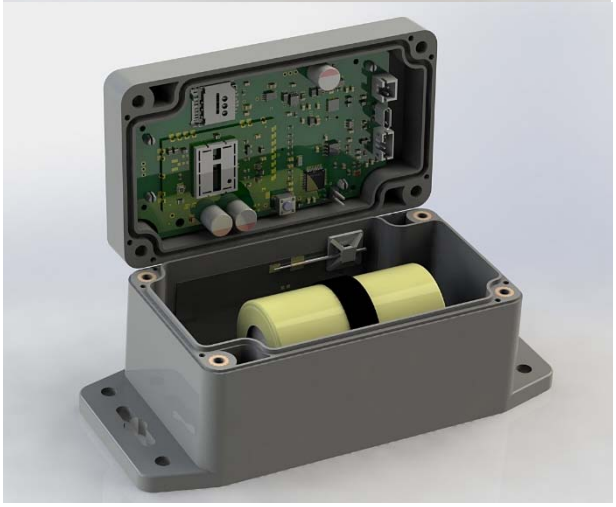
AERINOS™

ADS-420 Gen5 Waste Monitoring



Introduction

ADS-420 is an ultra-low power Itron gen5 network end Node The unit incorporates a built-in modem, a USB serial port, digital inputs, a 3-axis digital accelerometer, a Laser Imaging, Detection, and Ranging (LIDAR) sensor and battery monitoring. An ultra-low power microcontroller is utilized for data sampling, subsystem activation and overall system control. The unit incorporates a Lithium Thionyl battery supplying system operation for up to 10 years.

Modes of operation

Modes of operation include autonomous battery operation or power supply through the USB port for unit configuration.
During battery supplied operation, only the low power microcontroller is awake. The microcontroller activates the modem during data transfer, as well as other subsystems for sampling and logging.

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Features

- Power network independent Itron Gen5 Network
- Up to 10 years maintenance free operation
- Quick and easy installation
- Internal 3-axis digital accelerometer measuring angles of inclination in 2 axis and capturing acceleration events
- Internal LIDAR sensor, level/distance
- Built-in battery monitoring

Applications

- Waste Management
- People counting
- Building Management & Home Automation
- M2M systems

Technical characteristics

Power supply Battery External	 Internal 13.0 Ah Lithium Thionyl 5V (USB power)
Consumption	10µA max (Low power operation) 2 mA (AI sampling w/o sensors) ~50mA (Alarm messaging)
Digital inputs	4, 0-30VDC or potential free contact inputs
Counters	1,1 kHz max.
Accelerometer	16bit, ±16g, ±0.1° Accu.
LIDAR	0-4m, 15-27° FoV, 1cm Accuracy
Serial port	USB serial, 9600 to 115200 bps
Modem	Itron Gen 5 Milli module
Antenna	internal or external, ISM
Indications	2 LED, network status, device status
Temperature	-20°C…+70°C operating
Protection	IP65
Dimensions	154 x 66.5 x 60 mm
Weight	0.2 kg (w/o Battery)

Data Acquisition

Sampling period and data send rate are user definable. Ultra low power standby mode followed by frequent data recording and transmission can be selected to fit the application needs, while maximizing the battery life.

Tilt Sensing

The unit has an optional accelerometer which is used for measuring angle inclination, tilt & rotation.

Distance Measurement

The unit has an optional built in LIDAR ranging sensor which can be used for measuring level/distance with high accuracy.

Coulomb Meter

A user enabled Coulomb Meter allows for the monitoring of the battery's consumption.

Setup and programming

The unit can be programmed locally through the serial by using simple ASCII configuration commands. The command set features commands for configuring scaling and timing parameters.

Enclosure

Plastic enclosure (IP65) for in- and outdoor use. Lidar IR filter for LIDAR sensor.

Firmware features

Accelerometer	Tilt Sensing
Sampling interval	1-255 minutes
Sensor warm-up time	1-255 sec
Transmission rate	0-4096 minutes
Programming	ASCII command set
Local setup	via USB serial port
LIDAR	Distance measurement

Ordering information

Code	**ADS-320**

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Representative - authorized dealer

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