



## AIUB DSpace Publication Details

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<b>Author(s) Name:</b>	<u>SM Miraj Uddin, Md Reyad Hossain, Md Shahriar Rabbi, Md Akib Hasan, Md Saniat Rahman Zishan</u>
<b>Contact Email(s):</b>	<u>saniat@aiub.edu</u>
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## Abstract:

This paper represents a design of an ardupilot mega (APM) based remote-controlled unmanned aerial vehicle system for cleaning the high rise buildings windows. The design is developed with the remote-controlled system, which allows the workers to give security and maintenance of a surrounding area. The project used a Quad copter that contain with a frame, 4 motors, 4 electronic speed controllers, 1 APM development board, and sensor boards. Batteries, a transmitter, a receiver, and a GPS module were interfaced with the Quad copter's frame. Individual components were tested and verified to work properly. The aim of this project was to build and program a Quad copter that can be used for cleaning the high rise buildings windows. After water is sprayed from the drone, microfiber brush washes the windows. This system is applicable for almost every window size and window form. A secondary goal of this project is to use this platform for future innovative projects that could include stabilization, image processing, and artificial intelligence. Moreover, the developer of UAV for cleaning the high rise buildings glass is relatively simple and cheaper in comparison to other existing techniques.