Product Overview 2026

Aquatos Web LTX (Type 1500)

The Aquatos Web LTX captures environmental measurement data (intervals from 1 minute, up to 800 values per transmission) and transmits it via LTE-M to the sensor manager. Internal humidity monitoring, fully AES-128-CBC encrypted — down to the firmware level.

Highlights:

LTE-M communication with NB-IoT fallback

Bluetooth 5 (BLE) with 6-digit PIN

AES-128-CBC encryption (recommended by BSI)

Sensor manager · HTTPS / FTPSSL · >30,000 transmissions

LSH20 battery (2x parallel) · 10 years · 3 million measurements

Up to 3 physical sensors · 24 SDI-12 channels

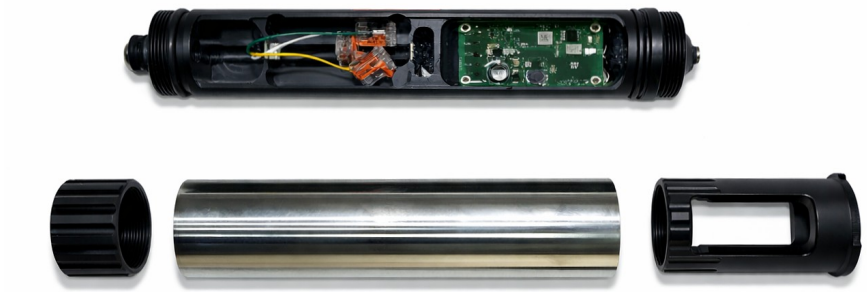
Operating range: −25 °C to +85 °C | IP68 at 1 meter depth for 24 hours

Above-ground and underground solutions

CE-certified (RED, EMC) | RoHS compliant

Product Overview - DATA LOGGERS

Aquatos mini



Compact data logger with Bluetooth Low Energy for reliable acquisition of environmental measurement data, e.g. for groundwater or level measurements. Flexibly combinable with various sensors, data is read out wirelessly via Bluetooth and transferred to a web portal for visualization.

Highlights:

Integrated barometer

2-inch housing

Plug-in pressure and temperature sensor

Bluetooth Low Energy short-range interface

Storage for 250,000 measurement series

Batteries (lithium) user-replaceable

Service life up to 10 years

Optional: counter and temperature measurement chains

Product Overview - DATA LOGGERS

Aquatos

Compact submersible mini-logger as an all-in-one solution for measurement, storage and data transmission with integrated BLE communication. Ideal for pressure and temperature measurements in groundwater monitoring, level and water level measurement, and flood protection.

Highlights:

All-in-one: sensor, logger and communication

Extremely compact 1" submersible probe

Measurement of pressure and temperature

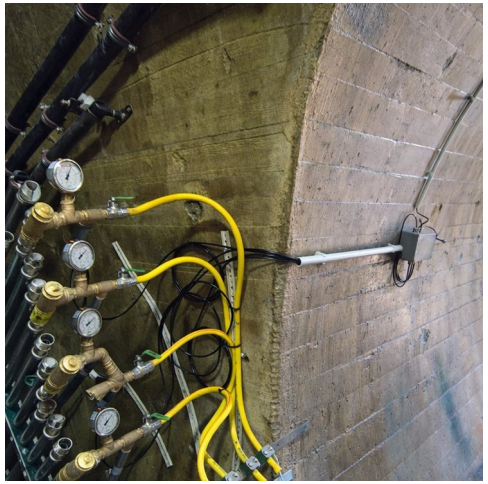
Bluetooth Low Energy (BLE) short-range communication

Robust design for demanding environments

Integration with data loggers and mobile devices

Product Overview - DATA LOGGERS

Application Scenarios



The solutions are versatile and specially designed for demanding environments. They can be adapted to individual requirements, operate with minimal maintenance and have proven themselves as reliable measurement systems for meteorological observations in sensitive areas and critical infrastructure.

Possible application scenarios:

Monitoring of dams and reservoirs

Monitoring of rivers, lakes and water bodies

Deployment in alpine and hard-to-reach locations

Observation in dry and water-scarce regions

Applications in sensitive ecosystems

Deployment in critical infrastructure (e.g. flood protection, water management)

Installation and Programming

All TerraTransfer sensors and data loggers can be easily configured — directly in the browser via Bluetooth, without any app installation. The open-source tools enable quick commissioning, diagnostics and firmware updates on site.

BLX.JS / BLX Dashboard

Browser-based configuration (Chrome, Edge, Android). No download required — Web Bluetooth connects directly to the sensor. Free, open source (MIT license).

BlueShell (Windows Desktop)

Windows 10/11 desktop app for BLE communication with sensors and data loggers. Ideal for detailed configuration, diagnostics and firmware updates at the workstation.

SDI12Term (PC Terminal)

Terminal for PC (Windows) with RS232 connection for direct SDI-12 communication on the bus. Open source (C). For lab tests and extended diagnostics.

Firmware Updates

All devices support encrypted firmware updates via BLE or mobile network (OTA). Only signed firmware is accepted — tamper-proof and future-proof.

Sensor Manager

The Sensor Manager with its easy-to-use interface can be tested — as a mobile web app or conveniently in the browser on a computer. Developed in-house specifically for Aquatos data loggers and continuously improved.

Fully automated Sensor Manager with database

Online access via browser or smartphone

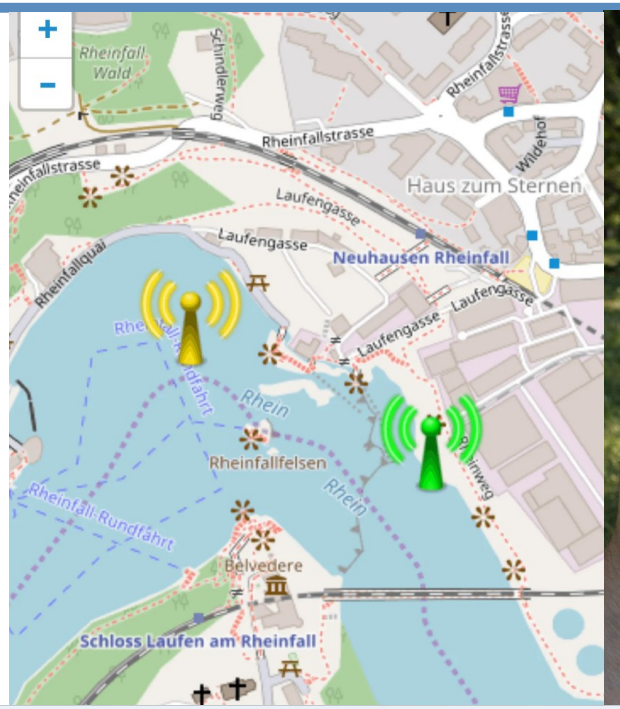
Visualization (hydrographs, maps) and export (CSV, FTP)

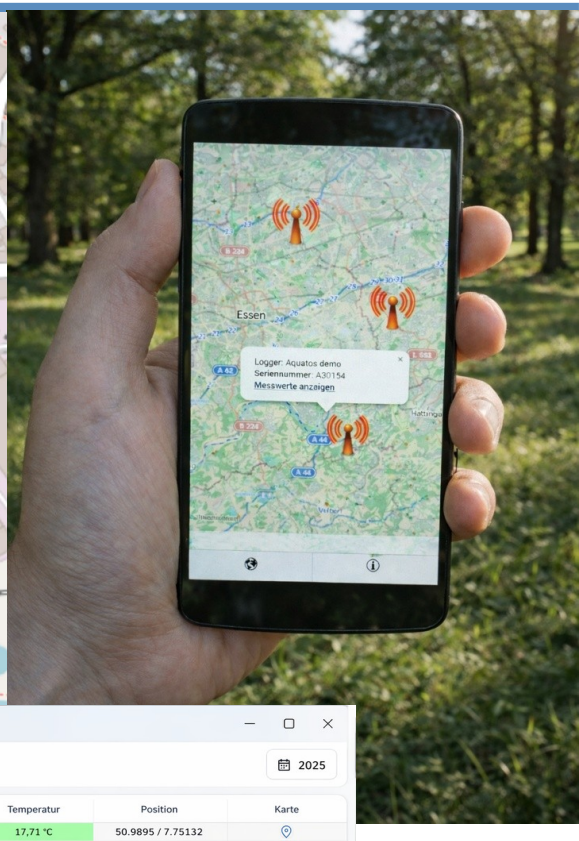
User and alarm management (SMS/email)

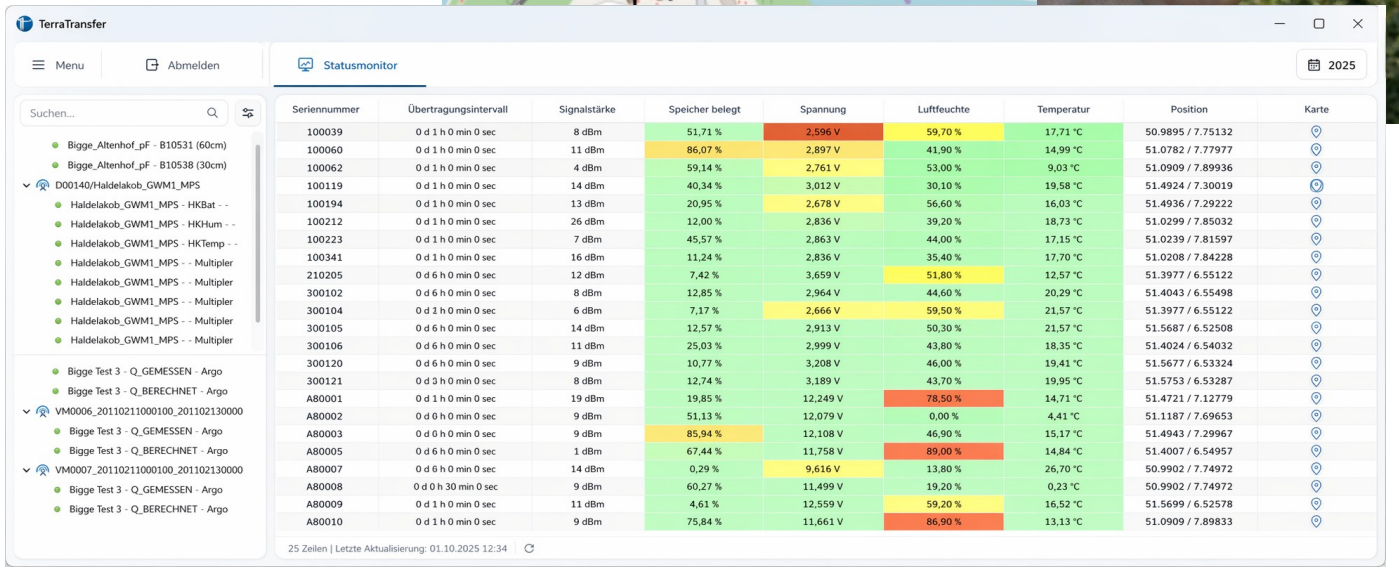
Intuitive status monitor (battery, signal strength)

Long-term data storage (up to 10 years)

GDPR-compliant and BSI security








In combination with the Aquatos Web data logger,
TerraTransfer‘s intelligent measurement buoys enable, precise low-maintenance water monitoring with real-time data transmission.

Product Overview - BUOYS

Standard Measurement Buoy

The standard measurement buoy provides a robust and immediately deployable platform for continuous monitoring of water bodies — developed for municipalities, research institutions, environmental agencies and operators of water management facilities.

Technical features:

Stainless steel float body, protective coating

Central mast mount for antenna, logger and weather protection

Stainless steel cable entry for measurement chains

Temporary monitoring campaigns possible

Integration into early warning systems (e.g. for oxygen deficiency)

Flexible expansion (e.g. vertical temperature stratification)

Shallow water buoy for measurement depths from 20 cm

The innovative shallow water buoy was specially developed for shallow water bodies. It enables reliable monitoring of water quality even where conventional systems reach their limits. Ideal for lakes, ponds, wetlands or slow-flowing river sections.

Specially designed for shallow waters

Robust construction for long-term use

Continuous data transmission and remote monitoring

Adaptable with various sensors

Temperature Measurement Chain (Thermistor Chain)

Thermistor chains are sensor systems for continuous temperature measurement at different depths, e.g. in water bodies or permafrost soils. In combination with internet data loggers, they enable reliable, precise and long-term data acquisition as a basis for analyses, models and forecasts.

Continuous temperature measurement across multiple depth levels

Individually configurable with up to 30 thermistor nodes

Measurement accuracy (up to ±0.1 °C) and fine resolution (0.01 °C)

Cable lengths up to 200 m

Battery life (up to 10 years)

Secure data transmission via M2M protocol

Applications: Permafrost, lakes, stratification analyses

Alarm functions (SMS and email) for threshold exceedances

Climate Stations

On request, we also supply and manufacture individual climate stations with autonomous power supply via solar and/or battery. These systems are specially designed for remote areas and different climate zones and can reliably transmit measurement data via satellite. In combination with the Aquatos Web LTX data logger, they form a low-maintenance all-in-one solution — including professional installation by us or our partners.

Weather Stations

Weather stations capture current meteorological data such as temperature, humidity, air pressure, wind and precipitation. With a data logger, the values can be stored and transmitted, e.g. for weather observation and forecasting, agriculture, building and energy technology, and environmental analyses. Their purpose is the short-term capture and use of current weather conditions, as opposed to climate stations, which analyse long-term developments and trends.

Sensor Options and Water Quality Parameters

The Aquatos data loggers can be equipped with various sensors capable of reading one or more measurement parameters.

pH value

Oxygen content (O_2)

Electrical conductivity

Temperature

Turbidity

Nitrate (NO_3^-)

Ammonium (NH_4^+)

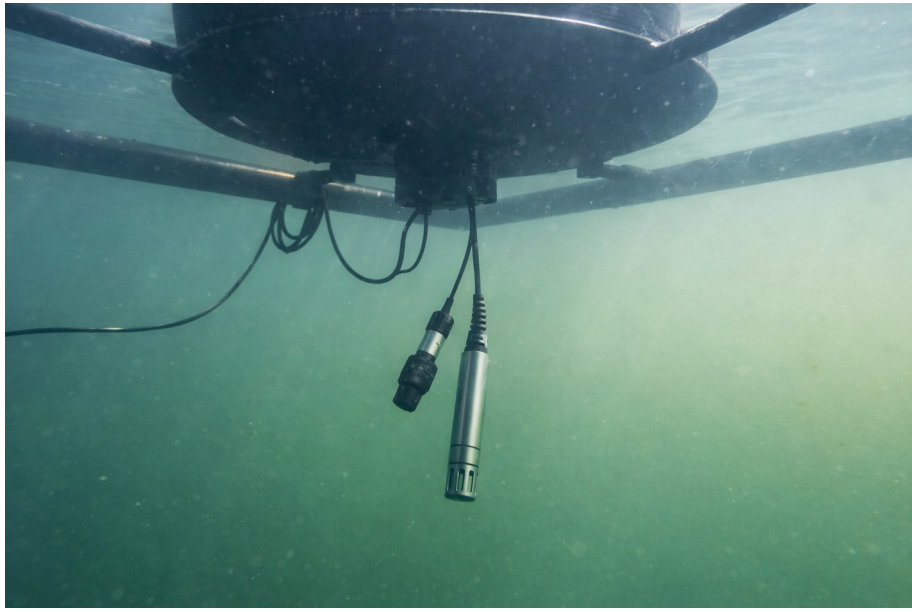
Phosphate (PO_4^{3-})

Redox potential (ORP)

Chlorine / free chlorine

Salinity

Total hardness



Piezo Pressure Sensor (Type 0312)

The piezoresistive pressure sensor type 0312 is a high-precision submersible probe for measuring water levels and gauges. The housing is made of stainless steel 316 Ti. The pressure diaphragm is available in stainless steel or titanium for saline waters. Based on the Open-SDI12-Blue platform (nRF52, <10 µA idle current). Configuration via BLX.JS in the browser.

Housing stainless steel 316 Ti

Pressure membrane stainless steel or titanium

High-precision temperature (±0.1 °C)

3-axis orientation sensor integrated

Relative pressure (capillary) or absolute pressure (Lemo)

Measurement ranges: 5, 10, 20, 30, 100 mWC

SDI-12 V1.3 + Bluetooth 5 (BLE)

Accuracy: ±0.15 % FS | IP68

Open-SDI12-Blue Platform (nRF52, <10 µA)

Ceramic Pressure Sensor (Type 0420)

The ceramic pressure sensor Type 0420 is a robust submersible probe with a ceramic pressure membrane for measuring water levels and stages. The ceramic membrane is particularly resistant to aggressive media and offers excellent long-term stability. Based on the Open-SDI12-Blue platform (nRF52).

Ceramic pressure membrane

Resistant to aggressive media

SDI-12 V1.3 + Bluetooth 5 (BLE)

IP68 at permanent submersion depth

Ultra-Low-Power (<10 µA Idle current)

Relative pressure with capillary (10 m cable)

Measurement range: 0–1 bar (approx. 10 mWC)

Stainless steel housing | pressure + temperature

Configuration via BLX.JS (browser-based)

Open-SDI12-Blue platform (nRF52)

Rainfall Adapter (Typ 0330) for Tipping Bucket Ga

The precipitation adapter Type 0330 is a compact pulse/frequency counter for digital acquisition of precipitation data. It converts the pulses of standard tipping bucket rain gauges into digital SDI-12 signals.

Adapter for tipping bucket rain gauges

SDI-12 V1.3 + Bluetooth 5 (BLE)

Pulse counter up to 9,999,999 pulses

Frequency measurement up to 1,000 Hz

Ultra-Low-Power (<10 µA Idle current)

Supply: 2.8–16 V

Configurable conversion coefficients

Delta calculation for precipitation intensity

Open-SDI12-Blue platform (nRF52)

Configuration via BLX.JS (browser-based)

Water Meter Adapter (Type 0330)

The water meter adapter Type 0330 is a compact pulse/frequency counter for digital acquisition of consumption data. It converts the pulses of digital water meters into SDI-12 signals and enables automated consumption measurement and flow monitoring.

Adapter for digital water meters (pulse output)

SDI-12 V1.3 + Bluetooth 5 (BLE)

Counter up to 9,999,999 pulses

Configurable coefficients (e.g. m^3/pulse)

Delta calculation for flow rate (e.g. l/min)

Frequency measurement up to 1,000 Hz

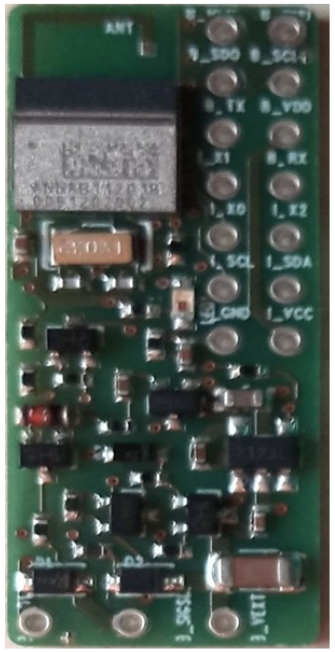
Ultra-Low-Power (<10 µA Idle current)

Supply: 2.8–16 V

Open-SDI12-Blue platform (nRF52)

Configuration via BLX.JS (browser-based)

Modbus Converter (Type 0210)



Bluetooth® BLE 5

SDI-12 V1.3
2.8V-14V / I_q: <10µA

The OSX Modbus converter Type 0210 enables the connection of Modbus sensors (RS485) to the SDI-12 bus. The converter board is based on the Open-SDI12-Blue platform and manages up to 10 Modbus registers. The Modbus is dynamically powered — ideal for battery-operated IoT applications.

Modbus RS485 → SDI-12 conversion

Up to 10 Modbus registers manageable

Dynamic power supply for the Modbus

SDI-12 V1.3 + Bluetooth 5 (BLE)

Standard 9600 8N1 communication

Setup via QR code or BLX.JS

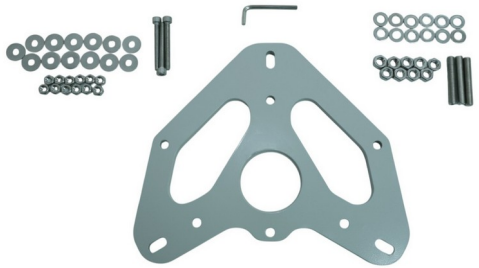
Ultra-Low-Power (<10 µA Idle current)

Supply: 2.8–16 V

Open-SDI12-Blue platform (nRF52)

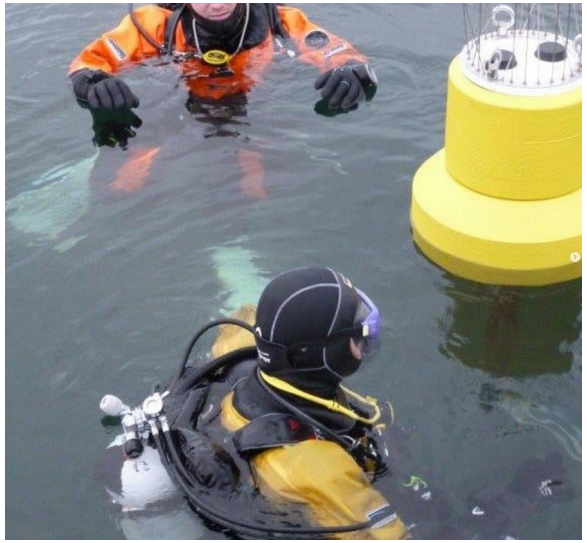
Accessories and Spare Parts

Whether robust sensor cages to protect the measurement probes, suitable adapters and clamps for different installation situations or various antennas for reliable data transmission — we offer a comprehensive range of accessories for the optimal use and professional installation of your systems.



Product Overview - SERVICE

Service Offerings



Installation:
We offer a complete installation service for all groundwater and water level monitoring points — both above and below ground, as well as on sheet pile walls or custom installations.

Maintenance:
With our all-inclusive service package, we ensure regular or on-demand maintenance of your data loggers.

Custom manufacturing:
For specific requirements at your measurement site, we work with you to design a tailored solution for optimal setup.

Product Overview - CONTACT

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