ABSTRACT:

WATER QUALITY ANALYSIS USING SMARTPHONE BASED SYSTEM

Water excellence in rural regions is tough to display because of loss of connectivity from one-of-a-kind water laboratories. In different regions, location-primarily based totally real-time water excellent statistics series is a tedious task and particularly depending on human intervention.The paper offered here has low-cost battery operated smartphone-based embedded system design to measure different water quality parameters in various remote locations. Developed system measures pH, total dissolved salt (TDS) and temperature of the water samples using sensors. Measured pH and TDS dataset derives other water quality parameters using standard mathematical relationships such as salinity, oxygen reduction potential and conductivity. Front-end readout interface circuit has been designed and interfaced with 8-bit microcontroller along with classical Bluetooth module for measurement, data acquisition, and logging purpose. An android application offers analysis and cloud data storage possibilities. It also provides a facility to analyze water quality data with location information on Google maps for quick judgment and easy understanding.