Non-invasive Low-Cost Water Quality Monitoring System

SMARTCITY RESEARCH CENTER

OBJECTIVE

- Contaminated drinking water is one of the major problems that affect the health of the people.
- It is imperative to use an IOT system to monitor the quality of water
- The main challenges addressed by the project are
  - ✓ Robust design, deployment and testing
  - ✓ Validation of low-cost IoT nodes without disturbing the normal operation of the water supply.

FEATURES

- Low cost and robust IoT based TDS measurement system.
- ESP32 micro controller and sensors are used to sense TDS(total dissolved solids), Temperature & Water Level.
- Non-invasive mechanism implemented
- Reads the TDS data from the sensors and posts it to the server at predefined intervals through WiFi.
- The accuracy of the data collected by the IoT system is ensured by a proper compensation and calibration mechanism

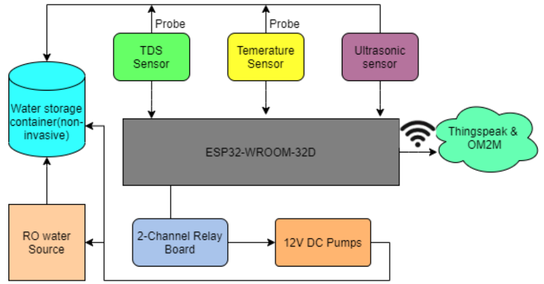

Fig1: Block Diagram

Fig2: 3D model of the node

Dynamic Billing and Leakage Detection using Digital Meters

OBJECTIVE

- Achieve dynamic billing and leakage detection.
- Develop a predictive model to forecast and analyze water quantity parameters for efficient distribution of water supply.

FEATURES

- Latest Technology with digital interface
- ESP32 interfaced to Digital Ultrasonic based water flow meters and pressure sensors to monitor flow rate and pressure
- Rugged modules and easy to install

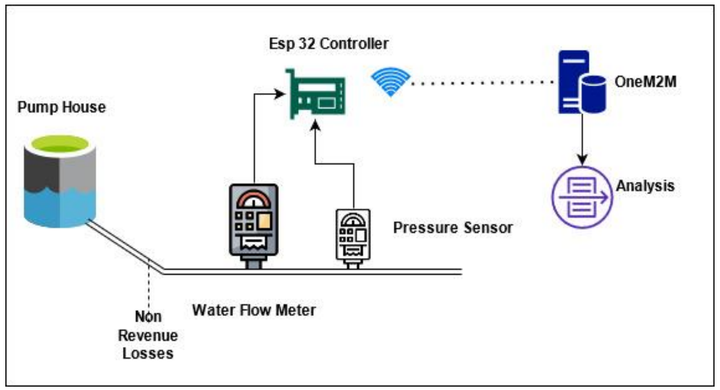

Fig3: Block Diagram

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