

Galaxy - SEWAGE AND WATER LEVEL MONITORING



Ultrasonic Transceiver

The Galaxy two-way network offers water resource authorities the reliability and wide area coverage needed to confidently deploy various sensors in order to manage a city's water cycle. The highly secure Galaxy network is a comprehensive solution for all segments in water resource management, and can facilitate additional utility demand as and when needed, to provide coverage to tens of thousands of battery operated sensors from a single base station. Utilizing wireless communications, the Galaxy network does not have to contend with the limitations of the public Telco infrastructure. Sensors in the Galaxy water resource management range include: water quality sensors, water flow meters, water pressure sensors, and water level sensors.



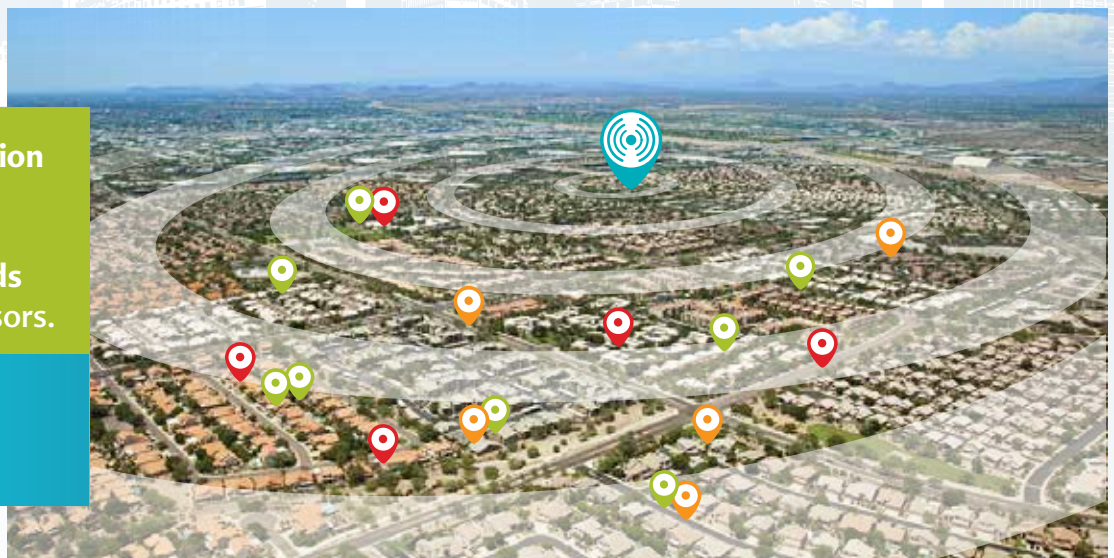
The **Ultrasonic Transceiver** utilizes two-way communications to report on levels of water and sewage. Two adaptable alert levels are provided from the ultrasonic sensor; the sewage level parameters can be adjusted as and when needed from the Base Station. Two-way communications function as follows:

The Ultrasonic Transceiver systematically stores sewage levels in the transceiver's data-logger. The Galaxy Base Station periodically interrogates the Ultrasonic Transceiver as to the status of the sewage levels - at flexible intervals, scheduled according to customers' needs. The Ultrasonic Transceiver transmits status reports back to the Base Station. Two alert levels allow for vigilant status reports: If the water level crosses either alert level (using preprogrammed adjustable parameters) an alert is automatically generated and included in the next status report.

Single Base Station
for wide area
coverage with
tens of thousands
of managed sensors.

Sewage monitoring

- Ultrasonic sensors
- Real time alerts



Ultrasonic Transceiver

PROPERTIES

- Two-way network for sensor monitoring and remote control
- Highly secure management system, can be integrated to security systems
- External power supply not needed, unit powered by Internal battery

RF SPECIFICATIONS

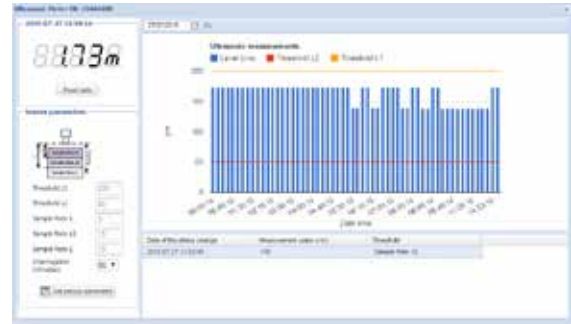
Frequency:	450-470MHz- Licensed band
Bandwidth:	6.25KHz
Receiver Sensitivity:	-120dBm@4.8kbps
Output Transmit Power:	Up to +36dBm/4Watt
Certification:	FCC Part 90.210, spectrum mask E
Range from Base Station to Transceiver:	Up to 5km (depending on topography)
Range from Repeater to Transceiver:	Up to 3km (depending on topography)
Range from Base Station to Repeater:	Up to 20km (depending on topography)

ELECTRICAL SPECIFICATIONS

Battery life:	5 years
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SENSOR SPECIFICATIONS

Maximum Depth of Sensor Reading:	500cm +/- 1cm; or 1,000cm +/- 1cm
Range of Sensor Reading from the Transceiver:	30 - 500cm; or 50 - 1,000 cm (depending on model)
Operating Temperature:	-40°C to +75°C



Vigilant status reports include two alert levels



Sensors on the map



Repeater with optional Solar Panel for fully autonomous operation



When needed repeaters are used to cover "dead zones" or to increase the coverage range

Telematics Wireless is a recognized global leader in the delivery of robust, reliable and advanced energy and water resource management systems based on RF wireless networks. With almost 20 years of experience in Machine-to-Machine (M2M) technologies, our solutions support a wide spectrum of smart city applications, increasing their efficiency, reliability, and cost-effectiveness. Telematics Wireless has delivered and installed over 14 million cutting-edge wireless devices and water systems for Automatic Meter Readings (AMR), Advanced Metering Infrastructure (AMI), energy resource management, smart grid, street and outdoor lighting control systems, location-based services, asset tracking and monitoring, and electronic toll collection.

* Specifications subject to change without prior notice.



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