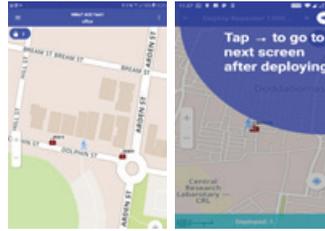


ZONESCAN

Correlating IoT Leak Logger

Correlating acoustic logger for permanent monitoring of water distribution mains using NB-LoT cellular technology to connect to the Gutermaann Cloud.





NB-IoT data transmission from below the chamber lid directly to the cloud server

ZONSCAN NB-IoT is the world's first water leak detecting noise logger based on Narrowband Internet of Things ("NB-IoT"), the new LTE-based cellular communication standard optimised for machine-to-machine data communication in smart cities.

NB-IoT significantly outperforms conventional 3G/4G communication standard for leak detection applications:

- Significantly lower power consumption (5-10x less) extending battery life; batteries can be replaced in the field, no need for factory returns
- Significantly improved coverage underground (deep coverage)
- Much lower communication costs

Use of cloud-computed Correlation Indicator for leak identification

The recorded sound signal of every sensor is synchronised to enable the GUTERMANN Cloud software to automatically correlate the data between all neighbouring sensors and provide leak indications even where the individual loggers don't recognise the existence of a nearby leak (we call this feature "Correlation Indicator").

The Correlation Indicator will give you information about the area in which the leak has been identified. For accurate pinpointing in fixed networks the RF based fixed network monitoring technology ZONSCAN ALPHA will continue to be the most accurate technology in the market.

Easy installation using proprietary Android-based installation software

Installing (and subsequently moving) an NB-IoT logger has never been easier. The Android app ZONSCAN INSTALL will guide you through the process of logger activation and registration to the cellular network, including its exact geo-location. An antenna jig with USB port allows you to connect the logger to your Android device for direct access. Once deployed, a regular extended antenna is connected to the logger and attached magnetically underneath the lid.

Loggers are deployed in intervals of typically between 50 and 300 meters, depending on the deployment area and the pipe properties.

Industry-leading cloud software for leak data analysis and result display

ZONSCAN NB-IoT logger data will be sent to and stored in the same, industry-leading cloud platform as other GUTERMANN cloud-enabled products (ZONSCAN ALPHA, HISCAN, EASYSKAN and MULTISCAN) for remote access.

GUTERMANN CLOUD is a Google Maps™ and Street View™ based interface which lets you see and manage all of your leak detection infrastructure, import your GIS data, perform advanced leak analysis and review leak alarms. You can also change settings, such as recording times, alarm thresholds and more.

Technical Specifications

Enclosure/housing material:	100% stainless steel
Ingress protection:	IP68
Dimensions:	Length 107mm (4.2"), Ø 40mm (1.6")
Weight:	0.54 kg (1.2 lbs)
Temperature range:	-30°C to +70°C (-22°F to +158°F)
Communication:	Cellular (NB-IoT), various bands
SIM Card:	Nano, exchangeable
Battery:	Replaceable Li-SOCI2 cell size C
Battery life:	Typically, between 3 and 5 years, dependent on carrier specific properties and proximity to telecom antennas
Antenna:	Extended antenna with magnetic antenna base and RSMA connector

Cloud Software Features

- ✓ Browser-based cloud software with data hosted on secure servers of GUTERMANN's professional hosting partners
- ✓ Geospatial mapping of loggers and leaks (using Google Maps™ and Street View™ technology)
- ✓ Leak identification thanks to automatic daily correlation
- ✓ Unlimited data storage
- ✓ Ability to import network specific GIS and piping data in KML format
- ✓ Maintenance mode for real-time check-up of each piece of equipment
- ✓ Automatic calculation of leak probability
- ✓ Email alarm for immediate leak notification
- ✓ Event ticket management with work-flow support
- ✓ Advanced spectrum analysis for avoidance of false leak alarms created by constant mechanical and electrical noise sources
- ✓ Graphical display of all historical sound histograms, frequency spectra and correlation data to investigate difficult results
- ✓ Remote access possible from anywhere in the world - on demand by GUTERMANN specialists to assist in difficult leak investigation
- ✓ Automatic upgrades of cloud software, Android app and firmware



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