

AQSense-Edge

Advanced Water Leak Detection
powered by Cat-M/NB-IoT
Acoustic Correlating Sensors



Give your ops teams an edge with the most accurate leak detection system ever.

Main Features

- Cat-M/NB-IoT Cellular communication
- 8 years battery life with replaceable batteries
- CE, FCC, Mil810 and WRAS certifications
- Easy installation on above-ground & below-ground hydrants or valves
- FW OTA (Over The Air) update capability
- Multiple pipe diameters supported
- Multiple pipe materials supported
- A mix of sensors can be deployed on the same network depending on infrastructure's type



AQSense-Edge (AG)

The first compact acoustic correlating sensor that fits installations on all aboveground hydrants. Leak detection on metal and AC pipes up to 24".

*Typical installation up to 1,150 feet apart.



AQSense-Edge (BG)

The first-in-its-kind acoustic correlating sensor installable on belowground valve pits. Leak detection on metal and AC pipes up to 24".

*Typical installation up to 1,150 feet apart.



AQSense-Edge (Hyd)

The most advanced hydrophone designed especially for:

- PVC & PE pipes - up to 24".
- * Typical installation 1,000 feet apart.
- Large diameter pipes.
- * Typical installation 2,300 feet apart.

AQSense-Edge: Cat-M/NB-IoT Fixed Acoustic Correlating Sensors

Sensor Type/Model	Above-ground Accelerometer	Below-ground Accelerometer	Below-ground Hydrophone
Cellular			
Cellular Communication	Cat-M/NB-IoT		
Supported Cellular Radio Bands	Cat-M1: B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66 Cat-NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B20, B25, B26, B28, B66		
Analog Recording & Performance			
Frequency range	1-1000Hz		
Dynamic range	20 Bit		
Pressure rating			232 psi (16 bar)
Sampling	Typically once per day, configurable up to 48 times per day		
Time synchronization	Less than 1ms using RF		
Self-test	Comprehensive self-test upon installation		
Enclosure			
Water-proof	IP 65	IP 68	
Dimensions	5.6x2.8x2.2"	D=2.5" H=6.7"	
Material	PA6 30%GF	Aluminum 6061 with anti-corrosive coating	
Weight	10.93 oz (310g)	13.40 oz (380g)	
Sensor type	Internal Accelerometer	External Accelerometer	External Hydrophone
Sensor dimensions	N/A	D=2.1" H=2"	D=1.6" H=2.1"
Standard Cable length	N/A	6.5 Ft (2m) for ACC	9.8 Ft (3m) for hydrophone
Cable connector	N/A	M12	
Sensor weight	N/A	5.3 oz (150g)	6.3 oz (180g)
Sensor material	N/A	PA6 20%GF	SS316
Sensor threads	N/A	N/A	Male -1" NPT
Antenna			
Type	Internal	External SMA Standard	
Dimensions	N/A	D=0.5"; H=2" (LTE) D=0.5"; H=4" (FM)	
Polarization	Linear, omni directional		
Average / Peak Gain / LTE	2.3 / 3.4 dBi	2.1 / 3.5 dBi	
Interface			
Interface physical layer	BLE communication		
Mobile application support	IOS, Android		
Operating Conditions			
Certification	CE / FCC / Mil810 / WRAS		
Temperature range	(-4°F to 140°F) (-10°C to 60°C)		
Battery type	Replaceable Lithium Metal 3.6V battery size D		
Expected battery life	8 years of operation at standard conditions and 1 sample per day		
Product lifetime	Over 20 years		

