

Abstract

Teaching aids are tools in educating that become a means of communication and interaction between educators and students in the learning process. Free Fall Motion (GJB) is one of the physics learning materials in high school class X using conventional teaching aids in the recording process with a low level of precision and takes a long time. Based on studies related to GJB props from several studies using a manual recording. The development of teaching aids by implementing the Internet of Things (IoT) creates the potential for automatic data reading and assessment that can be stored in the cloud. Then in this research, the free fall motion prop that implements IoT is carried out by evaluating the functionality and performance of the system. From the test results, the functionality of the system built runs 100%. Based on the parameters of recording the accuracy of the values, the recording results are recorded properly on the ThingSpeak microcontroller and IoT platform without any data recording failures. From the results of testing the speed of reading the data obtained an average of 5392 milliseconds or 5 seconds.

Keywords: props, free fall motion, IoT, microcontroller, infrared sensors
