are clean and unobstructed. Avoid placing the device near strong air currents or heat sources. Refer to calibration certificate for accuracy details.
Alarm constantly active	Environmental conditions exceed set thresholds.	Check the current CO2, temperature, and humidity readings. Adjust environmental conditions or reconfigure alarm thresholds on the cloud platform if necessary.

For further assistance, please contact Frigga technical support.

7. Specifications

Feature	Detail
Brand	Frigga
Model Number	V5 CO2 Multi Use
Power Source	Battery Powered (Rechargeable Lithium Ion)
Product Dimensions	0.9"D x 2.3"W x 4.3"H
Item Weight	7.7 ounces (0.48 Pounds)
Alarm Type	Sound & Light (LED Indicator)
Operating Humidity	Up to 95% (non-condensing)
Sensor Type	Photoelectric (for CO2)
CO2 Measurement Range	0-100 VOL%
Temperature Measurement Range	-22°F ~ +158°F (-30°C to 70°C)
Humidity Measurement Range	5%~95%RH
Connectivity	Built-in 4G+2G SIM Card (Global LTE 4G/5G, fallback 2G)
Battery Life	Up to 120 days (at 1-hour uploading interval)
Data Storage	Max 28800 points (offline backup)

8. Warranty and Support

Your Frigga V5-CO2 monitor comes with a warranty card. Please refer to the card for specific warranty terms and conditions.
For technical assistance, troubleshooting, or any inquiries regarding your device, Frigga offers 24/7 technician support via email.

Contact information can be found on the warranty card or the official Frigga website.

Online Resources: For the most up-to-date user manual and support resources, scan the QR code on your warranty card or visit the Frigga official website.