ABSTRACT

AR Drone 2.0 is one of the example of a miniature unmanned aerial vehicle used in the field of research. AR Drone 2.0 has a camera and IMU sensors, so it can be easily controlled by pilot. Unmanned aerial vehicle requires GPS (Global Positioning System) so that the pilot can control it remotely as well as to support automatic fly without pilot. GPS are supported by AR Drone 2.0 using SiRF protocol. Usually, The GPS module using NMEA protocol so that required data conversion. In the conversion process required microcontroller to processing data from the GPS that can be accepted by AR Drone system. Integration of GPS with AR Drone allows for automatic control. In aition, GPS data will also be sent information of latitude and longitude to computer so that the pilot can determine the current position when AR Drone is flying. The GPS system can be developed further in the future because it is open source.

Key words: AR Drone 2.0, GPS, latitude, longitude, NMEA protocol, SiRF protocol, unmanned aerial vehicle.