Actual aspects of control system development for advanced unmanned aerial vehicles

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Discussing the advanced unmanned aerial vehicles (UAVs) the article considers the actual aspects of the development of the control system for them. Since current and future UAVs are focused on the implementation of a wide range of tasks and taking into account the use of several types of payload, this paper discusses the general principles of the onboard control complex construction. The automatic control system hardware has been implemented in the Arduino and Raspberry Pi microcontroller platforms. Furthermore, the paper presents the most common and promising ways of ensuring the smooth and reliable communication of the command post with the UAVs as well as the ways of managing of considered and pending emergency situations.

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