

TROLL® Link Telemetry Systems

Real-Time, Remote Data Access

In-Situ® Inc. TROLL® Link telemetry systems offer reliable, secure access to remote site data 24 hours a day. TROLL Link systems are designed for remote monitoring applications, including long-term aquifer monitoring, stream and tide gaging, flood warning, storm surge monitoring, and real-time water quality monitoring.

- **Save time and money** – Quickly access data while reducing site visits, labor costs, and travel expenditures.
- **Communicate with every site** – Choose from satellite or cellular options to ensure communication with your site.
- **Stay informed** – Event-driven sampling and real-time alarm notifications alert you to changing conditions, including early detection of sensor fouling or damage.
- **Retrieve data when you need it** – View and analyze data from anywhere in the world via Win-Situ® Plus software or the secure In-Situ® Data Center web site.
- **Reduce power consumption** – Low-power systems eliminate the need for on-site power and preserve instrument battery life by using solar power.
- **Get expert advice and service** – Call for free technical support – 24/7.

Direct-access telemetry systems

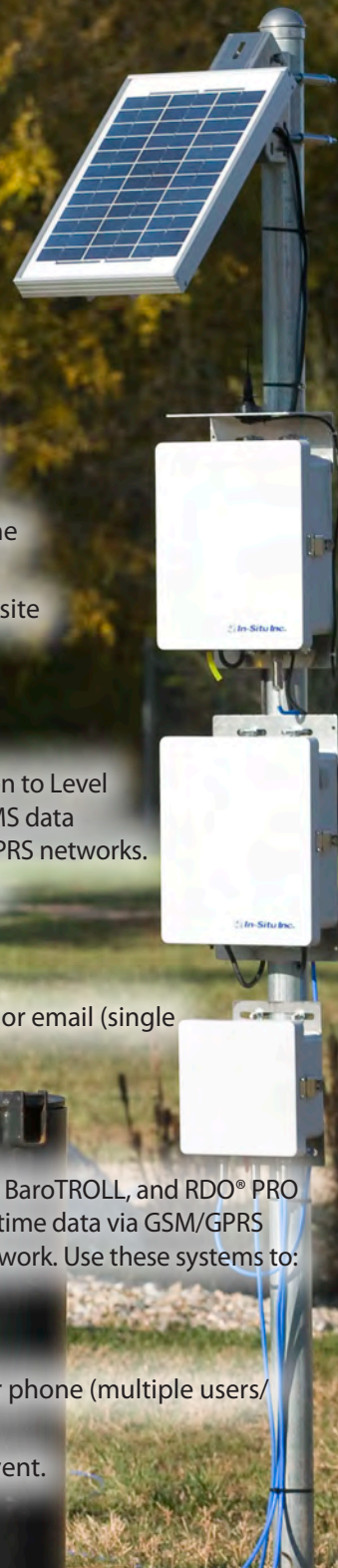
TROLL Link 100 and 102 systems use Win-Situ® Plus software and offer direct connection to Level TROLL®, Aqua TROLL®, and BaroTROLL® instruments. Transmit real-time readings via SMS data messaging for TROLL® 9500 instruments. **TROLL Link 100 systems** operate on GSM/GPRS networks. **TROLL Link 102 systems** operate on domestic CDMA networks. Use these systems to:

- Remotely configure field instrumentation and the telemetry system.
- Remotely extract data from field instruments.
- Set up real-time alarm and warning notifications of user-defined events via SMS or email (single user/single parameter).
- Provide external power to attached instrumentation.

Web-access telemetry systems

TROLL Link 101 and 201 systems offer access to Level TROLL, Aqua TROLL, TROLL 9500, BaroTROLL, and RDO® PRO instruments via the secure In-Situ Data Center. **TROLL Link 101 systems** transmit real-time data via GSM/GPRS networks. **TROLL Link 201 systems** transmit real-time data via the Iridium satellite network. Use these systems to:

- Remotely configure the telemetry system.
- Provide access to real-time data for large user groups.
- Set up real-time alarm notifications of user-configured events via SMS, email, or phone (multiple users/multiple parameters).
- Conduct event sampling and automatically increase data logging during an event.
- Provide external power to attached instrumentation.



TROLL® Link Telemetry Systems

Specifications

	TROLL Link 100	TROLL Link 102	TROLL Link 101	TROLL Link 201
Communications				
Technology	Cellular – GSM/GPRS	Cellular – CDMA	Cellular – GSM/GPRS	Iridium Satellite
Frequency Range	Quad-Band 850/900/1800/1900 MHz	Dual 800/1900 MHz	Quad-Band 850/900/1800/1900 MHz	1616 to 1626.5 MHz
Market				
Global	✓ ¹		✓	✓
USA/Canada (only)		✓		
Data Access Mode				
TCP/IP; Dial-Up/CSD; SMS Data	✓	✓		
ISI Data Center			✓	✓
Alarm Notifications				
SMS and Email	✓	✓	✓	✓
Phone			✓	✓
Single Contact; Single Parameter	✓	✓	✓	✓
Multiple Contacts; Multiple Parameters			✓	✓
Compatibility				
Level TROLL 200, 300, 500, 700; Aqua TROLL 100, 200; BaroTROLLs	✓	✓	✓	✓
TROLL 9500; RDO PRO sensor	✓ ²	✓ ²	✓	✓
I/O				
Discrete Input/Counter (pulse counter)	✓	✓		
12V Discrete Input/Output (relay)	✓	✓		

¹ CE Mark; ² SMS data only; no alarming

Standard Equipment

- NEMA 4X fiberglass enclosure
- Modem and controller board
- Mounting hardware for 2.5-inch diameter post
- 1W solar panel (10W and 20W panel options available)
- 12V, 7Ah sealed lead-acid battery
- Built-in internal and in-line desiccants protect units from moisture and ensure accurate readings when measuring gauged pressure/level.

Specifications

Telemetry Systems

Enclosure (NEMA 4X)	10 x 12 x 5 in (25.4 x 30.5 x 12.7 cm)
Communication options	Satellite, cellular GSM/GPRS, or CDMA
Sensor options	Level TROLL® 200, 300, 500, 700; Aqua TROLL® 100, 200; TROLL® 9500; BaroTROLL; BaroTROLL 100; RDO® PRO sensor
Power supply options	10W solar panel; 20W solar panel; 12V, 14Ah battery kit with charge controller
Temp. range (operating)	Cellular: -20° to 60° C (-4° to 140° F) Satellite: -40° to 70° C (-40° to 158° F)
Weight	15 lbs (6.8 kg)
Warranty	1 year on components

TROLL® Net Hub

Use the TROLL Net hub to set up a network of up to 32 devices (connected by up to eight TROLL Net hubs). Each cable within the network has a maximum length of 4000 feet per Modbus RS485 protocol. Networked devices can be connected to a single TROLL Link telemetry system.



Specifications

TROLL Net Hub

Enclosure (NEMA 4X)	6.1 x 6.1 x 4.18 in (15.5 x 15.5 x 10.6 cm)
Power requirements	9-36 VDC (refer to instrument documentation for cable length and voltage limitations)
Temp. range (operating)	-40° to 60° C (-40° to 140° F)
Weight	4 lbs (1.8 kg)
Warranty	1 year



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