CLAIMS

1. An apparatus for cold chain monitoring of perishable goods, comprising:

at least one environmental sensor to monitor at least one environmental parameter;

at least one event detector to detect at least one of an environmental altering event and a user induced event; and

a controller to receive and log a plurality of readings from the at least one environmental sensor at a selected sampling rate, wherein the sampling rate is selected based on the type of perishable goods;

wherein the sampling rate further adjusts depending on at least one of:

a) the type of perishable goods;

b) the environmental altering event; and

c) the user induced event.

2. The apparatus of claim 1, wherein the at least one environmental sensor, further comprises:

a power source providing electrical power to the at least one environmental sensor.

3. The apparatus of claim 1 or claim 2, wherein:

the at least one environmental sensor commands the sampling rate to adjust.

4. The apparatus of any one of the preceding claims, wherein:

the controller commands the sampling rate to adjust.

5. The apparatus of any one of the preceding claims, further comprising:

a communication module in operative communication with the controller and wireless operative communication with a remote controller, wherein the communication module is configured to transmit at least one data signal associated with the plurality of readings to the remote controller.

6. The apparatus of claim 5, wherein:

the communication module is configured to receive at least one remote command from the remote controller and transmit the at least one remote command to the controller.

7. The apparatus of claim 5 or claim 6, wherein:

the remote controller commands the sampling rate to adjust.

8. The apparatus of any one of claims 5-7, wherein:

the communication module is a cellular interface to communicate with a cellular network.

9. The apparatus of any one of the preceding claims, wherein:

the apparatus is associated with a transportation operation.

10. The apparatus of any one of the preceding claims, wherein:

the type of perishable goods includes at least one of food and pharmaceuticals.

11. A method for cold chain monitoring of perishable goods, comprising:

monitoring, using at least one environmental sensor, at least one environmental parameter;

selecting a sampling rate based on the type of perishable goods;

receiving and logging, using a controller, a plurality of readings from the at least one environmental sensor at the selected sampling rate;

monitoring, using at least one event detector, at least one of an environmental altering event and a user induced event;

and

further adjusting the sampling rate depending on at least one of:

a) the type of perishable goods;

b) the environmental altering event; and

c) the user induced event.

12. The method of claim 11, further comprising

electrically powering, using a dedicated power source, the at least one environmental sensor.

13. The method of claim 11 or claim 12, further comprising

commanding the adjustment of the sampling rate via the at least one environmental sensor.

14. The method of any one of claims 11-13, further comprising

commanding the adjustment of the sampling rate via the controller.

15. The method of any one of claims 11-14, further comprising:

wirelessly transmitting, using a communication module in operative communication with the controller, at least one data signal associated with the plurality of readings to a remote controller.

16. The method of claim 15, further comprising:

receiving, using the communication module, at least one remote command from the remote controller; and

transmitting the at least one remote command to the controller.

17. The method of claim 15 or claim 16, further comprising:

commanding the adjustment of the sampling rate via the remote controller.

18. The method of any of claims 15-17, wherein:

the communication module is a cellular interface to communicate with a cellular network.

19. The method of any one of claims 11-18, further comprising:

transporting the perishable goods.

20. The method of any one of claims 11-19, wherein:

the type of perishable goods includes at least one of food and pharmaceuticals.