

## Applications

- Stream Gaging
- Flood Warning
- Discharge Monitoring
- Watershed Monitoring
- Water Quality Monitoring
- Nutrient Monitoring
- Lake/Reservoir Monitoring
- Tide Monitoring
- Groundwater Monitoring
- Meteorological Observation



## Logger/Transmitter

With cellular or IRIDIUM® communications

**High resolution analog and digital measurements**

**Up to 32 independent measurements and expanded log for up to 1,000,000 readings**

**Low power, less than 1 mA typically at 12.5 VDC**

**Cellular modem options include 3G, 4G, and cellular IoT (CAT-M1/LTE-M)**

**Secure communication by sending encrypted data over secure HTTPS**

**Supports multiple interfaces and protocols, including SDI-12, RS-232, and RS-485**

### Latest communications technology

The modem card is field exchangeable, so it can be easily switched from one telemetry type or service carrier to another. Allows for support of rapidly changing communications standards such as cellular IoT technologies, preventing hardware obsolescence. Reduce setup time with automatic modem recognition.

### Custom programming with Python scripts

Supports applications beyond standard configuration, including custom measurements, transmission formats, user defined computations, and scheduled tasks. The scripting language is modern and easy to learn with a strong and growing developer community. (Available with XLink 500)

### Simple and intuitive software

LinkComm software is used with all SUTRON XLink and SatLink 3 dataloggers, reducing training requirements. The software is also simple to setup over Wi-Fi using a smart phone, tablet, or PC. The XLink can also be paired with AQUARIUS or Hydromet Cloud to access and manage real-time data and alerts.

### Two-way communication

All datalogger features and configuration options are available remotely via cell. Reduce the time and cost of visiting field stations to check, change, or download configuration or turn on/off instruments.

# Technical Specifications

	XLink 100	XLink 500
<b>General information</b>		
<b>Dimensions</b>	Inches: 4.5 x 6.2 x 1.6, / cm: 11.4 x 15.8 x 4.1	Inches: 4.5 x 6.2 x 1.6 / cm: 11.4 x 15.8 x 4.1
<b>NEMA-4</b>	Inches: 7.3 x 9.5 x 5.2 / cm: 18.5 x 24.2 x 13.2	Inches: 7.3 x 9.5 x 5.2 / cm: 18.5 x 24.2 x 13.2
<b>Weight</b>	1 lbs. (0.5 Kg)	1 lbs. (0.5 Kg)
<b>IP rating</b>	IP66 (NEMA variants)	IP66 (NEMA variants)
<b>Operating temperature</b>	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)
<b>Modem Options</b>	IRIDIUM, Cellular (3G, 4G, CAT-M1/LTE-M)	IRIDIUM, Cellular (3G, 4G, CAT-M1/LTE-M)
<b>Compliance</b>	CE, FCC, ISED	CE, FCC, ISED
<b>Power requirements</b>		
<b>Voltage</b>	9–20 VDC; 10–16 VDC for SDI-12 Compliance	9–20 VDC; 10–16 VDC for SDI-12 Compliance
<b>Quiescent</b>	< 1 mA typ. @12.5 VDC	< 1 mA typ. @12.5 VDC
<b>SDI-12 (Dedicated interface)</b>		
<b>Compliance</b>	V1.3 data recorder	V1.3 data recorder
<b>Power</b>	500 mA, short-circuit protected	500 mA, short-circuit protected
<b>Analog - Single ended (XLink 500 only)</b>		
<b>Number of inputs</b>	-	2
<b>Range*</b>	-	0–5 V
<b>Accuracy @ 25 °C</b>	-	0.04 % typ. FS
<b>Resolution</b>	-	0.3 μV
<b>Analog - Differential (XLink 500 only)</b>		
<b>Number of inputs</b>	-	2
<b>Range*</b>	-	±39 mV, ±312 mV, ±2.5 V
<b>Accuracy @ 25 °C</b>	-	0.04 % typ. FS over 2.5 V
<b>Resolution</b>	-	0.3 μV @ ±2.5 V scale
<b>Analog - 4-20 mA (XLink 500 only)</b>		
<b>Number of inputs</b>	-	1
<b>Range</b>	-	0–22 mA
<b>Accuracy @ 25 °C</b>	-	0.14 % FS
<b>Load</b>	-	Internal 200 ohms
<b>Digital inputs/outputs</b>		
<b>Number of inputs</b>	2	2
<b>Input type</b>	0–15 V, optional low-level input Status, counter, frequency	0–15 V, optional low-level input Status, counter, frequency
<b>Max input frequency</b>	10 KHz, optional debouncing, internal pull	10 KHz, optional debouncing, internal pull
<b>Number of outputs</b>	1	1
<b>Output types</b>	On/off/pulse, Open collector w/ 100 ohm limiting resistor. 100 mA, 15 V max	On/off/pulse, Open collector w/ 100 ohm limiting resistor. 100 mA, 15 V max
<b>Other inputs/outputs</b>		
<b>Precision analog reference (XLink 500 only)</b>	-	2 terminals, 2.5 V, 10.0 mA (total)
<b>Switch 12V</b>	1A, 1 port, overloaded protected	1A, 1 port, overloaded protected
<b>Protected 12 V (XLink 500 only)</b>	-	0.75 A, 1 port
<b>RS-485</b>	1 port; SDI-12, ModBus	1 port; SDI-12, ModBus, custom communications with Python
<b>RS-232</b>	DB9; terminal interface, User interface, ModBus	DB9; terminal interface, User interface, ModBus, custom communications with Python
<b>USB Device (Micro B)</b>	1 port; PC/MAC communication using Sutron's LinkCOMM	1 port; PC/MAC communication using Sutron's LinkCOMM
<b>USB Host (Type A)</b>	1 port; setup, firmware update, log download using a USB flash drive	1 port; setup, firmware update, log download using a USB flash drive

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**NOTE:** RECOMMEND installing XLINK500 or XLINK100 in a NEMA-4 enclosure for all applications requiring outdoor exposure. Recommend the internally mounted lightning protection kit 6661-1353-1 for the -1E or -1C models or an externally mounted lightning protection module such as the 8111-1113-1 to protect the telemetry RF output.

\* Nominal. Guaranteed Analog Input Range Over Temperature Is 0–4.98 V, ± 2.49 V, ±311 mV, ±38.9 mV.z

Up to date information on available modems and supported cellular carriers can be found on our website, OTTHydroMet.com