



WALMER ENERGY

# Three-phase folding container for drone station





## Overview

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How a drone lands on a wireless docking station?

Fig. 1: Mid-flight landing sequence of the drone on the wireless docking station. The proposed system consists of two independent modules: the energy transmitting unit (attached to the camera tripod) and the energy receiving unit (attached to the drone). swapping mechanism and precise landing.

How do drones work?

The drones can autonomously dock, charge, and transfer power wirelessly to the stations. They can also form groups to coordinate tasks and share functions. The stations have imaging sensors to guide drone docking. The drones have docking ports to connect to the stations. This allows continuous drone flight with in-air docking and charging.

What are some examples of docking stations for drones?

Such examples include funnels for one or for each leg, overhead funnels, and closed contours. To underscore the importance of docking stations for drones, two major players in the drone market have released two commercial docking stations for drones in 2022: DJI dock1 and Skydio dock2.

How to extend drone power autonomy?

One of the most promising solutions to extend drone power autonomy is the use of docking stations to support both landing and recharging of the drone. To this end, we introduce a novel wireless drone docking station with three commercial wireless charging modules.



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JOUAV VTOL-in-a-Box: 24/7 Autonomous ...

The JOUAV VTOL Hangar is a complete drone-in-a-box solution featuring a weatherproof JOS-C700 docking station, a high-performance CW-15V ...

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DJI Dock 2: Autonomous Drone Docking Station

Nov 13, 2025 · The DJI Dock 2, a resilient and efficient autonomous drone docking station, is tailored for Matrice 3D/3DT drones, enabling seamless automated and scheduled missions.

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arXiv:2309.05433v1 [cs.RO] 11 Sep 2023

Sep 12, 2023 · Dario Stuhne, Goran Vasiljević, Stjepan Bogdan and Zdenko Kovačić  
Abstract--Drones are increasingly operating autonomously, and the need for extending drone ...

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Automatic Wireless Drone Charging Station Creating ...

Oct 24, 2024 · Among various solutions for this problem, an automatic drone charging station can be utilized. This paper proposes a fully automatic charging station which operates wirelessly. ...

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A Novel Folding Wireless Charging Station Design for Drones

Jun 26, 2024 · Receiver coils are designed as vertical rectangular planar spirals. A transmitter coil consists of three rectangular planar spiral coils with two movable edge windings and a fixed ...

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Docking Systems for Drone and UAVs

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Docking Systems for Drone and UAVs

Sep 12, 2025 · A deep analysis into state-of-the-art docking systems for drones and unmanned aerial vehicles (UAVs) that provide reliable and consistent docking/undocking in all conditions.

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Drone Docking Systems: The secret keys to aerial autonomy

The unique universal Drone Docking System from Nest-Fly Technologies. Drone Docking Systems: Autonomous and always ready.

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A Novel Folding Wireless Charging Station Design for Drones

Jun 26, 2024 · A folding wireless charge system of the UAV is designed for 100 W output power at a 138.1 kHz frequency. The misalignment tolerance of the proposed design in the vertical axis ...

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Percepto Base: Autonomous drone-in-a-box docking station

4 days ago · The Percepto Base is a ruggedized, field-proven drone dock for the Percepto Air drones, designed for remote operations and autonomous drone flight.

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## JOUAV VTOL-in-a-Box: 24/7 Autonomous Drone Operations

The JOUAV VTOL Hangar is a complete drone-in-a-box solution featuring a weatherproof JOS-C700 docking station, a high-performance CW-15V VTOL drone, and the intelligent JoCloud ...

## Design and Validation of a Wireless Drone Docking Station

Oct 13, 2023 · To this end, we introduce a novel wireless drone docking station with three commercial wireless charging modules. We have developed two independent units, both in ...

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