



# HydroTerra

Environmental Monitoring Specialists

## Stygo 4

### Low-Cost Groundwater Satellite Battery Powered IoT Sensor Hub

Stygo 4 is a low-cost groundwater Nanosatellite battery powered IoT sensor hub with integrated level sensor. Connectivity is provided via Australian company Myriota's Low Earth Orbiting constellation providing affordable, massively scalable, long battery life and global connectivity.



# Overview

Various mounting options includes bracket/pole and direct install to groundwater monuments/standpipe covers



Nanosatellite - retrieve data from anywhere on earth



Up to 200m depth, cable and housing material options to suit installation environment



Weatherproof, compact and ultra-rugged housing with easy field access to the battery compartment and micro USB port



Ultra-low power (3-4 years battery life), powered by 2 AA lithium batteries (e.g. Energizer L91)



Global Navigation Satellite System (GNSS) for geolocation and tracking



Unit can easy be removed from installation bracket by simply unclipping



## SMARTS

Configurable Alerts	Configure email and sms alerts based on levels remotely from our cloud-based device management system.
Nanosatellite	Lower cost, faster to build and cheaper to launch than traditional satellites and can do almost everything a conventional satellite does. With these low barriers to entry, they are a cost-effective option for new technology.
Location	Weekly GPS location updates

## TECHNICAL SPECIFICATIONS

### Power

Power Supply	Built-in replaceable 2 x AA Lithium Batteries
Power Consumption	Sleep 1.5 uA, MCU Processing 23 mA, Receive 34 mA and Transmission 380 mA
Battery Life	3 - 4 years based on 4 readings and 1 messages per day
Supported Battery Types	Ultimate Lithium Energizer

### Water Level Sensor

Level Accuracy	5m Cable $\pm 1.2\text{cm}$ 10m Cable $\pm 2.5\text{cm}$ 20m Cable $\pm 5.0\text{cm}$
Resolution	5m Cable $\pm 0.5\text{mm}$ 10m Cable $\pm 1.0\text{mm}$ 20m Cable $\pm 2.0\text{mm}$
Pressure Reference	Vented Gauge
Compensated Temperature Range	0 ~ +60 °C
Cable Length	up to 200m

## Physical Specification

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Materials	Enclosure - ABS Polycarbonate Plastic Water Level Sensor - Stainless Steel (316) or optional polycarbonate
Dimensions	Enclosure - 191 x 80 x 60 mm Water Level Sensor - 110 H x 26.6 Diameter mm
Weight	800g with 5m cable
IP Rating	Enclosure - IP66 rated housing Water Level Sensor - IP68

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## Communication

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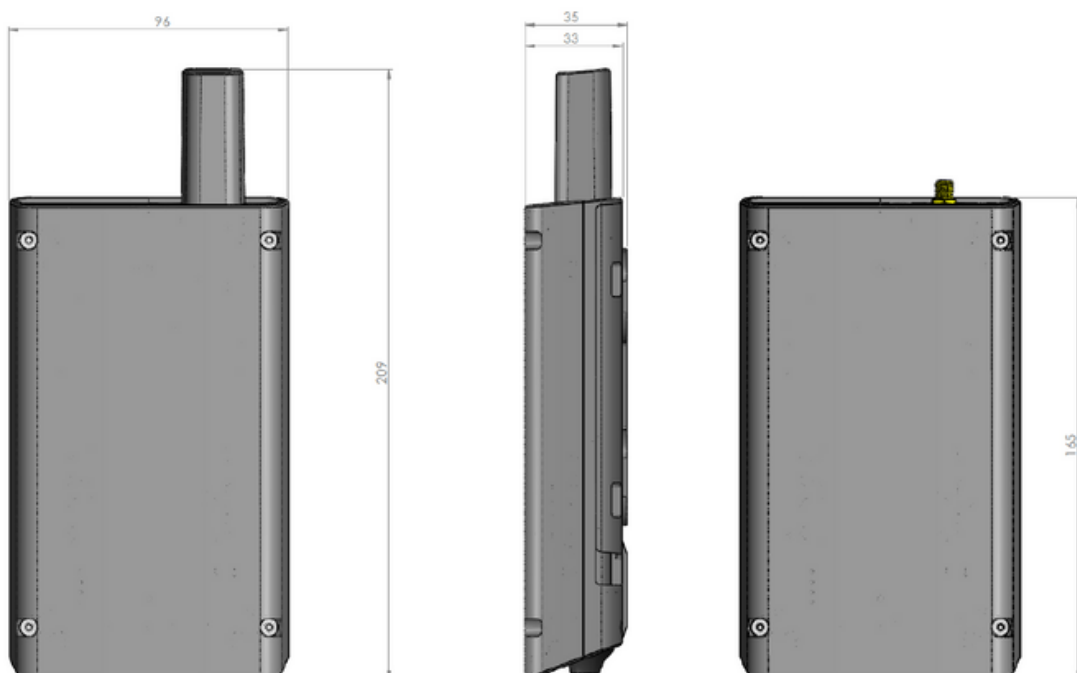
Nanosatellite	<ul style="list-style-type: none"><li>- Default setup with 4 readings and 1 message per day-</li><li>- Current median latency of 4 hrs with a roadmap to achieve median latency of 30 min within 18 months</li></ul>
GPS	GNSS for geolocation and tracking
Integration	Third-Party Integration Webhook, TCP or HTTPS

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**Warranty** 12 Months from date of purchase

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## Dimensions Drawings



## TECHNICAL SPECIFICATIONS

### Level Accuracy

Level 0.2% FS

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### Stability

Level 0.25% FS/year

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### Pressure Reference

Vented Gauge

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### Temperature

-20 ~ 85 °C

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### Cable Length

5m Standard

10m to 200m Optional

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### Materials

#### Housing

Stainless Steel 304 (Standard Option)

Stainless Steel 316 (Saline Water)

Polypropylene (Corrosive and Acidic Water)

#### Cable

Polyvinyl Fluoride (Standard Option)

PTFE (Corrosive Medium)

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### IP Rating

IP68

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### Dimensions

Standard - 110mm L x 23 mm diameter


Sludge Head - 116mm L x 47.5mm diameter

## FEATURES

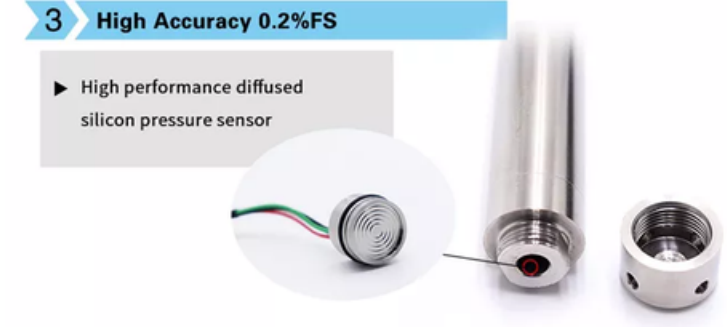
### 1 High Durable and Anti-corrosion

- ▶ Thickened SS304/ SS316L housing
  - ▶ Anti corrosive cables PE/PTFE
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### 2 Good Ingress Protection

- ▶ Double o-ring provide better sealing
  - ▶ Special gasket inclination design
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### 3 High Accuracy 0.2%FS

- ▶ High performance diffused silicon pressure sensor
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### 4 Various outputs

- ▶ Modbus RS485, 4~20mA, 1-5V  
I2C, SPI, 0.5-4.5V, 0-5V  
and other outputs for other model
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# HydroTerra Platform

## FEATURES



Monitor environmental sensors and device locations and parameters



Configure sample rates, device outputs and variable alerts



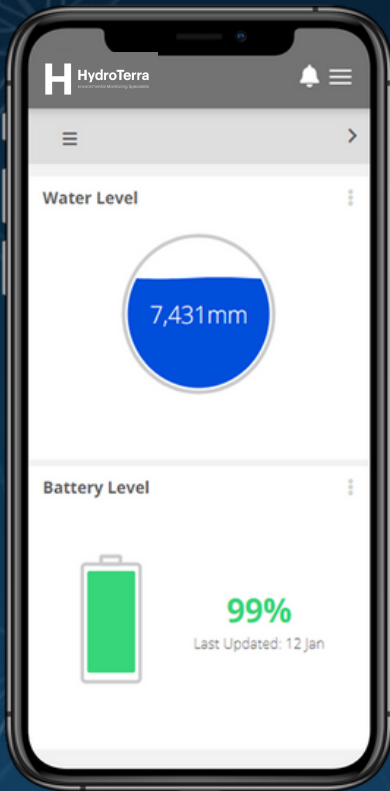
Control device outputs such as pumps, valves and gates



Receive SMS or email alerts based on variable thresholds



Download device data as csv files and images



## OVERVIEW

Sensors are remotely monitored with our custom cloud based platform. Interrogate volume and level trends, change sampling intervals and set SMS and email alerts. Our platform is flexible and modular meaning we can set it up the way you like from our library of maps, charts, gauges and controls.

## OTHER SERVICES

- Integrate other sensors to our platform
- White label the platform with your company branding
- Send your sensor data to third party platforms



DataStream™

by HydroTerra