

PLIABLE MANIPULATOR ORION

A Revolutionary Solution For Aerial Operations

Dexterous | Lightweight | Robust | Customizable Interface

Highlights

Combining Wisson's Pliabot™ technology with quadcopters, Orion manipulators broaden the aerial operation scenarios for UAVs, enabling dexterous manipulation and object handling across complex terrain for high-risk, aero, and marine operations.

Features

01 Dexterous
Bionic smooth operation; Teleoperation and modular programming, dual-mode switching control

03 Flexible
Ultra-lightweight design, adaptable to multiple UAV platforms

05 Extreme Environmental Endurance
Handles extreme environments with ease, through customized industry-level protection solutions



02 Lightweight
Maximum 3:1 load-to-weight ratio, tailored to various aerial operations

04 Safe
Outstanding interacting safety with humans and environment, thanks to innovations in material, actuation, & control

06 Customizable Interfaces
Customized electrical and mechanical interfaces available for different UAV platforms

Applications



Infrastructure Maintenance



Disaster Relief



Sampling in Extreme Environments



Working Aloft

Key Parameters

Dimension	1650mm (wheelbase), 550mm (H)	Diameter of Manipulator	φ160mm
Standard Takeoff Weight	24kg	Max Speed	15m/s
Max Takeoff Payload*	7kg	Working Time	40min (no load); 30min (full load)
Extension Rate	350mm-1000mm	Image Transmission	2 channels
Dexterity & Flexibility	Linearly retractable to 300mm; 360° compliance; omnidirectional bending	Deployment Time	<5min

*Max Payload of Pliable Robotic Manipulator is 15kg