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General requirements for suspension control of unmanned cargo aircraft

物流无人机货物吊挂控制通用要求

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Aircraft Standardization Technical Committee (SAC/TC435).

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General requirements for cargo hanging control of logistics drones

1 Scope

This document specifies the general requirements for cargo hanging control of logistics drones and hanging control, cargo hanging status monitoring, hanging control interface, Safety protection and other contents.

This document applies to the cargo hanging control system of logistics drones.

2 Normative references

GB/T 38152

GB/T 38911-2020

GB/T 38997-2020

3 Terms and definitions

The terms and definitions defined in GB/T 38152 and the following apply to this document.

3.1

Drones used for cargo transportation in logistics activities.

3.2 Suspension control

Logistics drones use cables to lift cargo point-to-point, ensuring the safety of the drone and cargo and completing the control method of cargo loading, unloading and transportation.

4.1 Control Logic

The control logic block diagram of the cargo hanging control of the logistics UAV is shown in Figure 1.The control logic is based on the flight status of the logistics UAV, the hanging cable, and the The logistics drone can be controlled through basic flight control and hanging control.

The travel mechanism, cable servo mechanism and cargo loading and unloading mechanism issue corresponding instructions to control the flight of logistics drones and cargo transportation in real time.