

SMART WATER MANAGEMENT SYSTEMS BASED ON INTERNET OF THINGS TECHNOLOGY

ABSTRACT

5 The present invention provides a smart water management system based on the Internet of Things (IoT) technology comprising; the controller unit operating in tandem with input data and conducting edge-based analysis while communicating with a central cloud-based server to enable transmission of data through GPRS or Wi-Fi connectivity. The data is further processed and appears
10 on the central dashboard to allow real time control and data visualization on the cloud based backend and generates further inputs for improved operating efficiencies and for data analysis and is connected to the flow sensor and the solenoid for controlling the water to be dispensed; the user selects the start dispensing option on the UI after payment, the controller puts the solenoid in
15 open state and counts the number of pulses of the flow sensor which is calibrated for ml/sec and when the selected amount of water is reached the solenoid is put to off state; the reader connected to the DC will get the unique number of the payment and then the DC will send the number along with the DC ID and SKU to the IoT cloud for authentication and once the authentication is
20 received on the DC from IoT cloud dispensing screen will appear; water quality sensor unit (WQSU) controlling and monitoring the sensors for the measurement of the quality of the water containing various sensor to monitor the

- water quality from the water outlet line which comes out of the chiller to the dispenser wherein WQSU is connected to the IoT cloud via Wi-Fi and will publish the quality readings to the cloud in real time gathering the temperature, pH readings, TDS Readings and turbidity of water; authentication service;
- 5 device backend service; data logger; integration services; User Interface (UI) services; and Calibration services.

No Figure