OTT ecoLog 1000
Water Level Logger System

a brand of **OTT** HydroMet

All-in-One Water Level Logger System
OTT ecoLog 1000

The OTT ecoLog 1000 is a self-contained, robust surface and groundwater logger for measuring water level and temperature, providing reliable and accurate data to reduce maintenance costs and field visits.

- Avoid data gaps with reliable long-term operation
- Avoid unscheduled trips to your measurement site with:
  - Remote two-way data access
  - Intelligent power management
  - Up to 10 years battery and up to 2 years desiccant functionality
- Enjoy intuitive and simple local operation using SUTRON LinkComm software

The OTT ecoLog 1000 is simple to operate using just a smart phone or PC via integrated Bluetooth Low Energy (BLE) - no additional tools for maintenance or battery replacement. It supports cellular devices, smart phones, and tablets operating with Android, iOS or Windows 10.

Configure and monitor your data remotely with integrated two-way cellular communication to avoid unnecessary, expensive trips to your measurement site and send encrypted data with automatic retries if transmission fails.

Reduced equipment cost

The ecoLog 1000 is simple to operate using just a smart phone, with no additional tools required for maintenance or battery replacement. Installation and maintenance become easy with no need for additional cables or dongles. This minimizes your total cost of ownership and guarantees you won't spend unnecessary time or energy setting up or relearning your equipment.

The logger also supports cellular devices, smart phones, and tablets operating with iOS, Android, or Windows 10.

Blue Tooth Low Energy (BLE)

Native bluetooth low energy (BLE) communication for use with the LinkComm cellular app.

All-In-One

All-in-one instrument with water level sensor, logger, and modem.
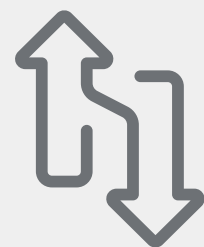
Easy Battery Exchange

Easy battery exchange without tools to save time working.

Exchange on Site

Exchange communication unit or sensor on site for easier installation.

Eliminate data gaps and reduce field visits

The ecoLog 1000 has reliable system up-time and accurate measurements in every data transmission. This wealth of continuous data, sent through either HTTP(S) or FTP, keeps you better informed before field trips, so each future visit is faster and more efficient. You'll also be able to take fewer unscheduled, expensive trips to your measurement sites due to the logger's long-lasting battery.

The ecoLog 1000 is durable and corrosion resistant to saline water, due to the complete sensor element being made of high quality 904L stainless steel. It also includes enhanced alarm management including alarm messages and action management, for automatic adjustment of measurement or transmission intervals.

Ceramic pressure cell
Ceramic Pressure Cell, durable and robust to be long-lasting.

Accurate battery status info
Intelligent power management with automatic low power mode.

Send data to up to 4 servers
Automatic retries for transmissions.

Access data remotely

View the status of your complete network at a glance, anytime and anywhere. With remote data access, you can configure and monitor your data completely remotely with two-way cellular communication and an integrated modem. This allows you to make decisions without ever having to travel to the field. You can also utilize a bundled solution with OTT HydroMet data hosting solutions, which give you access to web-based data visualization and alarm management.

Integrated Modem

Get immediate alarms directly from the measurement sites.

Data hosting service

Data hosting service optional.

Cellular communication

Two-way cellular communication, with support of CAT-M1 communication technology certified for Verizon and AT&T.

Pair with Software Solutions

Pair with bundled software solution like Hydromet Cloud.

Software
LinkComm

LinkComm is a program used to view and configure the ecoLog 1000. LinkComm runs on Android platforms, iPhone/iPad and Windows PC.
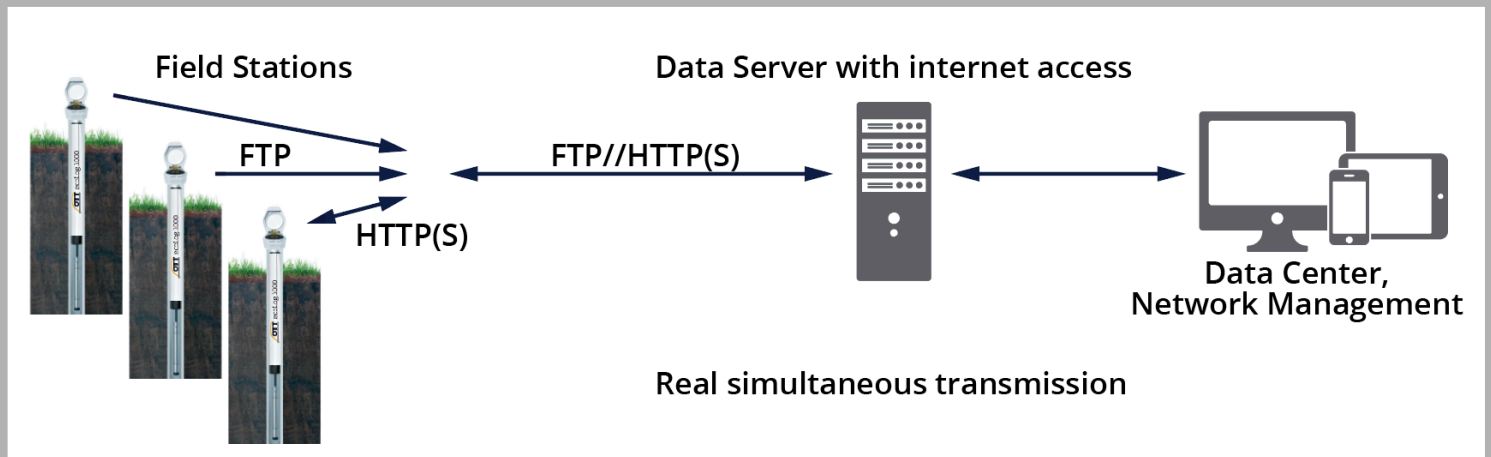
LinkComm enables you to create and save configurations for every station you manage as a 'station definition'. This means that once you set up a definition for each of your stations, accessing them is only a single click away.

With LinkComm you can:

• View current status and measurement data
• Enter observer values (for groundwater)
• Change the setup
• Download and graph the log
• Perform diagnostics (e.g. send a command, set the time)

Data Transmission and Visualization
The Data Journey

Field Stations

FTP

HTTP(S)

Data Server with internet access

FTP//HTTP(S)

Data Center, Network Management

Real simultaneous transmission

Data is transmitted efficiently in real or near-real time from your monitoring well to your mobile phone or office computer. Transmissions can occur via both HTTP(S) and FTP, of which HTTP(S) allows for two-way communication.

By using a monitoring tool like Hydromet Cloud, you can view and chart your data from all of your field stations at once.

## Data Visualization | Software as a Service

Hydromet Cloud

Hydromet Cloud provides secure real-time data access from almost anywhere in the world via HydrometCloud.com and the Hydromet Cloud Mobile App. This includes the backend infrastructure to receive, ingest, decode, process, display, and store measurement data from nearly any remote Hydromet monitoring station via a cloud-based data hosting platform.

Integrated Bluetooth Low Energy (BLE) Communication
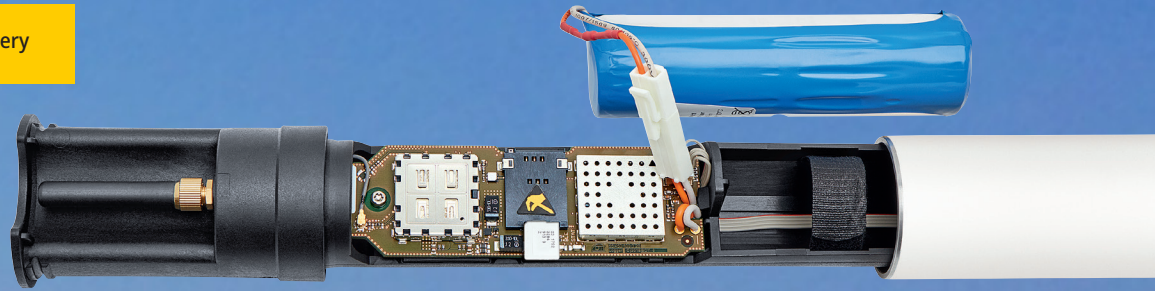
Designed for

- Measuring, collecting, and transmitting precise and accurate water level data
- Ground and surface water level monitoring using an All-in-One system
- Short and long-term continuous monitoring to collect more data, more often
- Monitoring locations requiring data in real-time or near real-time
- Accessing the data anytime, anywhere (in conjunction with a data hosting bundle)
- Detecting changes in the water table to better assess the impact of drought or climate change, and water availability and water use over time

Used by

- Municipal, state, and federal government agencies
- Groundwater resource managers, scientists, and technicians
- Consultants and engineers

Locations

- Groundwater, in-well solution
- Surface water, in-pipe solution; easy to conceal, install, and access
- Urban to remote locations with cellular signal
- For fresh, brackish, or salt water

Accessories

- ecoCap version 2-4" top cap with cut-out. Also available in 3" and 4"
- Adapter for installation of ecoCap on 4.5" well pipe, also available in 5" and 6"
- Adapter plate 3", also available in 4", 4.5", 5", and 6"
- Universal suspension bracket
- External antenna

Technical Specifications

	Feature	Value imperial	Value metric
WATER LEVEL	Measuring range	0 … 13 ft water column / 0 … 5.8 psi 0 … 33 ft water column / 0 … 14.5 psi 0 … 66 ft water column / 0 … 29 psi 0 … 131 ft water column / 0 … 58 psi 0 … 328 ft water column / 0 … 145 psi	0 … 4 m water column / 0 … 0.4 bar 0 … 10 m water column / 0 … 1 bar 0 … 20 m water column / 0 … 2 bar 0 … 40 m water column / 0 … 4 bar 0 … 100 m water column / 0 … 10 bar
	Resolution	0.01 ft / 0.1 inch / 0.001 psi	0.001 m / 0.1 cm / 0.0001 bar
	Accuracy (linearity + hysteresis)	± 0.05 % full scale	
	Long-term stability (linearity + hysteresis)	± 0.1 %/a full scale	
	Units	ft, inch, psi	m/cm/bar
	Pressure sensor	Ceramic / temperature compensated	
	Temperature-compensated operating range	+23 °F (ice-free) … +113 °F	-5 °C (ice-free) … +45 °C
TEMPERATURE	Measuring range	-13 °F … +158 °F	-25 °C … +70 °C
	Resolution	0.02 °F	0.01 °C
	Accuracy	± 0.2 °F	± 0.1 °C
	Units	°F	°C
POWER	Power supply	3.6 V / 26 Ah - Lithium power pack with connector	
	Battery life time - configuration depending	> 10 years @ average temperature of 20 °C/68 °F, 1 hour sampling and 1 transmission per day	
RTC CLOCK	Accuracy	± 26 s / month (at 77 °F) / < ± 3 s using SNTP	± 26 s / month (at 25 °C) / < ± 3 s using SNTP
INTERFACE	Cellular network LTE-M (Cat-M1)	B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66	
	Local communication	Bluetooth Low Energy (BLE) 5.0 - up to 10 m (free line of sight)	
	Antennas	Verizon: SMA connector with Penta Band Stubby Antenna	
		AT&T: SMA connector with Blade Antenna and 3 ft cable	
MEASUREMENT	Measured values	Water level / water pressure	
		Temperature	
		Supply voltage	
		RSSI / Signal strength	
		PBAT / Power consumption battery	
		Processed Value	
		Logger Humidity	
	Sample/storage interval	5 s … 24 h	
DATA TRANSMISSION	Interval	1 min … 1/week	
	IP COM	FTP	
		HTTP	
		HTTPS (TLS1.2)	
DATA MEMORY	Measurement memory	28 MB (approx. 1,000,000 values)	
	Temperature range, operating	-22 °F … +185 °F	-30 °C … +85 °C
	Temperature range, storage	-40 °F … +185 °F	-40 °C … +85 °C
	Humidity	5% … 95 % (non-condensing)	
	IP rating logger unit	IP67 (Flooding without damage for 1 week / 1 m water column (bottom housing))	
	IP rating senor	IP68	
DIMENSIONS	Logger unit	LxD: 20.7 x 2.0 inch	LxD: 525 x 50 mm (2")
	Pressure probe	LxD: 7.7 x 0.9 inch	LxD: 195 x 22 mm (<1")
	System length	0 … 656 ft (> 656 ft on request)	0 … 200 m (> 200 m on request)
WEIGHT	Logger unit incl. battery pack	~ 31.7 oz	~ 900 g
	Pressure probe	~ 23.6 oz	~ 670 g
	Pressure probe cable	~ 1.48 oz/m	~ 42 g/m
MATERIAL	Pressure probe housing	Stainless steel 1.4539 (904L)	
	Logger housing	Aluminum / POM	
	Cable jacket	PUR	
REGULATORY	FCC / IC / CE	FC IC CE	
	PTCRB	According to NAPRD03	
	Provider certification	Verizon Open Development Certification, AT&T IoT Device Certification	

Insights for Experts

For more information, please contact

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