NEXSENS X2-SDLMC Cellular Data Logger User Guide

Contents

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X2-SDLMC CELLULAR DATA LOGGER

Quick Start Guide

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.

1. To get started

1. Go to **WQDataLIVE.com**
2. Create a new account or sign in to an existing account.
3. Choose or create a project that will contain the data logger by selecting the Projects link from the bottom right footer of the page.
4. Go to the ADMIN tab located at the top of the project dashboard and click Settings.

From there, choose the Project/Site pull-down menu and select the site for the new data logger.

1. If a site has not been created, select New Site. Create and save the site before entering the claim code.

Figure 1: X2-SDLMC Submersible Data Logger.

Overview

The X2-SDLMC with cellular telemetry includes an integrated modem. Two sensor ports provide industry-standard protocols including SDI-12, RS-232, and RS-485. The SOLAR/HOST MCIL-6-FS port offers direct communication (serial to PC) and power input. All connections are made using MCIL/MCBH wet-mate connectors. The X2-SDLMC is powered by an internal solar rechargeable battery reserve. Smartphones and tablets connect by WiFi. Data is accessed and stored on the WQData LIVE web data center. An easy-to-use dashboard and built-in sensor library automatically facilitate setup and configuration.

Enter the claim code listed below into the space provided under Assigned Devices.

Click Add Device.

1. The new device should be visible in the Assigned Devices list.

If cellular service is not purchased through NexSens, visit the article link below for steps on how to setup the cell modem.

1. **nexsens.com/x2apn**

What's Included?

- (1) X2-SDLMC data logger
- (1) Pre-installed antenna
- (2) Sensor port plugs
- (1) Power port plug
- (3) 11 cable ties
- (1) Quick start guide

Use the CONNECT software to ensure the proper scripts are enabled for each sensor.

1. **nexsens.com/conncss**

Remove the top white plate from the buoy and one blank sensor plug from an MCIL-8-pin port (i.e., Sensor 1 or Sensor 2) for each available sensor.

Note: Before installing, ensure that all SDI-12 and RS-485 sensors have unique addresses.

Buoy Installation/Cable Routing (Optional)
Route the sensor cables underneath the solar panel opposite the sensor ports.

1. Ensure to insert enough cable within the solar tower to avoid tension on the connector.
2. The connector should remain in a nearly vertical angle while connected.
3. Use the included zip ties to secure the cable to one of the solar tower posts.

Remove the nearest sensor pass-through lid using a Philips screwdriver.

1. Route the sensor cable through the passthrough tube.

Connect the solar tower cable to the SOLAR/HOST port for power application.

1. The unit will beep once confirming the power connection.

Wait up to 60 seconds for the system to check cellular coverage.

1. Two consecutive beeps = adequate signal
2. Three consecutive beeps = no signal

Figure 2: Sensor cable connection.

Make sure to follow all instructions carefully to ensure proper setup and configuration of the X2-SDLMC Cellular Data Logger. If you encounter any issues or have any questions, refer to the user manual or contact customer support for assistance.

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.

Figure 1: X2-SDLMC Submersible Data Logger.

Overview

The X2-SDLMC with cellular telemetry includes an integrated modem. Two sensor ports provide industry-standard protocols including SDI-12, RS-232, and RS-485. The SOLAR/HOST MCIL-6-FS port offers direct communication (serial to PC) and power input. All connections are made using MCIL/MCBH wet-mate connectors. The X2-SDLMC is powered by an internal solar rechargeable battery reserve. Smartphones and tablets connect by WiFi. Data is accessed and stored on the WQData LIVE web data center. An easy-to-use dashboard and built-in sensor library automatically facilitate setup and configuration.

What’s Included?

- SDLMC data logger
- pre-installed antenna
- Sensor port plugs
- power port plug (3)
- 11” cable ties
- Quick start guide

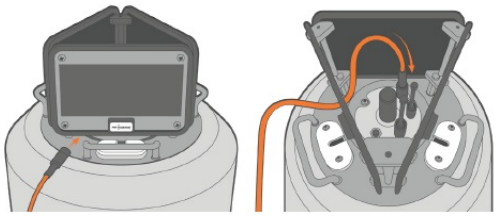
To get started

- Go to WQDataLIVE.com
- create a new account or sign in to an existing account.

- choose or create the project that will contain the data logger by selecting the Projects link from the bottom right footer of the page.
- located at the top of the project dashboard and click Settings.
- From there, choose the Project/Site pull-down menu and select the site for the new data logger.
- If a site has not been created, select New Site. Create and save the site before entering the claim code.
- enter the claim code listed below into the space provided under Assigned Devices.
- Click Add Device.
    - The new device should be visible in the assigned Devices list.
    - If cellular service is not purchased through NexSens, visit the article link below for steps on how to setup the cell modem.**nexsens.com/x2apn**
    - Use the CONNECT software to ensure the proper scripts are enabled for each sensor. **nexsens.com/conncss**
    - Remove the top white plate from the buoy and one blank sensor plug from an MCIL-8-pin port (i.e., Sensor 1 or Sensor 2) for each available sensor.
    - Note: Before installing, ensure that all SDI-12 and RS-485 sensors have unique addresses.

Buoy Installation/Cable Routing (Optional)

- Route the sensor cables underneath the solar panel opposite the sensor ports.
- ensure to insert enough cable within the solar tower to avoid tension on the connector.
- the connector should remain at a nearly vertical angle while connected.
- se the included zip ties to secure the cable to one of the solar tower posts.
- ensure provide enough cable slack for tension-free connections on both ends.



Remove the nearest sensor pass-through lid using a Philips screwdriver

- Route the sensor cable through the pass-through tube.
- Align the sensor cable within the opening on the pass-through lid and re-install the lid.

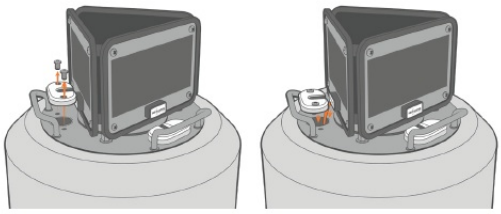


Figure 3: Sensor routing through pass-through tube.

- Connect the solar tower cable to the SOLAR/HOST port for power application.
- The unit will beep once confirming the power connection.
- Wait up to 60 seconds for the system to check cellular coverage.
- Two consecutive beeps = adequate signal
- Three consecutive beeps = no signal

- If three beeps are heard, move the X2-SDLMC into an area with strong cellular coverage.
- Check cellular coverage through CONNECT using the link: nexsens.com/x2apn
- After 20 minutes, refresh WQData LIVE and confirm all sensor parameters are shown and valid sensor readings appear.
- The device will beep for a duration of three seconds when detection is complete.

Buzzer Pattern Indicators

Table 1: X2-SDLMC 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 Successfully[1]

- WQData LIVE setup is automatically done after sensor detection.

For additional information, please reference the X2-SDLMC Resource Library on the NexSens Knowledge Base. nexsens.com/x2sdlmckb

Documents / Resources

	[NEXSENS X2-SDLMC Cellular Data Logger](#) [pdf] User Guide X2-SDLMC Cellular Data Logger, X2-SDLMC, Cellular Data Logger, Data Logger, Logger

References

- Configure Sensor Scripts - NexSens
- Enable Cellular Communication on an X-Series Data Logger Using CONNECT - NexSens
- Knowledge Base - NexSens
- WQData LIVE
- NexSens Technology Inc. - Better Data. It's what we do

Manuals+,