



The **TRITON+** Flow Monitoring System is used to gather data for use in a variety of applications:

- Sanitary sewer overflows (SSOs)
- Combined sewer overflows (CSOs)
- Infiltration and inflow (I/I) analysis
- Sewer model validation
- Optimize cleaning process
- Lift/pump station backup
- Regulatory reporting
- Mitigate SSOs
- Bypass monitoring
- Inter-jurisdictional billing

TRITON+® Flow Monitoring System

ADS TRITON+®

Flow Monitoring for Open Channel Flows

The ADS® **TRITON+** is the most versatile and cost-effective flow monitor on the market. The **TRITON+** includes connections for multiple sensor technology options and provides users with industry-standard data for a variety of applications.

The **TRITON+** is an intrinsically safe, "Fit-for-Purpose" open channel flow monitor for use in sanitary, combined, and storm sewers. It supports single pipe or dual pipe flow measurement installations.

Versatile and Accurate

Monitor-Level Intelligence (MLI®) enables the **TRITON+** to effectively operate over a wide range of hydraulic conditions. The **TRITON+** supports single or dual pipe/monitoring point measurement capabilities. It supports actuation of a water quality sampler for flow proportional or level-based operation.

Access Data with Ease

Wireless options make it easy to collect data from your **TRITON+**. The ADS web software **PRISM™** enables you to access all your data in one platform from any device (PC, tablet, phone).

Configure to Suit Your Budget

The **TRITON+** has the lowest operational cost per data sample of any *Intrinsically Safe* flow monitor available. The platform adapts to a wide range of customer applications and budgets, and can be configured as an economical *single sensor monitor or dual sensor monitor*.

Extended Asset Life

The **TRITON+** has industry-leading battery life. It offers a longer battery life and fewer parts for a more reliable system, providing a lower purchase price and lower ownership cost over the life of the monitor.

ADS TRITON+ Sensors are Adaptable to a Wide Variety of Applications



Non-Contact Depth Sensor



Submerged Velocity Sensor

The **TRITON+** flow monitor is compatible with a suite of sensors designed to cover a wide range of applications and a wide range of flow conditions in sanitary sewer, combined sewer, and storm sewer applications. Choose from area-velocity (AV) sensors and depth sensors using submerged or non-contact mounting options. There is even an available inclinometer. The **TRITON+** is configurable with one or two sensors measuring one or two monitoring points. See the sensor specifications at www.adsenv.com/triton.

ADS Sensor Technologies Include: Pressure depth, Ultrasonic depth (non-contact & submerged), Doppler velocity, Gated velocity, Surface velocity, Temperature, Inclinometer (tilt sensor)



Peak Combo™
Area-Velocity
Submerged



AV|Max™
Area-Velocity
Submerged



AV|GATED®
Gated Velocity
Submerged



Surface Combo™
Area-Velocity
Non-Contact



ParaFlow™
Area-Velocity
Non-Contact



ParaDepth™
Depth
Non-Contact



Long Range Depth™
Depth
Non-Contact



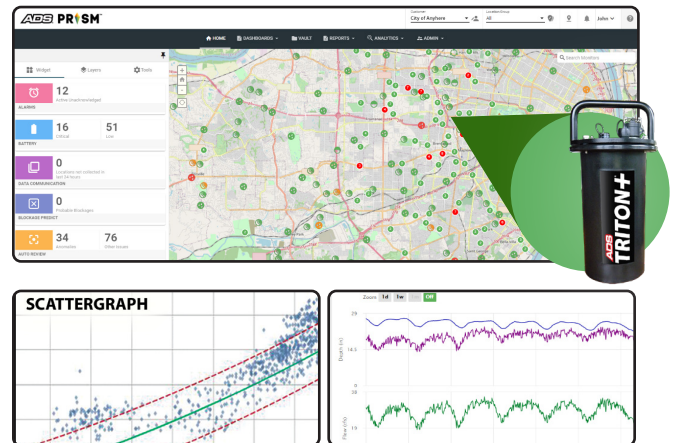
INCLINOMETER™
Angle Tilt

ADS PRISM™ Software Enhances Understanding

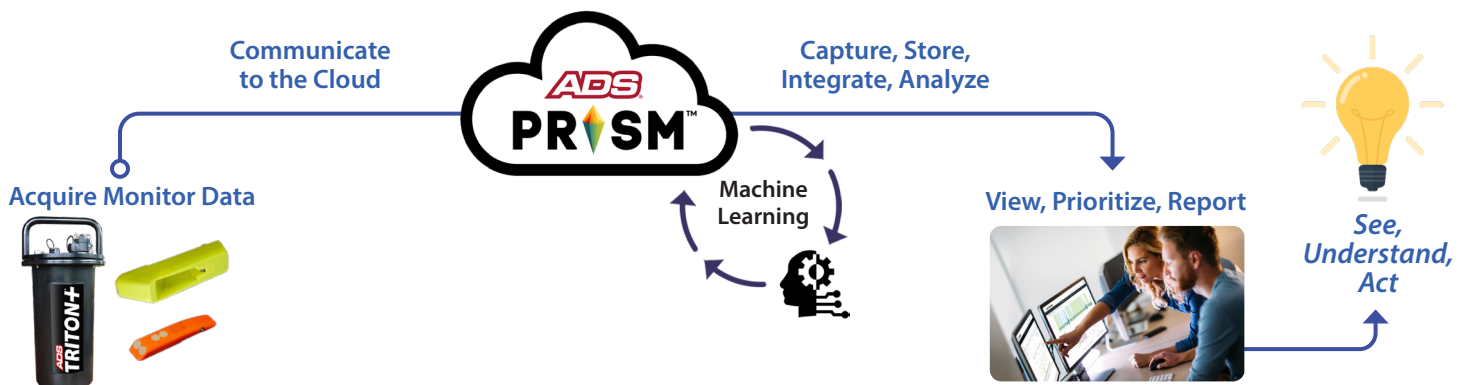
PRISM is a cloud-based, secure software system that acquires, stores and presents data with ongoing user access. The home page (right) provides a map view and a dashboard for quick access to essential parameters. Individual site details, hydrographs and remote site system settings are all accessible.

PRISM APIs enable third party data exchange.

- Configure and activate
- Set alarms
- Manage data
- Manage blockages with **blockage PREDICT™**
- Conduct I/I studies with the **NEW SLICER™** app
- Utilize GIS



Real-time data is collected and communicated to the cloud-based **PRISM** software and analytics. With continuous user access, informed actions are enabled. Learn more about **PRISM** at www.adsenv.com/prism.



Self-Contained Solutions for Power, Communication, Analog and Digital I/O and Modbus

The ADS **TRITON+** COMM+EXT PWR port is used for external power via the ADS XIO, XBUS or ExPAC devices, delivery of Modbus output values as well as for on-site, direct monitor communication.

XIO Features

Process variables measured by the **TRITON+** can be converted to two (2) 4-20mA loop output signals for SCADA systems or local display and control

Logging capabilities of the **TRITON+** can be used for two (2) 4-20mA input process variables measured by other instrumentation

Alarms produced by the **TRITON+** can be output on the two (2) XIO relay contacts for process actuation

Two (2) switch, solid state or dry contact digital inputs can be sampled and logged

Design facilitates easy field wiring

Supports easy plug and play configuration and start-up

Associated Apparatus **IECEx certification** for use with approved equipment in **Zone 0** (equivalent to Class I, Division 1, Groups C & D); **ATEX Zone 0**; and **CSA Class I**, Zone 0, IIB hazardous areas

Rugged indoor/outdoor NEMA 4x case with hinged clear cover

Accepts 85-264 VAC, 120-375 VDC; 47-62 Hz; 1.1A@110/0.59A @250 VAC

Supplies 8 – 11.5 VDC, 500mA power to the **TRITON+** flow monitors



XBUS Features

Supports Modbus RTU, ASCII and TCP communications

Connects to wired networks via RS485 or RS232

Supports easy plug and play configuration and start-up

Associated Apparatus **IECEx certification** for use with approved equipment in **Zone 0** (equivalent to Class I, Division 1, Groups C & D); ATEX Zone 0; and CSA Class I, Zone 0, IIB hazardous areas

Rugged indoor/outdoor NEMA 4x case with hinged clear cover

Accepts 85-264 VAC, 120-375 VDC; 47-62 Hz; 1.1A@110/0.59A @250 VAC

Supplies 8 – 11.5 VDC, 500mA power to the **TRITON+** flow monitors



ExPAC Features

Designed to be housed in another enclosure

Associated Apparatus **IECEx certification** for use with approved equipment in Zone 0 (equivalent to Class I, Division 1, Groups C & D); ATEX Zone 0; and CSA Class I, Zone 0, IIB hazardous areas

Requires DC power input between 9 and 36 volts and a minimum of 15 watts

Supplies DC power of 8 to 11.5 volts, 500mA to the **TRITON+** flow monitors

RS485 and RS232 Modbus output connections to SCADA systems

Supports Modbus RTU, ASCII and TCP/IP communications



ADS TRITON+

Flow Monitor Specifications



Connectors	U.S. Military specification MIL-C 26482 series 1, for environmental sealing, with gold-plated contacts	Mounting Options	Mount on the manhole rung using standard hook (ADS p/n 8000-0021) Mount permanently to the manhole wall using monitor mounting bracket/flange (ADS p/n 140-0009) Mount to the manhole rim using monitor bracket/flange (ADS p/n 140-0009)
Communication	Third-party, FCC/IC/EC- and carrier-approved wireless modem Compatible with all 4G LTE-M networks worldwide with 2G fallback (where available) Automatically detects installed SIM upon boot up to determine correct network Modem FCCID: R17ME910C1WW	Intrinsic Safety Certifications	Certified under the ATEX European Intrinsic Safety standards for Zone 0 rated hazardous areas Certified under IECEx (International Electrotechnical Commission) Intrinsic Safety Standards for use in Zone 0 rated hazardous areas (equivalent to Class I, Division 1, Groups C & D) CSA Certified to Class 225803 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Zone 0 Hazardous Locations, Ex ia IIB T3 (152° C) in Canada CSA Certified to Class 225883 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Class I Zone 0 Hazardous Locations, AEx ia IIB T3 (152° C) in the USA (equivalent to Class I, Division 1, Groups C & D)
Monitor Interfaces	Supports simultaneous interfaces with up to two combo sensors Supports optional Analog and Digital I/O with ADS XIO: two 4-20 mA inputs and outputs, two switch inputs and two relay outputs	Other Certifications/Compliances	FCC Part 15 compliant Carries the EU CE mark ROHS (lead-free) compliant Canada IC CS-03 compliant IP68 compliant
Power	Internal - Battery life with a cellular modem: <ul style="list-style-type: none">• Over 15 months at a 15-minute sample rate*• Over 6 months at a 5-minute sample rate* External - Optional external power available with ADS External Power and Communications Unit (ExPAC) with an ADS- or customer-supplied 9-36 Volt DC power supply * Rate based on collecting data once a day and varies according to sensor configuration and operating temperature		
Connectivity	Modbus ASCII: Wireless; Wired using ADS ExPAC or XBUS Modbus RTU: Wireless; Wired using ADS ExPAC or XBUS Modbus TCP: Wireless only		
Operating and Storage Temperature	-4° to 140° F (-20° to 60° C)		
Compatibility	Attachable ADS Sensors Qstart™XML with ADS TRITON+® firmware version 6.43 and higher PRISM™		



Learn more about ADS TRITON+
www.adsenv.com/triton



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