

ABSTRACT

Rainfall is the amount of rainwater that falls in an area in a certain time unit. Measurement of rainfall is said to be 1 mm if in an area of 1 m² water is held as high as 1 mm without evaporation, seep, and flow. The variation of each rain varies in each region so it is necessary to measure rainfall at each location of the different measurement points in the area. Rain data available in each location only has rainy days or no rain.

With these problems, we need a device that can measure rainfall in real time. This device is a rainfall counter device in real time using Automatic Rain Gauge type tipping bucket. The calibration method on the tipping bucket is a comparison of the volume of water contained in the tipping bucket with 1 mm of rainfall. In order for the value of rainfall obtained by hardware to be displayed through a medium of information in realtime, the rainfall calculator hardware will be connected with Firebase Realtime as a rainfall database.

The hardware of the rainfall calculator that has been made can make it easier for the wider community to get the value of rainfall that occurs in the area in realtime. Hardware resolution gets a value of 1.46 mm. 12% bucket tipping error. 0% rain detection error. The amount of data used in Hardware is 5.3 Kb. Power resistance for 69 hours. So that Hardware can provide realtime rainfall monitoring.

Keyword : rainfall, tipping bucket, volume