NEXSENS X2-CBMC-I Buoy Mounted Data Logger User Guide

Contents

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IMPORTANT – BEFORE FIELD DEPLOYMENT: Completely configure new X2 systems with sensors and a web connection in a nearby work area. Operate the system for several hours and ensure correct sensor readings. Use this test run to become familiar with the features and functions.

Overview

The X2-CBMC buoy-mounted data logger with iridium telemetry includes an integrated iridium satellite modem. Five sensor ports provide industry standard protocols including SDI-12, RS-232, and RS-485. The Solar/COM port offers direct communication (serial to PC) and power input. The X2-CBMC is powered from the CB-Series buoy's solar rechargeable battery reserve. Data is accessed and stored on the WQData LIVE web datacenter. An easy-to-use dashboard and built-in sensor library automatically facilitate setup and configuration.

What's Included?

- (1) X2-CBMC buoy-mounted data logger
- (5) Sensor port plugs, (3) spare orings
- (1) Power port plug, (2) spare orings
- (1) Oring grease
- (2) Spare sensor port plugs
- (1) Iridium antenna
- (1) Quick start guide

Figure 1: X2-CBMC Buoy-Mounted Data Logger

Installation & Connection

1. **To get started:**
    - **a**. Go to WQDataLIVE.com
    - **b**. Create a new account or sign into an existing account.
    - **c**. Choose or create the project that will contain the data logger by selecting the Projects link from the bottom right footer of the page.
    - **d**. Go to the ADMIN tab located at the top of the project dashboard and click Settings.
2. From there, choose the Project/Site pull down menu and select the site for the new data logger.
    - **a**. If a site has not been created, select New Site. Create and save the site before entering the claim code.
3. Enter the claim code listed below into the space provided under Assigned Devices.
4. Click Add Device.
    - **a**. The new device should be visible in the Assigned Devices list.
5. Use the CONNECT software to ensure the proper scripts are enabled for each sensor. **nexsens.com/conncss**
6. If iridium service is not purchased through NexSens, visit the article link below to setup an Iridium Short-burst data (SBD) account. **nexsens.com/wqsetiracc**
7. If using a Gmail for the SBD account, visit the article below to provide WQData LIVE access to transmit commands through the account. **nexsens.com/wqsetgmir**
8. Visit the link below to enter the iridium account information into the Advanced Device Remote Configuration settings on WQData LIVE. **nexsens.com/wqconfir**
9. Connect the RF cable between the pre-mounted antenna on top of the solar tower and the logger's antenna port.
    - **a**. Align the RF cable on the antenna port and push down firmly. Turn the connector clockwise until the connection is hand-tight.
    - **b**. Avoid over rotating the antenna extension cable.

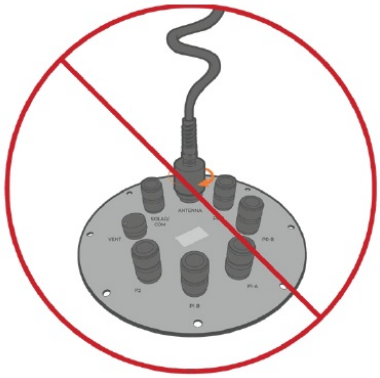


Figure 2: Example of cable coil due to over rotation.

10. Remove one blank sensor plug from an 8-pin port (i.e., P0, P1, or P2) for each sensor.
    - **a**. Connect all sensors to the desired ports.

      Note: Only one RS-232 sensor can be plugged into each P0, P1, or P2 port. Ensure that all SDI-12 and RS-485 sensors have unique addresses.
11. Remove the SOLAR/COM blank plug from the 6-pin port.
    - **a**. Connect the 6-pin solar panel plug to power the X2-CBMC. The device will beep once when powered.

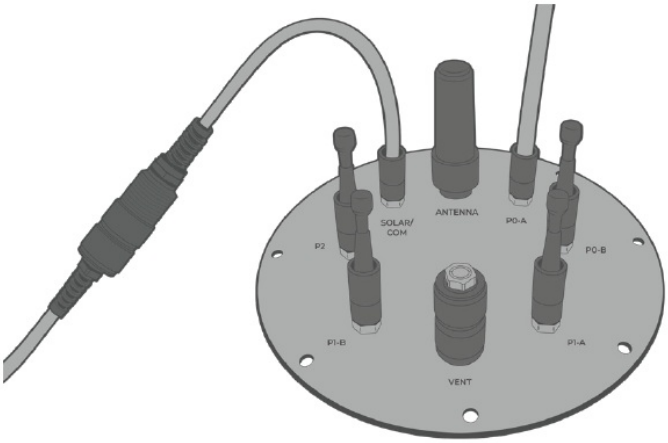


Figure 3: Steps 10 & 11 - Connect sensors to the 8-pin ports and the solar panel plug to the 6-pin port.

12. Wait up to 60 seconds for the system to check cellular coverage.
    - **a**. Two consecutive beeps = adequate signal
    - **b**. Three consecutive beeps = no signal
    - If three beeps are heard, move the X2-CBMC-I into an area devoid of overhead obstructions.
13. After 20 minutes, refresh WQData LIVE and confirm all sensor parameters are shown and valid sensor readings appear.
    - **a**. The device will beep for a duration of three seconds when detection is complete.

Buzzer Pattern Indicators

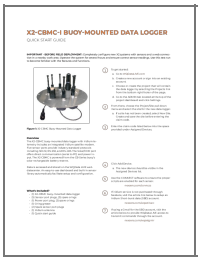
Table 1: X2-CBMC Buzzer Pattern Indicators.

Buzzer Event	Beep Type	Status
When power is applied	One short beep	System boot successful
During telemetry connection	Two short beeps	Connection successfully established
During telemetry connection	Three short beeps	No signal/connection failed
During sensor detection	Three second beep duration	WQData LIVE Setup completed 1 successfully

WQData LIVE setup is automatically done after sensor detection.

For additional information, please reference the X2-CBMC Resource Library on the NexSens Knowledge Base.
nexsens.com/x2cbkb
937-426-2703
www.nexsens.com

Documents / Resources

	NEXSENS X2-CBMC-I Buoy Mounted Data Logger [pdf] User Guide X2-CBMC-I Buoy Mounted Data Logger, X2-CBMC-I, Buoy Mounted Data Logger, Mounted Data Logger, Data Logger, Logger

References

- User Manual