

# 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 350 meters 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 350 meters apart.



### AQSense-Edge (Hyd)

The most advanced hydrophone designed especially for:

- PVC & PE pipes - up to 24".
- \* Typical installation 300 meters apart.
- Large diameter pipes.
- \* Typical installation 700 meters apart.

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

Sensor Type/Model	Above-ground Accelerometer	Below-ground Accelerometer	Below-ground Hydrophone
<b>Cellular</b>			
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		
<b>Analog Recording &amp; Performance</b>			
Frequency range	1-1000Hz		
Dynamic range	20 Bit		
Pressure rating			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		
<b>Enclosure</b>			
Water-proof	IP 65	IP 68	
Dimensions	142x72x56mm	D=64mm H=170mm	
Material	PA6 30%GF	Aluminum 6061 with anti-corrosive coating	
Weight	310g	380g	
<b>Sensor type</b>	Internal Accelerometer	External Accelerometer	External Hydrophone
Sensor dimensions	N/A	D=53mm H=52mm	D=42mm H=54mm
Standard cable length	N/A	2m for ACC	3m for hydrophone
Cable connector	N/A	M12	
Sensor weight	N/A	150g	180g
Sensor material	N/A	PA6 20%GF	SS316
Sensor threads	N/A	N/A	Male- 1" BSPT or NPT
<b>Antenna</b>			
Type	Internal	External	
Dimensions	N/A	D=12mm; H=50mm (LTE) D=13mm; H=102mm (FM)	
Polarization	Linear, omni directional		
Average / Peak Gain	2.3 / 3.4 dBi	2.1 / 3.5 dBi	
<b>Interface</b>			
Interface physical layer	BLE communication		
Mobile application support	IOS, Android		
<b>Operating Conditions</b>			
Certification	CE / FCC / Mil810 / WRAS		
Temperature range	(-10°C to 60°C) (-4°F to 140°F)		
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		

