Trusted Solutions for Level Monitoring

Level Monitoring for Open Channel Flows
The ADS® ECHO™ is an all-new generation level monitor. It gives users up to 10X more monitoring range and uses machine learning software to predict overflows long before they occur.

Coupled with its wide range of uses and low cost, ECHO is the leading solution for level monitoring applications.

Collection Systems, Plants, Surface and Storm Water Structures

Sanitary Sewers

Combined Sewers

Wastewater Treatment Plants

Lagoons and Ponds

Rivers and Streams

Canals

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The Wide Range of ECHO Applications Gives You Flexibility
Operations, Engineering, Planning, Modeling, and Contractor Professionals

**Efficient Cleaning Process**
Reduce cleaning frequency and mitigate SSOs with continuous monitoring and blockage prediction software.

**CSO Data and Reporting**
Monitor CSO activation and de-activation in real-time. Calculate overflows, prepare reports.

**Hydraulic Model Validation**
Acquire data for updating and validating hydraulic models. Low cost means higher sensor density.

**I/I Scouting**
*TRITON+®* flow monitor, *PRISM™* software and field services coupled with ECHO comprise a comprehensive I/I assessment solution.

**Wastewater Pump Station Back-up**
Avoid pump station overflows from power failures, partial pump blockages or failed alarms with ECHO back-up.

**Bypass Monitoring**
Secure 24/7 protection from overflows with bypass monitoring.

**New SSO Mitigation Advancements Give You More Assurance**
- ECHO is more advanced, less expensive
- Superior redundancy - five water-level alarms
- Simultaneous up/downstream monitoring
- Total Manhole Visibility™ 20 ft (6 m) below, 8 ft (2.5 m) above ECHO
- True readings with sensor alignment alarm, stable mount

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Continuous Monitoring Drives Informed Actions

Real-time depth data is collected and communicated to the cloud-based PRISM software and analytics. With continuous user access, informed actions are enabled.

PRISM is a cloud-based, secure software system that acquires, stores and presents data with ongoing user access. It’s home page (right) provides a map view and a dashboard for quick access to essential parameters. Individual site details, hydrographs and remote site system settings are all accessible. PRISM APIs enable third party data exchange.

PRISM’s new blockage PREDICT™ app (below) uses machine learning and will predictively detect blockages, with days’ or weeks’ worth of warning. When detected, blockages are presented in the dashboard.

Dashboard Reveals Prioritized List

blockage PREDICT lists prioritized, colored-coded symbols and access to details for sites of interest (below).

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Status</th>
<th>Depth Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN_204</td>
<td>09/16/2019</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>AN_110</td>
<td>09/16/2019</td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>AN_96</td>
<td>09/16/2019</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Real-Time Alarms

Dashboard summarizes Alarms and gives access details. Five redundant SSO alarms (below) guard against fast developing events.

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The ECHO Difference Means New Standards in Performance:

- **New LTE-M communications**
  LTE-M communications provide improved reliability often allowing the antenna to be installed in the manhole, eliminating drilling. Set-up is fast and easy, taking just minutes.

- **Total manhole visibility**
  Typical ultrasonic sensors’ measurement range is 2 ft (60 cm) into an 8 in (20 cm) pipe. ECHO’s unique narrow beam technology provides 20 ft (6 m). Its pressure sensor provides 8 ft (2.5 m) measurement range above ECHO.

### ECHO System Components:

- **Antenna Connector**
- **T-Handle**
- **Parabolic Beam-Focusing Head**
- **Ultrasonic Transducer**
- **Pressure Sensor**
- **“Bullseye” Level** Located on Top Assures Alignment in Seconds

### Installation Options:

**ECHO with Tension Bar Installation**

The ADS ECHO installs quickly making it easy to move from one location to another.

**Wall Mount Bracket and Bar**

**Adjustable Tension Bar**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th><strong>System</strong></th>
<th>dual-measurement sensor (ultrasonic and pressure), tilt alarm for sensor alignment, battery powered, wireless communication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Software</strong></td>
<td><strong>PRISM</strong>, cloud-based with data storage, dashboard, analytics and reports</td>
</tr>
<tr>
<td><strong>Modem</strong></td>
<td>universal for all SIM cards</td>
</tr>
<tr>
<td><strong>Communications</strong></td>
<td>LTE-M, 3G/4G / Worldwide MODEM</td>
</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>2-years (average)</td>
</tr>
<tr>
<td><strong>Submersible</strong></td>
<td>meets IP68</td>
</tr>
<tr>
<td><strong>Manufacturing Standard</strong></td>
<td>ISO-9001</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>CE, CSA, ATEX and IECEx certifications</td>
</tr>
</tbody>
</table>

Multiple intrinsic safety certifications set the ADS ECHO apart with an intense focus on safety.

### Tailored, Affordable Purchase Programs

**Purchase**

The ADS ECHO can be purchased bundled with communications and software. Every ECHO comes with a two-year product warranty.

**D-Site Turn-Key Service**

ADS takes care of your monitoring network including equipment, software, and onsite maintenance through one low monthly fee.

**2 Year Warranty**

Our two-year warranty gives you added assurance of its quality and reliability.

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Learn more about ECHO: www.adsenv.com/echo

Access PRISM: https://www.adsprism.com

Call: 800.633.7246

Email: adssales@idexcorp.com

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