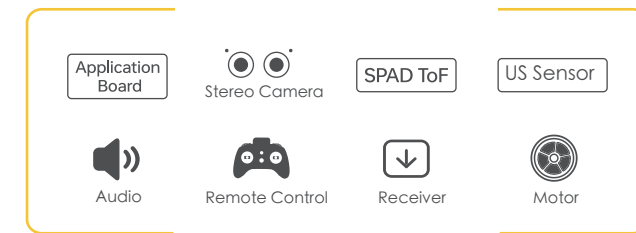


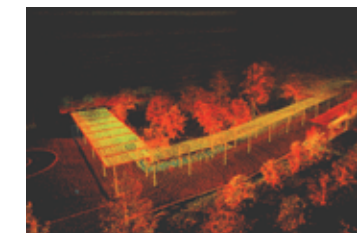


Product Overview

TITA



- Extremely modularity, various body configurations
Two-wheeled Self-balancing, Two-wheeled Legged, Bi-pedal, Quadru-ped and Wheeled Quadruped.
- Breakthrough coupling design
Battery hot-swap support, Quick-release expansion, Modular software development.



LIDAR SLAM

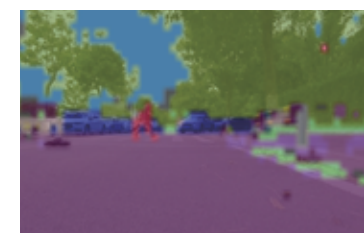


Image Segmentation

About Direct Drive Technology

Direct Drive Technology was established in Songshan Lake, Dongguan in 2020, with a focus on the research, development, and production of robot power modules. Committed to providing quasi-direct drive precision power solutions, Direct Drive Tech has manufactured the world's first mass-produced, direct-drive two-wheeled self-balancing robot. As a pioneer of two-wheeled mobile chassis, the Direct-Drive Technology Robotics Division aims to bring unique and efficient solutions to the

About TITA

TITA is a quasi-direct drive wheeled bipedal robot with high perception and decision-making capabilities. This innovation harnesses the speed and agility of wheeled robots while leveraging the adaptability of their legged counterparts through state-of-the-art direct-drive joints and hub motor drive technology. Additionally, it possesses an adoptive modular structure and open interface, can be equipped with visual module, communication module, AI host, edge processors, and a variety of other sensors for environments such as smart parks, mines and various complex industrial environments. TITA is capable of performing tasks such as high-efficiency inspections, load transportation, data collection, scanning and



All-terrain adaptability

TITA comes with a multitude of capabilities, including superb anti-fall performance, strong self-recovery, immediate response to stimuli, and efficient and flexible movement in various terrains and complex environments.



100 TOPS EV-rated computation power & obstacle avoidance

Equipped with the NVIDIA Jetson Orin NX 16GB chip, and using ultrasonic, SPAD TOF and stereo cameras for visual solutions (optional LIDAR), TITA provides accurate, millimeter-level measurements and a recognition coverage rate of



High-performance quasi-direct drive motor provides efficient, precise controlled movement

Eight, built-in high-performance quasi-direct drive joint modules with a peak torque of 120 N-m, create a powerful, reliable power drive system; 8 degrees of freedom provide superior range of motion when it is needed, allowing TITA to operate smoothly and move quickly.



Stable, reliable mobile transfer platform

- The fuselage is made of magnesium alloy, about 3.35 times stronger than aluminum alloy with a stiffness that is 10 times that of ordinary plastic.
- TITA possess a strong, anti-fall and self-recovery ability, and is capable of performing in a wide range of temperatures:



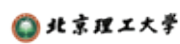
Complete API interface, fast & stable

- Fully featured secondary development demo, Microsecond response speed, 30Hz-300Hz, Control frequency, Low packet loss rate: ~0.05%
- Open Linux kernel source
- Open full-link API
- Open motor
- Support ROS

Enterprises



Universities



Government-affiliated Institutions



Media



 Technical Support

 After-sales Service

 en.directdrive.com

 Purchase : Hello@directdrivetech.com
Distributor Partnership : distro@directdrivetech.com
General Inquiry : MKT@directdrivetech.com

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 9th Floor Building 1, Xbot Park, Songshan Lake, Dongguan City, Guangdong Province



TITA SPECIFICATION

Name	TITA
Size (standing mode)	510mm*590mm*490mm
Size (creeping mode)	510mm*590mm*300mm
Net Weight (without battery)	24.1kg / 53.13lbs
Max Slope	±30°
Processor	Jetson Orin NX 16G
Research Programming API	ROS 2
Normal Voltage	43.2V
AI Performance	100 TOPs
TITA Bridges	3 on top
Payload Weight	10kg (Moving)
Max Jumping Forward Height	20cm
DoF	8
Max Speed	3m/s
Built-in Camera	2
Built-in Speaker	2
Inertial Sensor	2
SPAD Sensor	2
Ultrasonic Sensor	1
Output	48V 5A (Adjustable)
Battery	2
Each Battery Running Time	1h
Power Loss Protection	✓
TITA® Cognition	✓
Automatic Safe Stop	✓
OTA Update	✓
API	✓

Use Scenarios

