

X2-CBMC

BUOY-MOUNTED DATA LOGGER

- MCIL/MCBH wet-mateable sensor and power ports
- Cellular or Iridium satellite telemetry
- Supports a variety of environmental sensors
- Optional web datacenter
- Rugged waterproof enclosure

The NexSens **X2-CBMC** is an all-in-one environmental data logger specifically designed for offshore use with a NexSens CB-Series data buoy. It automatically recognizes sensors and sends data to the web via cellular or Iridium satellite telemetry. The **X2-CBMC** includes five sensor ports that are compatible with most environmental sensor protocols including SDI-12, RS-232 and RS-485. All connections are made using MCIL/MCBH wet-mate connectors, and the built-in sensor library automatically facilitates setup and configuration. Sensor data is recorded on common or independent schedules.

The **X2-CBMC** is powered from the CB-Series buoy's solar rechargeable battery reserve. Advanced power management combined with ultra-low sleep and run currents extend battery life and reduce the need for larger buoy and solar charging systems. The **X2-CBMC** monitors itself while collecting environmental data. Internal temperature, humidity, voltages and currents are constantly recorded. Failure alerts can be sent automatically to a predefined list of contacts.

The **X2-CBMC** integrates the sensor ports, solar panel connector, pressure relief valve, and wireless antenna all on the data well lid for quick installation on CB-Series data buoys. Integrated cellular or Iridium 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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BUOY-MOUNTED DATA LOGGER

specifications

| | |
|--------------------------------|--|
| Mount | CB-Series buoy data well plate |
| Material | 316 stainless steel plate with PVC body |
| Weight | 10.5 lbs. |
| Dimensions | 13.5" Diameter, 4.4" Height (6" with cell antenna; 8.125" with Iridium antenna) |
| 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 | IP67 |
| User Interface | RS-485 direct to CONNECT Software, WQData LIVE Web Datacenter, buzzer indicator |
| 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 ¹ ; Auto-sync weekly ² ; Internal backup battery |
| Log Interval | User configurable from 1 minute (10 minute default) ³ ; Independent 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 ^{4,5} |
| 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 | (5) MCBH-8-MP for Sensor Interface (RS-232, RS-485, SDI-12, Switched Power, GND) ⁶ |
| Power Port | (1) MCBH-6-FS for Power and Communication (12V Solar In, Power Switch, RS-485 Host, GND) |
| Telemetry Options | 4G LTE cellular, CAT-M1 cellular, Iridium satellite |
| Antenna Port | Type N female |

¹ Assumes 25°C operating temperature

² Requires the X2 to be connected to the internet

³ Minimum log interval dependent on sensor limitations and processing time

⁴ Cumulative concurrent current limit of all three channels is 2A

⁵ Logger power supply must be able to support current requirements of sensors

⁶ P0A & P0B share a single RS-232 and power channel. P1A & P1B share a single RS-232 and power channel



parts list

| Part # | Description |
|----------------|--|
| X2-CBMC | X2-CBMC buoy-mounted data logger with MCBH connectors |
| X2-CBMC-C-2G3G | X2-CBMC buoy-mounted data logger with MCBH connectors & 2G/3G cellular telemetry |
| X2-CBMC-C-NA4G | X2-CBMC buoy-mounted data logger with MCBH connectors & North American 4G LTE cellular telemetry |
| X2-CBMC-C-CATM | X2-CBMC buoy-mounted data logger with MCBH connectors & CAT-M1/NB2 LTE cellular telemetry |
| X2-CBMC-I | X2-CBMC buoy-mounted data logger with MCBH connectors & Iridium satellite telemetry |



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