Remote Temperature Monitoring

eVIN – The Technology

eVIN is a low cost remote temperature monitoring (RTM) system, with a sensor unit which is placed in refrigerators (ILR) which store vaccines at health centers. This sensor unit collects temperature data and sends it to eVIN.
CT5 measures ILR temperature at three points – top, middle and bottom.

INSTALLED

Temperature Monitoring

- Temperature monitoring is done in order to ensure that the vaccines are stored at recommended temperatures and the cold chain equipment is working properly. A break in the cold chain is indicated if the temperature rises above +8°C or falls below +2°C in the ILR; and above -15°C in the deep freezer.
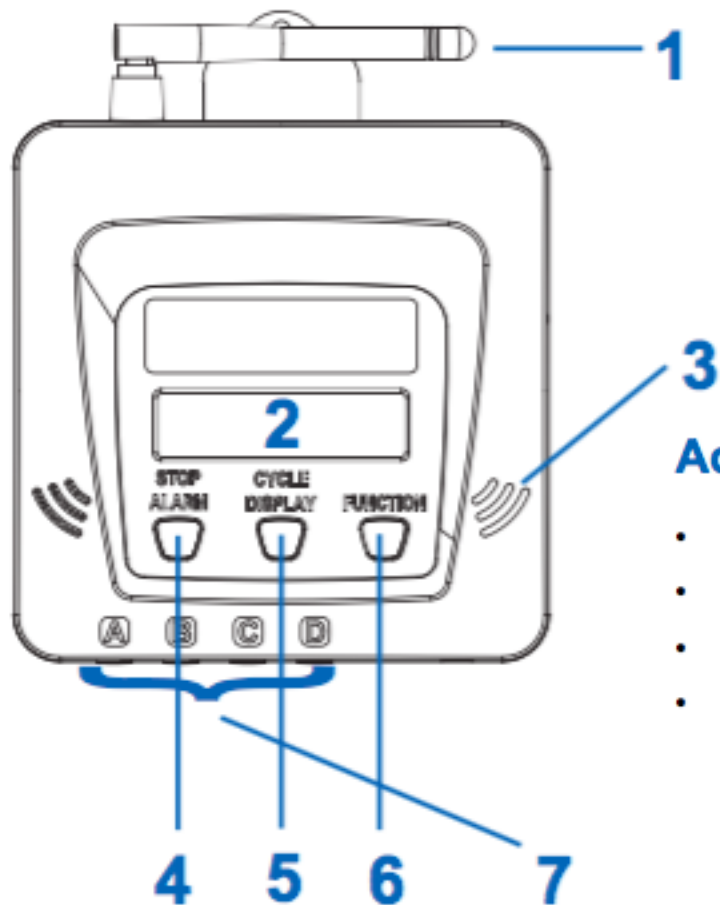
Addressing Challenges in Remote Temperature Monitoring with eVIN

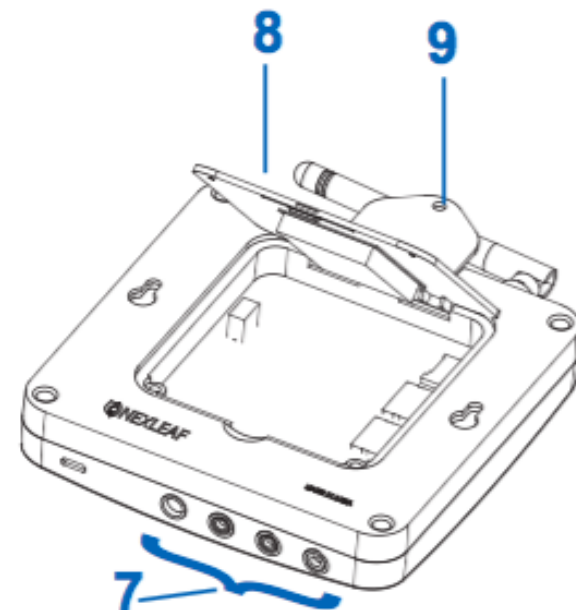| Challenges	Features of Temperature Loggers
Frequent power failure	24 hr battery back-up for temperature logger
Unavailability of Internet connection	Dual-SIM based loggers
Accuracy of temperature monitoring device	Accuracy of +/- 0.5 degree Celsius
Alarms	A physical alarm beeps on the device, and upto five alerts are sent through SMS and email to the concerned authorities upon sensing temperature breach.
Temperature mapping	Four sensors are utilized for ILRs and DFs placed in the top, middle and bottom zones.
Data back-up	Storage of temperature data locally in the logger in a SD card with 4 GB capacity and on the web and as well

ColdTrace5 - Introduction

Know your CT5

1. Antenna
2. Front display
3. Buzzer Speakers
4. Stop Alarm button
5. Cycle Display button
6. Function button
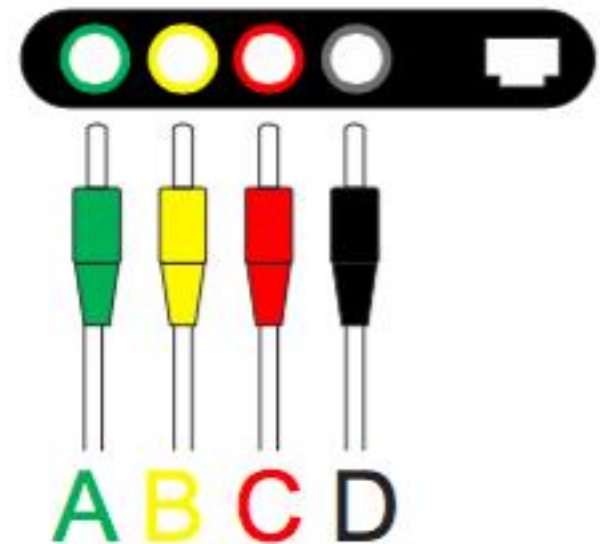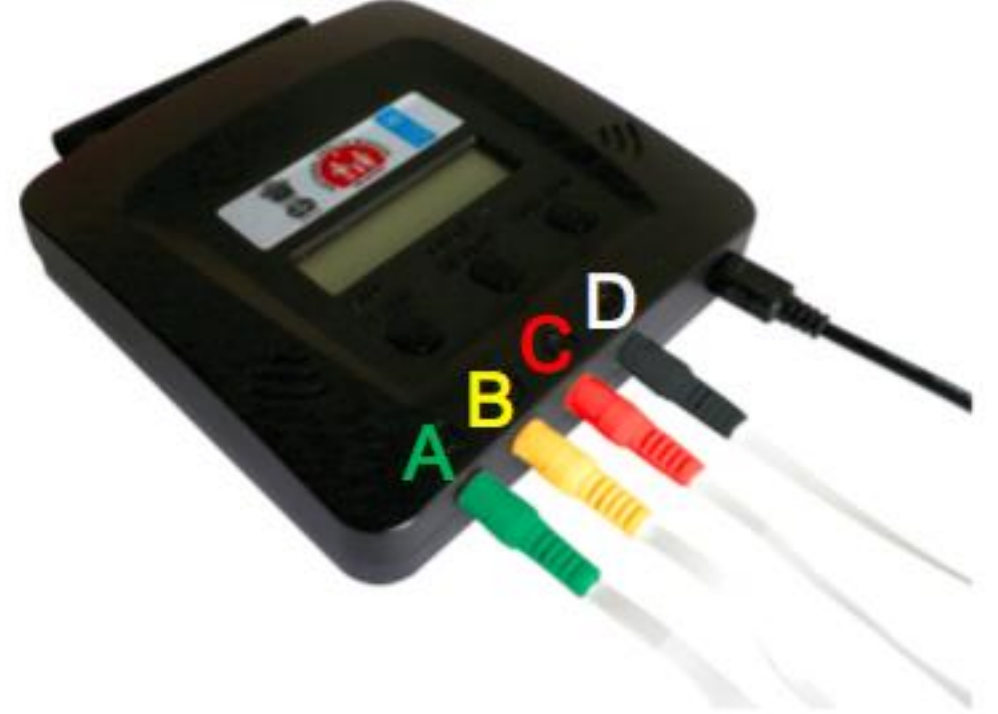7. Sensor ports – A, B, C, D
8. Back panel
9. Wall Hanger

Accessories

- Power cable
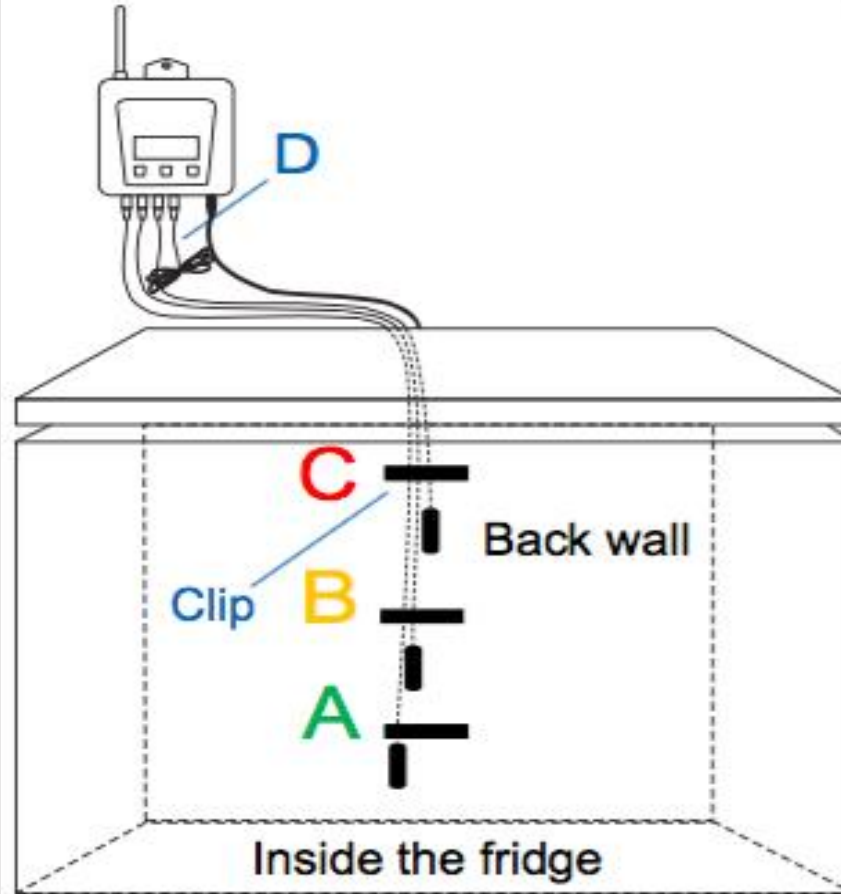- Sensor cable
- Clips
- Adhesive tape

Connecting CT5 sensors

- Locate sensor cables. Each sensor cable has a colored plastic strip around it.

- Look at the sensor ports on the logger. Match each sensor cable to the sensor port of the same color.
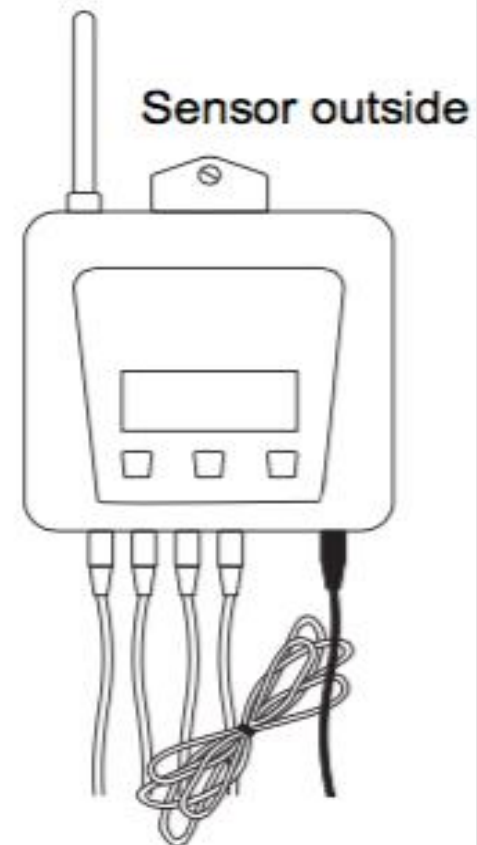
Sensor placement in the ILR & DF

- Place the green sensor A in the bottom zone of the refrigerator.
- Place the yellow sensor B in the middle zone of the refrigerator.
- Place the red sensor C in the top zone of the refrigerator.
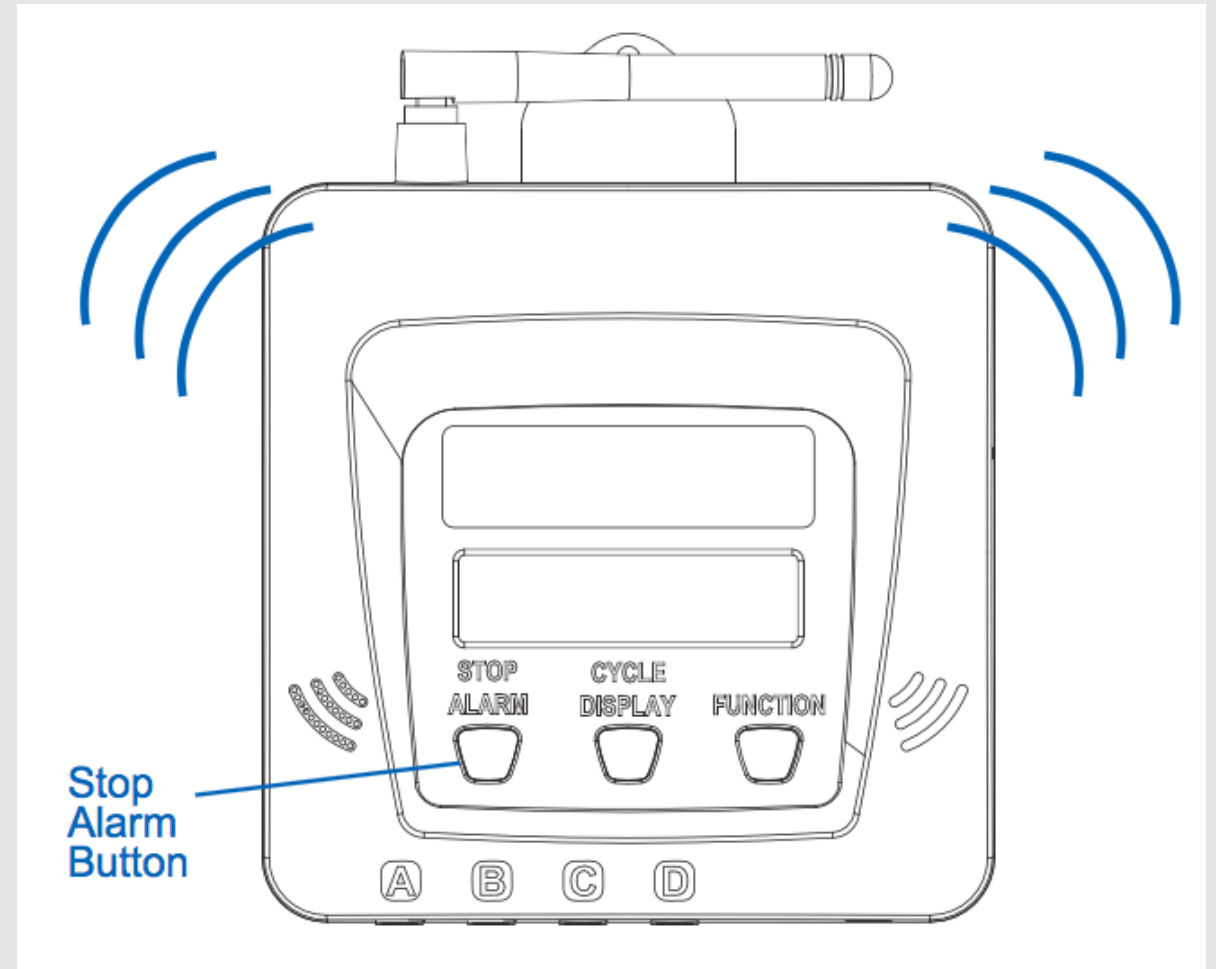- The sensors should be carefully clipped to the walls of the refrigerator.

Sensors should be placed:

- Outside- Sensor D
- Top- Sensor C
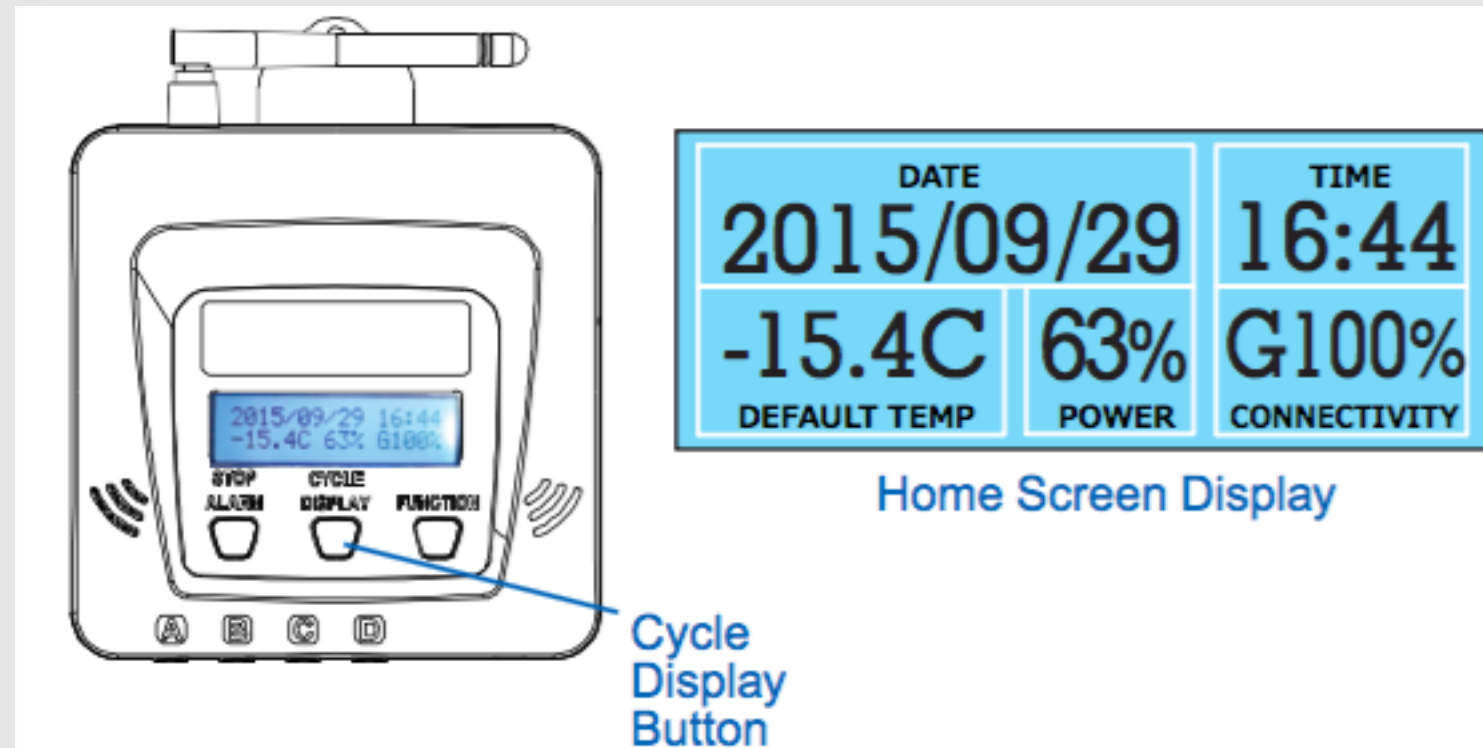- Middle- Sensor B
- Bottom- Sensor A

Stop Alarm

- The audio alarm on CT5 is configured to buzz immediately after a temperature breach. If the reason for alarm is not resolved, the alarm will buzz every 6 hours.

- Press the Stop Alarm button to mute the audio alarm.

Cycle Display button

Home Screen Display

Cycle Display Button

- The home screen of the logger displays the date, temperature data from sensor B, level of battery charge and network signal strength.

- Press the Cycle Display button to get detailed status information about temperature data of each sensor including alarms, battery charge levels, and network signal strength for each SIM.

- Continuous pressing of the Cycle Display button will bring you back to the home screen.

Note

- The cold chain handler should not touch the Function button, it is meant for use only by the cold chain technician.

- Be careful while removing baskets and vaccines to avoid disturbing the sensor probes and cables.