an OTT HydroMet brand

OTT ecoLog 1000
Water Level Logger System

OTT
HydroMet

All-in-One Level Logger & Telemetry Solution

OTT ecoLog 1000

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

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

The device is simple to operate using just a smart phone or PC via integrated Bluetooth Low Energy (BLE). 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.

Monitor water quality conditions at your measuring site to gain awareness of not only your water temperature but the chemical make up with an optional conductivity variant of the ecoLog 1000. Easily calibrate the conductivity cell, view measurement data, and perform diagnostics from your mobile device with the LinkComm Operating Software application.

Reduced field visits & equipment cost

The ecoLog 1000 is simple to operate using just a smart phone, with no additional tools required for maintenance or battery replacement. The logger also supports tablets and PCs operating with Android, iOS, or Windows 10.
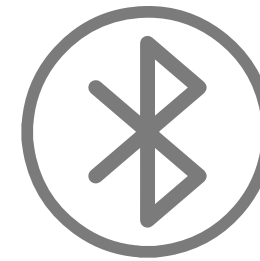
Bluetooth Low Energy (BLE)

Native Bluetooth low energy (BLE) communication for use with the complimentary LinkComm Operating Software application. 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.

All-in-One

The instrument consist of a water level sensor, logger, and modem. Collect, log, and telemeter your critical water data with a turn key solution for groundwater and surface applications. The compact design makes it easy to install and conceal at your site.
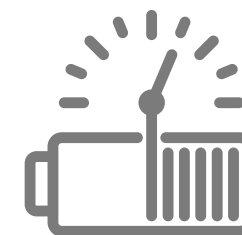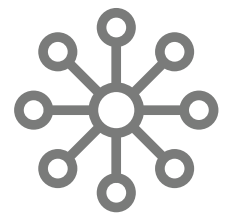
Accurate battery status info

Due to the logger's long-lasting battery and intelligent power management with automatic low power mode, take fewer unscheduled, expensive trips to your measurement sites. Easy to exchange when battery replacement is needed.

Exchange on site

Exchange communication unit, sensor, battery or desiccant on site for easier installation. Be remotely notified of the device status to proactively plan for site maintenance such as battery and dessicant replacement.
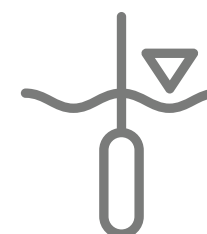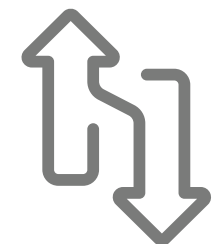
Robust pressure cell

The ceramic pressure cell is durable and designed to be long-lasting even in the harshest conditions. The device is corrosion resistant to salt water as the complete sensor probe is made of high quality 904L stainless steel.

Gain insight into your water quality

Along with water level, the OTT ecoLog 1000 collects continuous data on water temperature and conductivity (optional) so you know if your site conditions have been impacted by environmental changes.

Temperature

Water temperature data can indicate the movement of groundwater, the potential for different end uses, and how environmental conditions are impacting the water. Water temperature data helps users monitor and understand the dynamic systems in both ground and surface water to better manage the resource.

Conductivity

The ecoLog 1000 now has a variant with an integrated conductivity sensor. Water conductivity data can be used to identify the presence of dissolved minerals or ions, such as salt, in a system. With this knowledge, you can determine the potential uses of groundwater for drinking or irrigation, and monitor overall aquifer health.
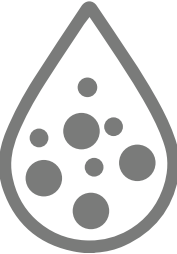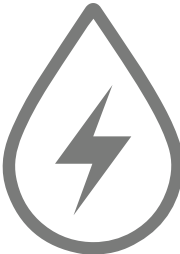
Derived parameters

The ecoLog 1000 with conductivity variant provides you with additional data on your water quality. Conductivity data is fundamental to the derived water quality parameters of Total Dissolved Solids (TDS) and salinity.
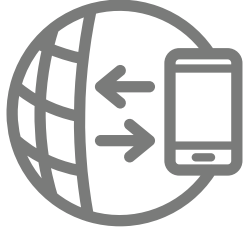
Seamless calibration

Quickly calibrate your conductivity sensor by connecting the device to LinkComm software via Bluetooth and following simple step by step instructions in the application.
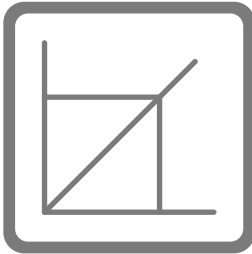
Access data remotely

View the status of your complete network at a glance, anytime and anywhere.

Integrated cellular modem

Configure and monitor your data completely remotely with the integrated cellular modem to make decisions without having to travel to the field. Get immediate alarms directly from your measurement sites.

Pair with software solutions

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. Pair with a bundled software solution like Hydromet Cloud, Hydras 3, or Aquarius.

Send data to up to 4 servers

Ability to send data to multiple locations for redundancy and confidence in your data reliability. Automatic retries for transmissions.
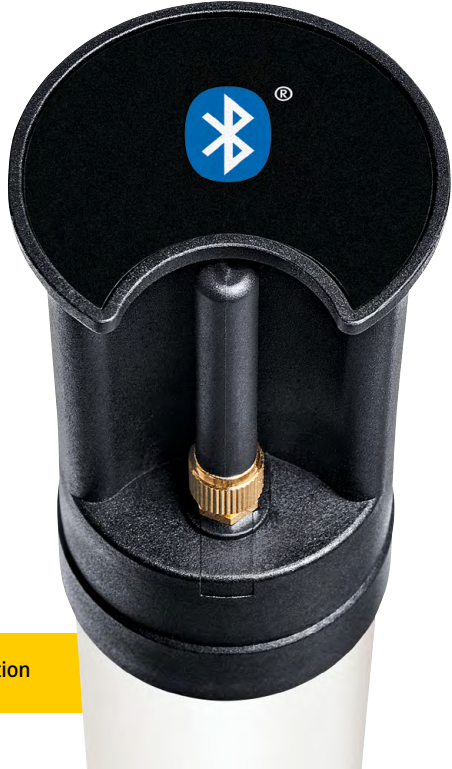
Integrated Bluetooth Low Energy (BLE) Communication

Operating Software
LinkComm

Data Transmission and Visualization
The Data Journey

4G/2G EMEA
IoT LTE-M/Cat M1 Global

Measurement Sites

Data Server
HTTP(S)
FTP(S)
MQTT(S)

Data Center, Data visualization, Network Management...

Data is transmitted efficiently in real time from your monitoring well to your mobile phone or computer. Transmissions can occur via HTTP(S), MQTT(S), and FTP(S).

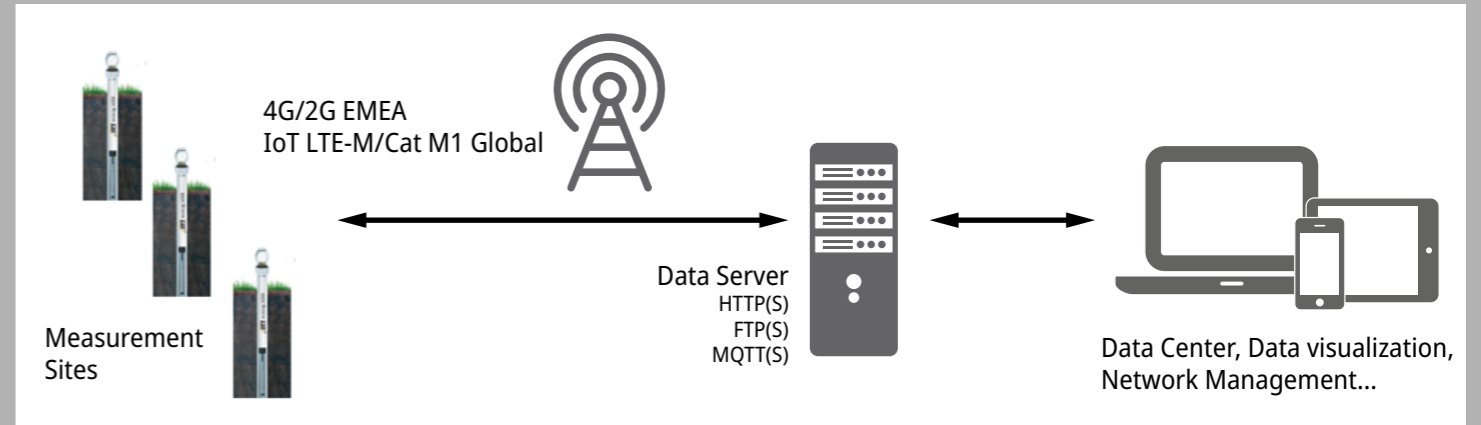By using a monitoring tool like Hydromet Cloud, Hydras3, or Aquarius, you can view and chart your data from all of your field stations at once.

Data Visualization | Software as a Service

Hydromet Cloud

Hydromet Cloud provides secure real-time data access from almost anywhere in the world via Hydromet Cloud. 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.

LinkComm is a program used to view and configure the ecoLog 1000. LinkComm runs on Android, iOS, and Windows devices.

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, local connection is only a click away.

With LinkComm you can:
• View current status and measurement data
• Enter observer values
• Change the setup
• Download and graph the log
• Perform diagnostics (e.g. send a command, set the time)
• Seamlessly calibrate your conductivity sensor

Water Data Management Software

Hydromet Cloud
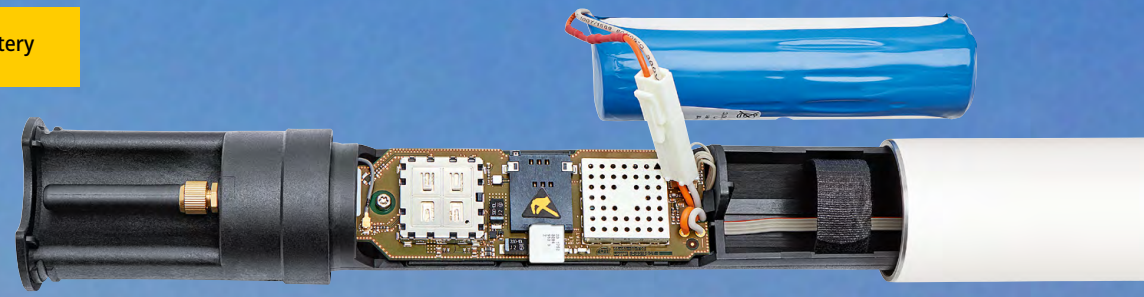
Designed for

• Measuring, collecting, and transmitting precise and accurate water level and water quality data
• Ground and surface water monitoring using an All-in-One system
• Short and long-term continuous monitoring to collect more data, more often
• Monitoring locations requiring data in 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
• Understanding water quality changes in aquifers from events like salt water intrusion

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 antennas

Technical Specifications

WATER LEVEL	Measuring range	0 ... 4 m water column / 0 ... 0.4 bar	0 ... 13 ft water column / 0 ... 5.8 psi
		0 ... 10 m water column / 0 ... 1 bar	0 ... 33 ft water column / 0 ... 14.5 psi
		0 ... 20 m water column / 0 ... 2 bar	0 ... 66 ft water column / 0 ... 29 psi
		0 ... 40 m water column / 0 ... 4 bar	0 ... 131 ft water column / 0 ... 58 psi
		0 ... 100 m water column / 0 ... 10 bar	0 ... 328 ft water column / 0 ... 145 psi
	Resolution	0.001 m / 0.1 cm / 0.0001 bar	0.01 ft / 0.1 inch / 0.001 psi
	Accuracy (linearity + hysteresis)	± 0.05 % full scale	
	Long-term stability (linearity + hysteresis)	± 0.1 %/a full scale	
	Units	m / cm / bar	ft / inch / psi
	Pressure sensor	Ceramic / temperature compensated	
	Temperature-compensated operating range	-5 °C (ice-free) ... +45 °C	+23 °F (ice-free) ... +113 °F
TEMPERATURE	Measuring range	-25 °C ... +70 °C	-13 °F ... +158 °F
	Resolution	0.01 °C	0.02 °F
	Accuracy	± 0.1 °C	± 0.2 °F
	Units	°C	°F
CONDUCTIVITY (OPTIONAL)	Measuring range	5 ... 100 000 µS/cm	
	Calibrated range	+5 °C ... 45 °C	+41 °F ... +113 °F
	Resolution	1 µS/cm (5 ...2000 µS/cm) · 0.01 mS/cm (0.10 ...100.00 mS/cm)	
	Accuracy	±0.5 % of measured value (at least ± 1 µS/cm) (5 ...2000 µS/cm)	
		±1.5 % of measured value (at least ±0.01 mS/cm) (0.10 ...100.00 mS/cm)	
	Units	mS/cm · µS/cm	
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 (> 5 years with conductivity variant)	
RTC CLOCK	Accuracy	± 26 s / month (at 25 °C) / < ± 3 s using SNTP	± 26 s / month (at 77 °F) / < ± 3 s using SNTP
COMMUNICATION	Cellular 4G/2G (EU)	LTE Cat-1; B3 (1800 MHz), B8 (900 MHz), B20 (800 MHz); GSM, GPRS, EDGE; 900 MHz, 1800 MHz	
	Cellular LTE-M (Cat-M1; Global)	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)	
MEASUREMENT	Measured values	Water pressure & temperature	RSSI / Signal strength
		Conductivity (optional)	PBAT / Power consumption battery
		Supply voltage	Logger Humidity
	Derived values	Water level / depth to water	Salinity & Total Dissolved Solids (optional)
	Sample/storage interval	5 s / 10 s* ... 24 h	
DATA TRANSMISSION	Interval	1 min ... 1/week, 15 min ... 1/week for SMS	
	IP COM	FTP, FTPS, HTTP, HTTPS (TLS 1.2), MQTT, MQTTS	
DATA MEMORY	Measurement memory	28 MB (approx. 1,000,000 values)	
ENVIRONMENTAL	Temperature range, operating	-30 °C ... +85 °C	-22 °F ... +185 °F
	Temperature range, storage	-40 °C ... +85 °C	-40 °F ... +185 °F
	Humidity	5% ... 95 % (non-condensing)	
	IP rating logger unit	IP 67 (flood-proof up to 1 week / 1 m water column)	
	IP rating pressure probe	IP68	
DIMENSIONS	Logger unit	LxD: 525 x 50 mm (2")	LxD: 20.7 x 2.0 inch
	Pressure probe	LxD: 195 x 22 mm (<1"), 317 mm x 22 mm*	LxD: 7.7 x 0.9 inch, 12.5 x 0.9 in*
	System length	0 ... 200 m (> 200 m on request)	0 ... 656 ft (> 656 ft on request)
WEIGHT	Logger unit incl. battery pack	~ 900 g	~ 31.7 oz
	Pressure probe	~ 300 g, 420 g*	~ 10 oz, 13.8 oz*
	Pressure probe cable	~ 42 g/m, 82 g/m*	~ 0.45 oz/ft, 0.9 oz/ft*
MATERIAL	Pressure probe housing	Stainless steel 1.4539 (904 L)	
	Logger housing	Aluminum / PA-GF	
	Cable jacket	PUR	
REGULATORY	FCC / IC / CE / ACMA	CE FC IC	
	PTCRB	According to NAPRD03	
	Provider certifications	Verizon Open Development Certification, AT&T IoT Device Certification	

*Device variant with integrated conductivity sensor
Please check website for country availability.

Insights for Experts

For more information, please contact

OTT HydroMet
sales@otthydromet.com
www.otthydromet.com

OTT HydroMet

OTT
an OTT HydroMet brand