

IoT Devices: Examples of industry-based devices that are available for a Smart City integration.

Municipalities

Window/Door Sensor

The wireless door/window sensor uses a magnetic hall effect sensor to detect open/close events for doors and windows.



Indoor Air / Room Monitor

AQ sensor for measuring the indoor environment. It is an indoor room sensor designed to be wall mounted. The AQ is completely wireless and powered by batteries. Inside you will find internal sensors for measuring indoor CO2 levels, temperature, humidity, light, and motion.



Rodent Trap

The rodent trap solution includes a mouse and a rat trap configuration. The devices use a quick high voltage shock for a clean and humane alternative to rodenticides. The traps can be spaced out over a wide geographical area using the LoRaWAN network.



Asset Tracker

Our asset tracker solution includes GPS location for identifying a specific machine location or vehicle location.



Level Sensor (Liquids or Solids)

The level sensor can be installed in many different applications to measure solids or liquid. Depending on the type of liquid or solids it might require a different measuring element, but we have experience using laser, ultrasonic, radar, and infrared.



Parking

The parking sensor is used to alert drivers using an app to open parking spaces. With wide open spaces it can be to protect or alert the system the parking spaces to make sure that the unique parking spaces are protected for special uses e.g., EV charging station, handicap parking, unloading zones, or other special parking spaces.



Meter Reading

Meter Reading using a LoRaWAN compatible MIU.



Remote Shutoff Valve

The valve can be installed in systems from ½" to 3" piping. It allows for complete shutoff or a trickle flow for conditions Utility set.



Acoustic Leak

The sound sensor connected through NB-IoT unit and will report the sound level (dB) and intensity (Hz) of the leak detected to our dashboard.



Outdoor Air Quality

Our ultra-low-power sensor system measures air pollutants including fine particulate matter PM 1.0/2.5/4.0/10, Carbon Monoxide, Carbon Dioxide, Ozone, NO2, NOx, SO2, H2S, and TVOC. They also measure air temperature and relative humidity. The sensors are pre-calibrated at the factory or can be re-calibrated in the field.



Street Lighting

The street lighting sensor is designed to be compatible with LED lighting that has a NEMA connector mounting on the fixture. It can be set to turn on/off and dim lights installed in streets or parking areas.



Loop Current Sensor

The 4-20mA Current Loop Sensor uses a 10-bit ADC to measure an analog value between 4 and 20mA with a 10uA resolution. If the measured value rises above or falls below the configured thresholds, an alert is sent over the wireless network. The 4-20mA sensor can also be used as a bridge device to enable a wide variety of sensors with only a 4-20mA output.



Dry Contact

The LoRaWAN Wireless Dry Contact Sensor is a two-wire dry sensor that detects a connection between two-wires. The Armored Sensor™ weather-proof enclosure makes the sensor suitable for outdoor and industrial use. The contact sensor can also be used as a bridge device to enable a wide variety of sensors.



Float Switch

The float switch is a simple level detector that can tell when a level of liquid has reached a maximum allowed height. It will be coupled with a switch closure to alert of any condition.



Alert Button

The alert button will send a notice through the network when the button is pushed.



Smart AC Switch

The switch gives users the ability to monitor and report on energy consumption and utilization including line voltage reporting as well as load, current, power and power factor reports. This device is designed to wirelessly communicate via LoRaWAN® which allows for seamless integration into your network



Flood Sensor

The LoRaWAN smart sensors give you low cost, small form-factor, easy to deploy, end-to-end solutions for monitoring rivers, streams, lakes, flooding, stormwater, snow, and sewers.



Oil & Gas Industry

C1 D1 Level Sensor

The level sensor for the oil & gas industry meets the Class 1 Div. 1 certification required for intrinsic requirements.



Valve Motion Detector

The valve sensor will send an alert when the valve position changes. If the device knows the actual position it will report the percent of opening. It can also be used for an alert if someone has tampered with the valve.



Vibration Sensor

- LoRaWAN wireless connectivity
- Built-in 3-axis accelerometer and temperature sensor
- Computing total 8 vibration characteristic values on board
- Compliant with ISO 10816
- IP66 with battery-powered, no wiring installation needed
- Easy setting with user friendly interfaces on WISE Studio
- Support wide temperature -20 ~ 85 °C
- RED Compliance



Agriculture

Watermark Reader

Reads the resistance of up to 4 Irrrometer WATERMARK soil moisture probes. Data can be used with other ag metrics to inform irrigation plans.



Troll Reader

Reads the output from an In-Situ Level Troll water level probe. Used to measure static ground-water level monitoring wells.



Weather Station

The weather station is an integral part of the farmers overall water solution. When attached to the moisture probes it can provide a complete evaluation system.

