XLite 9210 Datalogger & Controller
Models without Enclosures

Overview
The XLite 9210 Datalogger, a high performance data recorder & communications device for unattended, remote data acquisition, control & communications, is a multi-tasking logger with a 32-bit processor capable of making measurements & communicating simultaneously.

Features
- Removable Media Support
  - SD Cards
  - MMC Cards
  - USB Thumb Drives
- 65 MB built-In non-volatile memory (1 to 3 million readings.)
  32MB Flash Memory for log & configuration files . Expandable via SD Cards.
- 32-Bit Processor
- Built-in Ethernet
- Multiple Communications Simultaneously
- Unparalleled Sensor Support
  - XLite provides unparalleled sensor support through expansive I/O’s & built-in program libraries. Analog & digital modules plug into the I2C port. Support is also provided for single voltage, differential voltage, resistance, 4-20mA, frequency, counter, binary, binary alarm, grey-code binary, smart serial (RS-232 and RS-485), SDI-12, etc.
  - With 32 MB of Flash disk for storage, the Xpert also has 4 communications serial ports for satellite transmitters, modems, radios & other serial communication devices.
  - Get data w/any communication interface, USB or SD memory card.
- Robust Logging
  - XLite boasts 32 MB built-in memory expandable via removable media. Logged data is compressed and not affected by changes to the Setup. System events are logged independently of measurement data.
- Flexible Scheduling
  - Each measurement can be independently scheduled. Sample intervals can be set from 1 sec. to 24 hr., in 1-second increments. Built-in functions to support min, max, average, & accumulation calculations included.
- Event Driven Processing
  - Digital inputs can be configured to trigger measurement processing, including logging and telemetry transactions.
- Easy to Use Display
  - XLite provides a 2-line LCD character display & 3 front panel control buttons, making it very simple to view data & make minor Setup changes in the field.
- Intuitive Set-Up
  - System Setup & configuration uses Sutron's XTerm, with the same interface as Sutron's Xpert (based on Microsoft Windows CE, intuitive & easy to use).

Applications
- Meteorology and Climatology
- Agrometeorology
- Natural Resources
- Oceanography
- Aviation (AWOS)
- Disaster Warning
- Water Level and Flow
- Water Quality
- Hydrology
- Air Quality
- Visibility
- Geotechnical
  - Dam Safety
  - Structural Stability
- Structures
- Energy
  - Solar Farm
  - Wind Farm
## SPECIFICATIONS

Specifications subject to change without notice.

**Measurement Interval**
1.0 second to 24 hours (programmable)

**Measurements Supported**
Unlimited number of measurements supported

**Analog Channels**
10

**Input Voltage (Common Mode)**
-0.1 to 5V with respect to ground, single ended or differential

**Range**

- **Single-Ended**
  - 0-5 V, ±78 mV (with respect to ground)

- **Differential**
  - ±2.5V, ±78 mV (+ input with respect to – input)

**Accuracy**
0.002% of 5V typ 0.003% of 78mV typ

**Resolution**
16 bit

**Expansible**
via i²C & SDI-12

**Digital Inputs/Outputs**
8  (6 Bi-Directional, 2 input only)

**Functions Supported**
Status inputs, counter inputs, frequency inputs, quadrature input

**Max Frequency**
Channel 1, 8KHz; other channels 1KHz

**Low Level AC inputs Support**
Channels 7 & 8 support low level AC frequencies (e.g. RMYoung)

**Output Type**
Open collector with 100 ohm current limiting resistor, 100 mA max, 15V max

**Expandable**
via i²C and SDI-12

**Excitation Channels**
5 Channels

**Type(s)**
Precision Voltage Reference, Switched battery, Switched +5, Protected +12V, Protected +5V

**Communication Ports**
4 RS232 for communications

**Telemetry**
Satlink2, Sutron Data & Voice Modem, Radio, Direct Connect, GPRS, IRIDIUM, MODBUS, and custom devices via BASIC

**Communications**
4 Simultaneous Communications

**Operating Temperature**
-40°C to +60°C

**Display Operating Temp.**
LCD operates to -20°C

**Display Type**
2x20 character sunlight-readable backlit LCD

**Keypad Type**
3 buttons

**Memory**

- **Built-In Non-Volatile**
  - 65MB (1 to 3 million readings), RAM: 32 MB

- **SD/MMC Card**
  - For download data and read/write setups or additional log memory

**Ethernet**
Built in Ethernet support

**Clock Accuracy**
5.4 sec/month (at 0°C – 40°C)

**Power Requirements**
10-16VDC (20VDC max)

**Current Drain**
Typically 3mA standby, 40mA active

**Communication Protocols Supported**
SSP (Sutron Standard Protocol), MODBUS, MODEM, Telnet, HTTP, FTP, DHCP, DNS, SLIP, PPP, & custom via Basic (RS-232, TCP, & UDP)

**Programming**
Menu driven setup, Expanded complexity via BASIC, Custom capability via C++

## DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>STANDARD</th>
<th>SHIPPING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>11&quot; (28 cm)</td>
<td>14 in. (35.6 cm)</td>
</tr>
<tr>
<td>Length</td>
<td>6&quot; (15.3 cm)</td>
<td>10 in. (25.4 cm)</td>
</tr>
<tr>
<td>Width</td>
<td>3&quot; (7.7 cm)</td>
<td>6 in. (15.3 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>2 lbs. (0.9 kg)</td>
<td>5 lbs. (2.3 Kg)</td>
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</tbody>
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## XLITE ORDERING (NO ENCLOSURE)

- **9210-0000-2B**  XLite Datalogger, 4 Comms
- **9210-0000-3B**  XLite Datalogger, 8 Comms
- **9210-0000-4B**  XLite Datalogger, 8 Comms plus RS485
- **9210-SL2-2B**  Xlite Datalogger with Satlink-2 XLite packaged with SatLink2 GOES Logger/Transmitter.

## XPERT/XLITE I/O MODULES

- **8080-0002-1** Digital I/O Module, 8 Channels Auto reset after surge.
- **8080-0002-4** Digital I/O Module w/ Surge Protection. Multi-stage circuitry & auto reset after surge.
- **8080-0003-1** Precision Analog I/O Module 6 Channels Auto reset after surge.
- **8080-0003-3** Precision Analog I/O Module, 6 Channels with Surge Protection. Auto reset after surge. 24” cable.
- **8080-0007-1** Xpert Analog I/O Module, 10 Channels, 16 bit Built-in surge protection.
- **8080-0005-1** Voice Modem Module
- **8080-0008-1** Fire Weather I/O Module (RAWS). Integrated Fire Weather package w/digital I/O modules, analog I/O modules, voice modem & all connectors. (For NFDRS Update-Compliant Remote Automatic Weather Stations - RAWS)

## SURGE PROTECTION

- **6461-1241-2T** SDI-12 Surge Protection Module Provides connection for two SDI sensors, surge protection.
- **6461-1240-1T** Telephone Surge Protection Module Connection, for one twisted pair.
- **6461-1242-1T** Power Surge Protection Module Channels to monitor solar panel voltage, battery voltage, AC.
- **6461-1239-1T** RS232 Surge Protection Module for 1 sensor with RS-232 output.
- **6461-1238-2T** Digital Surge Protection Module for sensors with digital outputs.
- **6461-1237-1T** Analog Surge Protection Module for sensors with analog outputs.

## ADDITIONAL MEMORY

- **6661-1293** SD Card w/2 Gig available mem.

## COMMUNICATIONS MODULES/MODEMS

- **8080-0005-1B** Voice Modem Module Telephone modem, V.34, V.42bis
- **8080-0005-2B** Voice Modem Module, King Radio voice module
- **ISBD-1-O** Iridium Modem
- **GPRS-1-O** GPRS Modem
- **SL2-G312-V2** SatLink V2