

# ***EchoSmart™***

## Interface Level Analyzers



[www.EntechDesign.com](http://www.EntechDesign.com)



## Smart

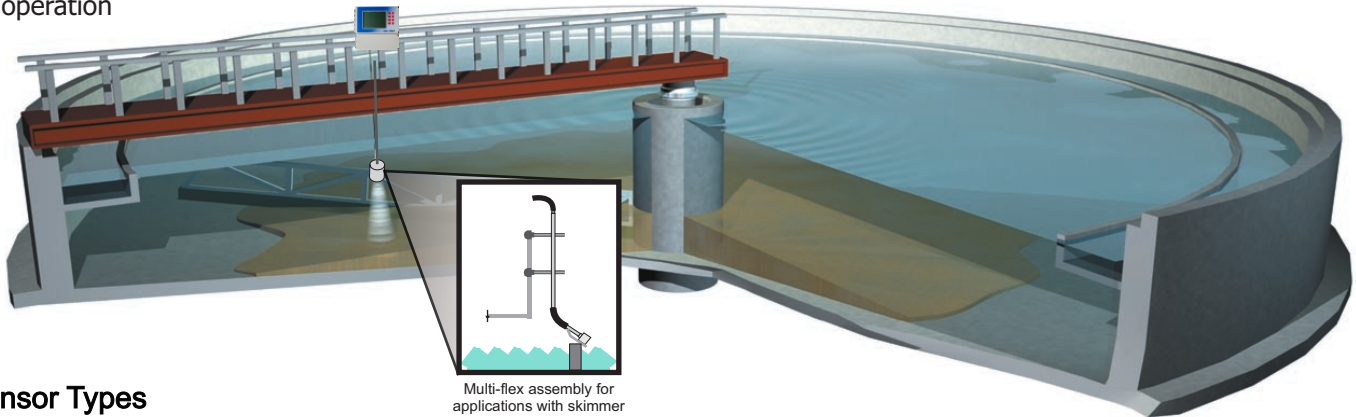
EchoSmart Sensors generate and process the ultrasonic signal for continuous, real-time measurement and maximum flexibility.

EchoSmart Sensors employ interface-detection algorithms developed exclusively by Entech with proven performance across the US and around the world.

## Friendly

Easy to set-up, easy to operate, and easy to secure consistent, reliable, trouble-free measurements - that's user-friendly, that's EchoSmart!

- Large display with intuitive screens for quick entry of parameters
- Soft Key operation with Help Prompts for all settings
- Automatic initialization for easy start-up
- Adaptive algorithms in each sensor for uninterrupted operation
- Track well-settled blankets
- Can also be configured to track dispersed solids (fluff or rag layer)
- Monitor blanket levels 24/7/365
- Suitable for round or rectangular clarifiers



## Sensor Types



### Standard Sensor

Typical for applications with surface skimmers. Multi-flex assembly recommended.



### Wiper Sensor

Self-cleaning face for applications without surface skimmers.

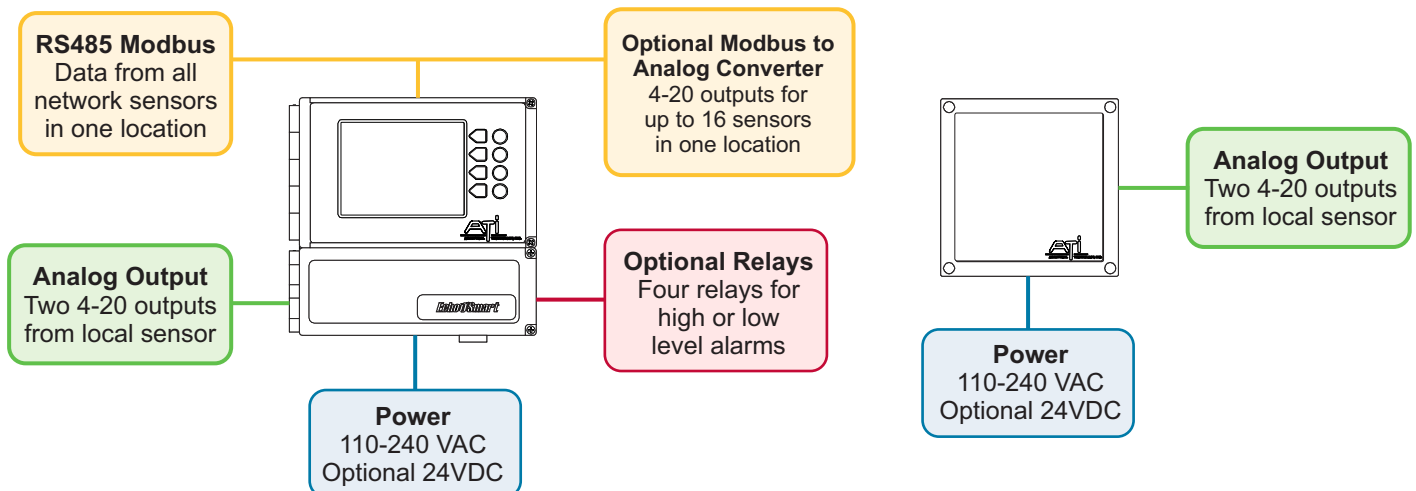


### Level & Turbidity

Self-cleaning face with sludge level and turbidity in one sensor.

*Sensors come standard with 20 feet of cable with custom lengths of up to 400 feet possible*

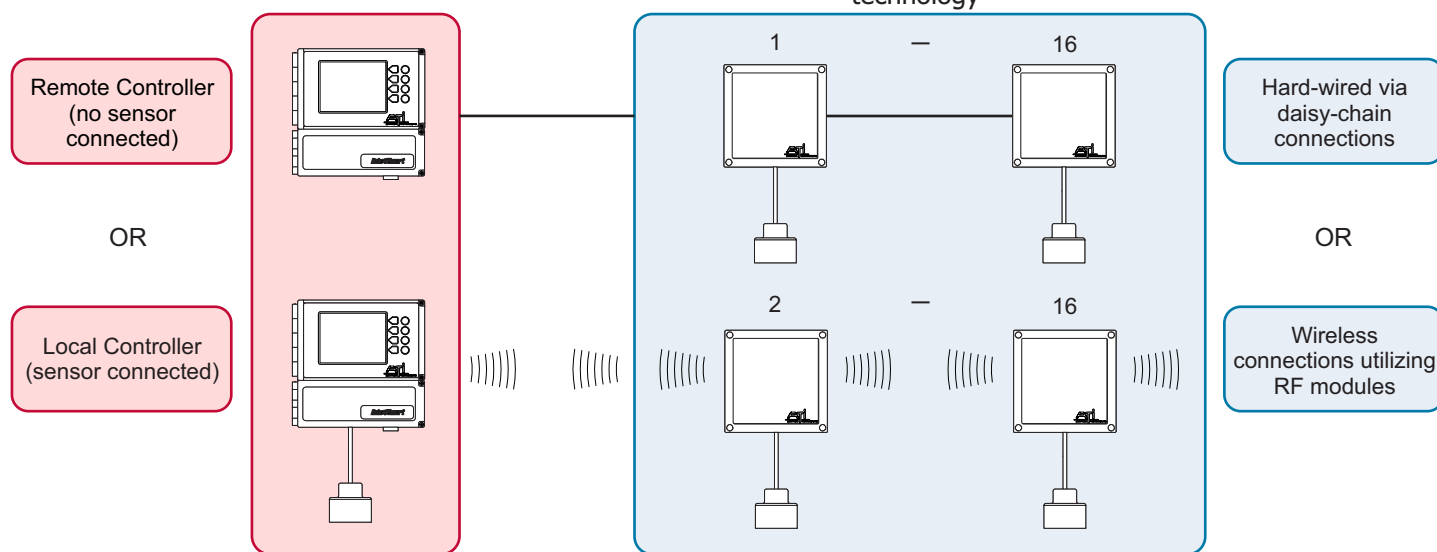
## Available Outputs



### Flexible

Adaptable configuration options for a variety of installation requirements and straightforward plant retrofit solutions

- Available as stand-alone system
- Networks of up to sixteen sensors possible with only one Controller needed
- Easily add more sensors to an existing network
- Communication between devices can be achieved through:
  - + Hard-wired connections
  - + Powerful sub-1GHz RF with self-healing mesh technology\*



\* Radio available as internally mounted plug-and-play module with external antenna or in a separate enclosure for maximum range and flexibility. Self-healing mesh technology eliminates most line of sight interference.



#### Free Demo

Ask about a 30-day free trial consisting of a stand-alone system with a cell modem for insights into the benefits of continuous monitoring.



#### Worldwide Installation

ATI-Entech enjoys a HUGE install base across the country and around the world. References available.



#### Remote Service via Cell Modem\*

Our Factory Remote Service puts every EchoSmart system in the reach of our expert engineers and service technicians for optional instrument commissioning and follow-on service at a fraction of the cost of field services.

\* Connection is independent of local LAN and requires no customer activation





# EchoSmart™ Specifications

## EchoSmart Sensor

Measuring Principle  
Underwater acoustic

Range  
1.0 to 32 ft. (0.305 to 10.0 m)

Sensor Measurement Resolution  
0.1 Unit of measure

Accuracy  
0.2 in at 10.0 ft. (5 mm at 3.05 m)

Operating Temperature  
34 to 125°F (1 to 52°C)

Power Requirement  
15VDC Standard: 2.4W; Wiper: 3W

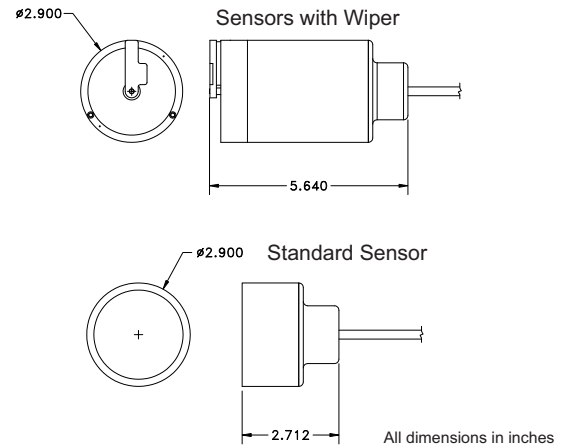
Configuration Backup  
Settings stored in FLASH memory

Sensor Construction  
IP68, ABS and epoxy  
Stainless steel and rubber (wiper only)

Turbidity (Optional)  
Measurement Principle  
90 degrees scattered light, pulsed LED  
Range  
0-50 NTU

Weight  
Standard Sensor: 2.25 lb (1.02 kg)  
Wiper Sensor: 2.75 lb (1.25 kg)  
Wiper Sensor w/ Turbidity: 2.75 lb (1.25 kg)

Certifications  
CE



## Controller

Operational Conditions  
-40° to +140°F (-40° to +60° C)

Power Requirements  
100 to 240 VAC, 50/60 Hz - 1.4A  
Power 65 W (fused)  
Optional: 24VDC

Display  
Graphical backlit monochrome screen  
Resolution: 320 x 240 pixels  
Viewing Area: 2.6 x 3.45 in (92 x 122 mm)

Reported Measurement Resolution  
1.0 (in & cm), 0.1 (ft), 0.01 (m)

Communications  
RS-485 MODBUS RTU  
(2) 4-20mA Output  
(1) Level Measurement  
(1) Turbidity (Optional)

Optional 900MHz RF Module  
Self-healing mesh network  
Approvals: FCC Part 15C, Industry Canada

Relays (Optional)  
(4) Relays: 10A @ 250 VAC; 10A @ 30VDC  
Configurable for high/low measurement  
alert or sensor fault

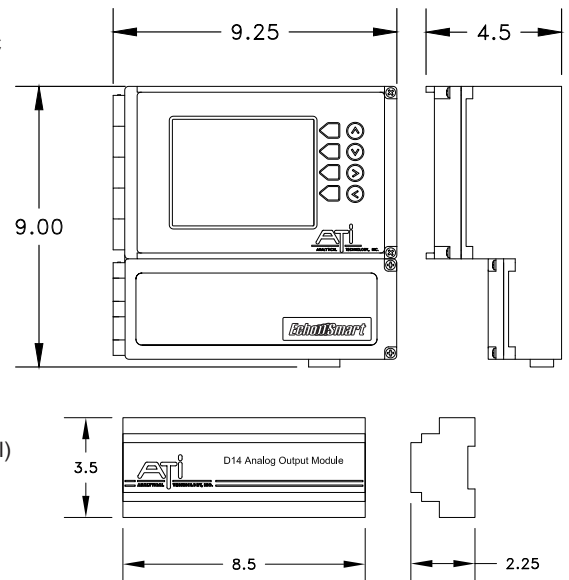
Configuration Backup  
Battery backup retains settings in event of  
power loss

Enclosure  
NEMA 4X, IP65; Polycarbonate

Weight  
Approximately 3.0 lb (1.36 kg) depending  
on configuration

Certifications  
CE

Modbus to Analog Output Converter (optional)  
18-30VDC  
DIN Rail Mount  
Up to 16 isolated analog outputs



## Power Supply Unit (Required only in multi-sensor network applications)

Operational Conditions  
-40° to +140°F (-40° to +60° C)

Power Requirements  
100 to 240 VAC, 50/60 Hz - 0.5A  
Power 20 W (fused)  
Optional: 24VDC

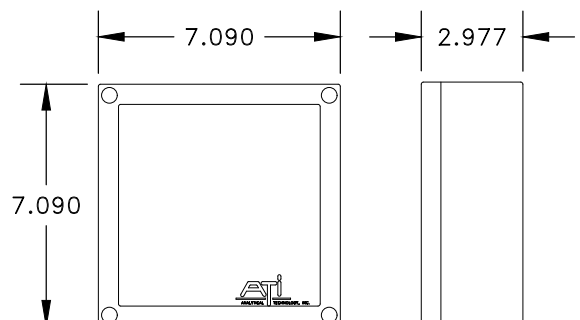
Communications  
RS-485 MODBUS RTU  
(2) 4-20mA Output  
(1) Level Measurement  
(1) Turbidity (Optional)

Optional 900MHz RF Module  
Self-healing mesh network  
Approvals: FCC Part 15C, Industry Canada

Enclosure  
NEMA 4X, IP65; Polycarbonate

Weight  
Approximately 1.5 lb (0.68 kg)

Certifications  
CE



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