X3

ENVIRONMENTAL DATA LOGGER

- Supports most industry environmental sensors
- Wi-Fi, 4G LTE & Iridium satellite telemetry options
- Direct PC or cloud-based communications
- Waterproof sensor and power ports
- Marine anodized aluminum housing

The **X3** is an all-in-one environmental data logger designed for both pole/wall mount and buoy-based applications. The three waterproof sensor ports are compatible with most environmental sensors including multi-parameter sondes, water quality sensors, temperature strings, ADCP's, water level sensors, and weather stations. All connections are made with a simple thread-in connector, and the built-in sensor library automatically facilitates setup and configuration. Data is stored on common or independent schedules.

Power options include **SP-Series** Solar Power Packs, AC adapter, or external 12 VDC. Advanced power management combined with ultra-low sleep and run currents extend battery life and eliminate the need for multi-battery arrays or large solar charging systems. The **X3** monitors itself while collecting environmental data - internal temperature, humidity, voltages and currents are constantly recorded, and failure alerts can be sent automatically to a predefined list of contacts.

Using Bluetooth or a USB adapter and **CONNECT** Software, users can configure the **X3** Data Logger for deployment, view live data, change settings, or troubleshoot. Standard Wi-Fi and optional integrated 4G LTE cellular or Iridium satellite telemetry modules offer 2-way 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, email/text alarms, public portal, API, and much more.

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specifications

Mount	(4) 5/16-18 top bolt holes, (3) 3/8-16 bottom bolt holes; Optional PM2 for pole/wall mounting
Material	Marine anodized aluminum
Weight	3.0 lbs. (1.36kg)
Dimensions	4.9" (12.45cm) diameter x 4.15" (10.54cm) height
Power Requirements	10.7 to 16.8 VDC +/-5%; includes reverse polarity protection, over voltage protection (OVP), and under voltage lock out (UVLO) protection
Current Draw (Typical @ 12VDC)	Sleep: 450uA; Active: 55mA; Wi-Fi transmitting: 100mA; 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	-40°C to 70°C
Rating	IP68
User Interface	Wireless Bluetooth or wired RS-485 via USB adapter to CONNECT Software; WQData LIVE Web Datacenter with optional wireless telemetry; Status beeps
Real Time Clock (RTC)	<30sec/month drift[1]; Auto-sync weekly[2]; Internal backup battery
Data Logging	8 MB non-volatile flash memory; >1 year storage with 20 parameters at 15-minute interval; Max 200 parameters per log interval (170 parameters per instrument)
Log Interval	User configurable from 1-minute (10-minute default)[3]; Unique interval per sensor
Transmit Interval	User configurable from 5-minute (10-minute default)
Transmission Trigger	Time-based; Selective parameter upload option
Sensor Interfaces	RS-232 (3 Channels), SDI-12, RS-485, Pulse Count
Sensor Power	(2) independent switches from input supply[4,5]
Built-in Sensors	Temperature (-40° to 100°C, 0.016°C resolution, ±0.3°C accuracy); Humidity (0% to 100%, 0.03% resolution, ±4% accuracy from 5 to 95% RH; System voltage; System current; System power; Real-time clock (RTC) battery voltage
Sensor Ports	(3) UW 8-pin for sensor interface (RS-232, SDI-12, RS-485, Pulse Count, Power, GND)
Power Port	(1) UW 6-pin for power and communication (primary/secondary/backup input, RS-485 host, GND)
Telemetry Options	2.4GHz Wi-Fi (802.11 b/g/n), 4G LTE global cellular, Iridium satellite; includes fallback support
Antenna Port	SMA

[1] Assumes 25ºC operating temperature

[2] Requires the X3 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

parts list

Part #	Description
X3	X3 environmental data logger with Wi-Fi telemetry
X3-4G	X3 environmental data logger with Wi-Fi & 4G LTE cellular telemetry
X3-IR	X3 environmental data logger with Wi-Fi & Iridium satellite telemetry
X3-4G-IR	X3 environmental data logger with Wi-Fi, 4G LTE cellular & Iridium satellite telemetry
PM2	PM2 pole and wall mount kit for 1.5" to 2" pipe
SP10	SP10 solar power pack with panel, regulator & 6 A-Hr battery in weathertight enclosure, 10-watt
SP15	SP15 solar power pack with panel, regulator & 6 A-Hr battery in weathertight enclosure, 15-watt
SP32	SP32 solar power pack with panel, regulator & 17 A-Hr battery in weathertight enclosure, 32-watt
MAST	MAST threaded aluminum pole assembly for hardware mounting, 2" NPT x 24" length
UW6-USB-485P-DC	UW 6-pin plug direct connect USB PC cable with external 12VDC power adapter

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