# Made-in-Japan Drone for Logistics



# AirTruck



## SOLUTION

# Providing last-mile deliveries amid the lack of workers logistics industry is facing

Today, a growing number of people find it difficult to deal with daily shopping including groceries due to the impact of declining population, aging society with fewer children etc. In order to solve this problem, efforts utilizing digital technologies such as drones are highly expected. AirTruck is a made-in-Japan mass-produced drone dedicated for logistics use with payload up to 5kg. It aims to play a role in last-mile deliveries with stable flight minimizing cargo sway. This is realized by adapting Aeronext Inc.'s unique 4D GRAVITY<sup>®</sup> structure design technology, which optimizes aerodynamic characteristics.



Cargo sway is reduced by 4D GRAVITY®, a technology to control the center-of-gravity.



Easy loading and unloading of cargo up to 5 kg by enabling simple mounting from the top.

#### CORE SET

### Stable flight achieved by incorporating Aeronext's 4D GRAVITY® structure design technology

4D GRAVITY®, a technology to control the center-of-gravity, has improved flight speed, flight distance, deliverable weight, and delivery quality. The development of AirTruck was also made possible by a total of 466 demonstration flights in locations including Kosuge in Yamanashi, and Kamishihoro in Hokkaido, covering 1,730 km in total (as of March 2022).

High flight performance and usability for logistics is achieved by technologies such as aerodynamic optimization and easy loading and unloading of cargo up to 5kg.

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#### **SPECIFICATION**

Structure
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Туре

		renormance	
Length (Arms stretched) Length (Arms retracted) Height	1.7 m × 1.5 m 1.0 m × 1.5 m 0.44 m	Maximum Flight time	About 50 minutes (Assuming that payload is 3.5 kg) (Battery: 22.000mAh × 4 units)
Weight of the Drone	10 kg		About 40 minutes
Maximum Takeoff Weight	25kg		(Assuming that payload is 5.0kg)
Payload	Up to 5 kg		(Battery: 17,000mAh $ imes$ 4 units)
		Maximum flight distance	20 km
Flight Control System		Maximum ascending speed	3 m/s
		Maximum descending speed	2.5 m/s
Autopilot	ACSL AP3	Hovering accuracy	Horizontal: $\pm 2.0$ m/s
			Vertical: $\pm$ 1.5 m/s
		Maximum communication distance	No restrictions within
Battery			LTE radio wave coverage
Capacity	22,000mAh OR 17,000mAh		

\*Product specifications are current as of March 2022.

LiPo 65 (4 units)