

# X2-SDL

## SUBMERSIBLE DATA LOGGER



- Wi-Fi, cellular, satellite or radio telemetry
- Alkaline battery or solar powered
- Supports a variety of environmental sensors
- Optional web datacenter
- Complete system is truly submersible

The **X2-SDL** Submersible Data Logger is a rugged, self-powered remote data logging system for deploying environmental sensors in lakes, streams, rivers, wetlands, coastal waters, sewers, and culverts without fear of accidental flooding. The system is configured with three sensor ports for connection to industry-standard digital interfaces including RS-485, RS-232 and SDI-12. Additional sensor inputs are available through the use of adapters. Each sensor port offers a UW receptacle with double O-ring seal for a reliable waterproof connection. Unlike many data loggers, the X2-SDL is truly submersible. The housing and battery compartment are completely sealed and waterproof.

When it comes to field ruggedness, the NexSens **X2-SDL** is in a class of its own. The housing is constructed of impact-resistant PVC and includes two elastomer bumpers for long-term deployment in close-fitting pipes and buoy ports. Internal circuit boards and communication modules are shock mounted and all access ports incorporate redundant sealing. The **X2-SDL** withstands extreme wave action, drops, floods, periodic & long-term deployment underwater, and more. When fitted for wireless remote communication, the Wi-Fi, cellular, satellite, and radio antennas are also waterproof.

The **X2-SDL** can be powered autonomously by sixteen D-cell alkaline batteries. Optional solar power kits provide long-term continuous operation and solar charging. Common sensor connections include multi-parameter sondes, water quality sensors, temperature strings, ADCP's, water level sensors, and weather stations. Optional integrated Wi-Fi, cellular or satellite telemetry modules offer real-time remote communications via the **WQData LIVE** web datacenter. There, data is presented on a fully-featured and easy-to-use dashboard. Other features include automated reports, alarms, push notifications and much more.

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### specifications

Material	PVC body with Acetal battery lid
Weight	12.0 lbs. without batteries; 16.6 lbs. with batteries
Dimensions	5.5" (13.97 cm) diameter; 17.3" (43.94 cm) length (antenna length varies by model)
Internal Power	16 user-replaceable D-cell alkaline batteries
External Power Requirements	5-16 VDC +/-5% (Reverse polarity protected)
Current Draw (Typical @ 12VDC)	Low power sleep: 350uA; Active: 45mA; Cellular Transmitting: 300mA; Iridium satellite transmitting: 170mA
Peak Current	Power supply must be able to sustain a 500mA 1-second peak current (@ 12V)
Operating Temperature	-20 to 70°C
Rating	Submersible to 200 ft. (requires SDL-CAP on telemetry models)
User Interface	RS-485 direct to CONNECT Software, WQDataLive Web Datacenter
Data Logging	256MB microSD card (expandable up to 4GB)
Data Processing	Parameter level polynomial equation adjustment; Basic & Burst Averaging (min, max, standard deviation, and raw data available)
Real Time Clock (RTC)	<30sec/month drift <sup>1</sup> ; Auto-sync weekly <sup>2</sup> ; Internal backup battery
Log Interval	User configurable from 1 minute (10 minute default) <sup>3</sup> ; Unique interval per sensor
Transmission Trigger	Time-based, Selective parameter upload option
Sensor Interfaces	SDI-12, RS-232 (3 Channels), RS485
Sensor Power	(3) independent switches from input supply <sup>4,5</sup>
Built-in Sensors	Temperature (-40C to 85C, 0.1C resolution, ±0.3C accuracy); Humidity (0% to 100%, 0.1% resolution, ±4% accuracy from 5 to 95% RH & -20 to 70C); Battery voltage; System & sensor current
Sensor Ports	(3) 8-Pin for Sensor Interface (RS-232, RS-485, SDI-12, Switched Power, GND)
Power Port	(1) 6-Pin for Power and Communication (Primary/Backup Input, RS-485 Host, GND)
Telemetry Options	Wi-Fi, 4G LTE cellular, CAT-M1 cellular, Iridium satellite, 900 MHz radio, 2.4 GHz radio
Antenna Port	Type N female

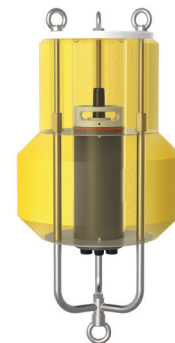
<sup>1</sup> Assumes 25°C operating temperature.

<sup>2</sup> Requires the X2 to be connected to the internet

<sup>3</sup> Minimum log interval dependent on sensor limitations and processing time

<sup>4</sup> Cumulative concurrent current limit of all three channels is 2A

<sup>5</sup> Logger power supply must be able to support current requirements of sensors



### parts list

Part #	Description
X2-SDL	X2-SDL submersible data logger
X2-SDL-W	X2-SDL submersible data logger with Wi-Fi telemetry
X2-SDL-C-2G3G	X2-SDL submersible data logger with 2G/3G cellular telemetry
X2-SDL-C-NA4G	X2-SDL submersible data logger with North American 4G LTE cellular telemetry
X2-SDL-C-CATM	X2-SDL submersible data logger with CAT-M1/NB2 LTE cellular telemetry
X2-SDL-I	X2-SDL submersible data logger with Iridium satellite telemetry
X2-SDL-R-DG	X2-SDL submersible data logger with 900 MHz radio telemetry
X2-SDL-R-DG24	X2-SDL submersible data logger with 2.4 GHz radio telemetry



tel: **937.426.2703**  
8am to 7pm EST, Monday-Friday

fax: **937.426.1125**

NexSens Technology, Inc.  
2091 Exchange Court  
Fairborn, OH 45324  
info@nexsens.com

**nexsens.com**