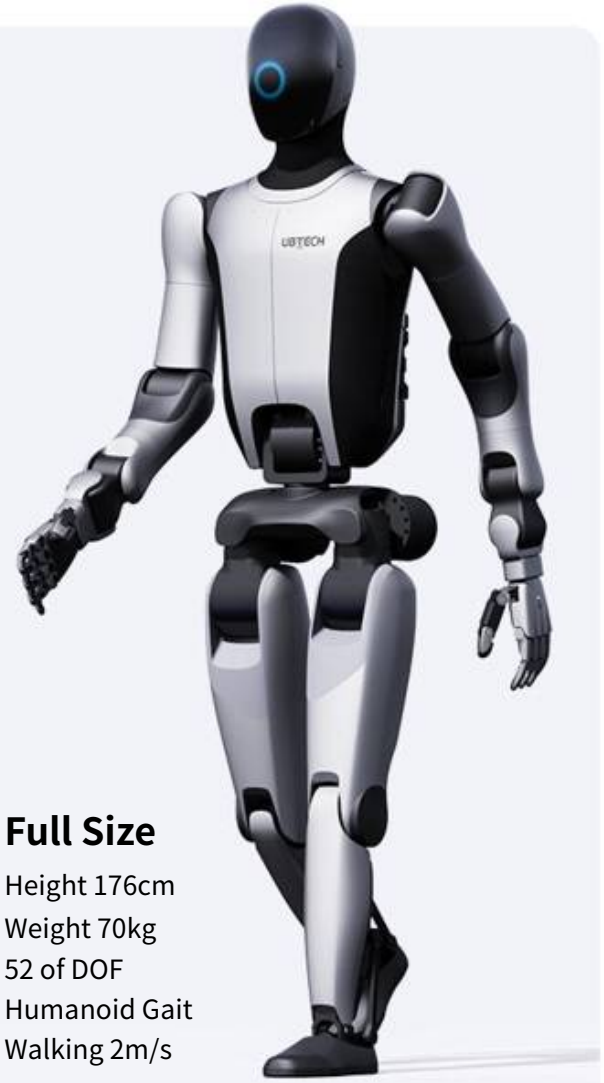
UBTECH New Generation
of Industrial Humanoid Robot

# Walker S2

The World's First Humanoid Robot
Capable of Autonomous Battery Swapping





## Full Size

Height 176cm
Weight 70kg
52 of DOF
Humanoid Gait
Walking 2m/s

## Flexible Waist

Pitch Angle:
+90° to -35°
Rotation Angle:
±162°



## Perception& Interaction

Support LLM
Voice Interaction
4-inch Circular
Facial Display
4 Array Microphones
2 Speakers



## Gen-4 Industrial Dexterous Hands

11 of DOF
6 Tactile Sensors Array
Single-hand Grasp: 7.5kg
Finger Grasp: 1kg



## Innovative Materials

Rigid-flex
Heterogenous
Composite
Aerospace-grade
Aluminum Alloy
3D Printed Primary Frame
3D Knitted High-elastic
Fiber Material



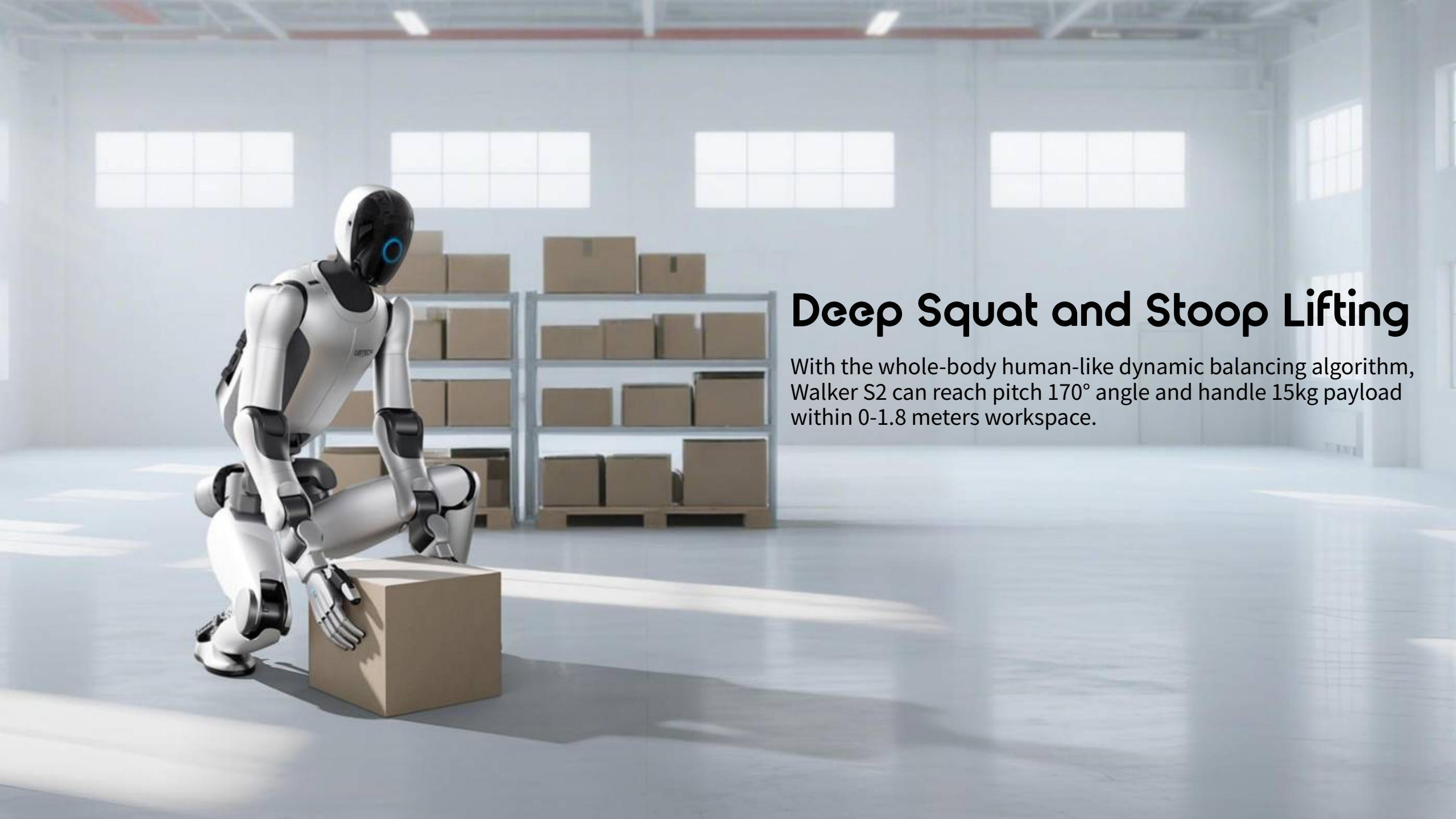

The World's First
3 -Minute
Autonomous Battery Swapping
24/7
Continuous Operation

# Real-time Battery Monitoring Management Intelligent Power Replenishment

The dual-battery switching design enables Walker S2 to switch between dual-battery and single-battery working mode. By integrating the real-time battery monitoring management with battery swap stations, Walker S2 can autonomously choose battery swap or charge mode according to the task priorities, and acheive dynamic power management.




±162°
Waist Rotation Angle

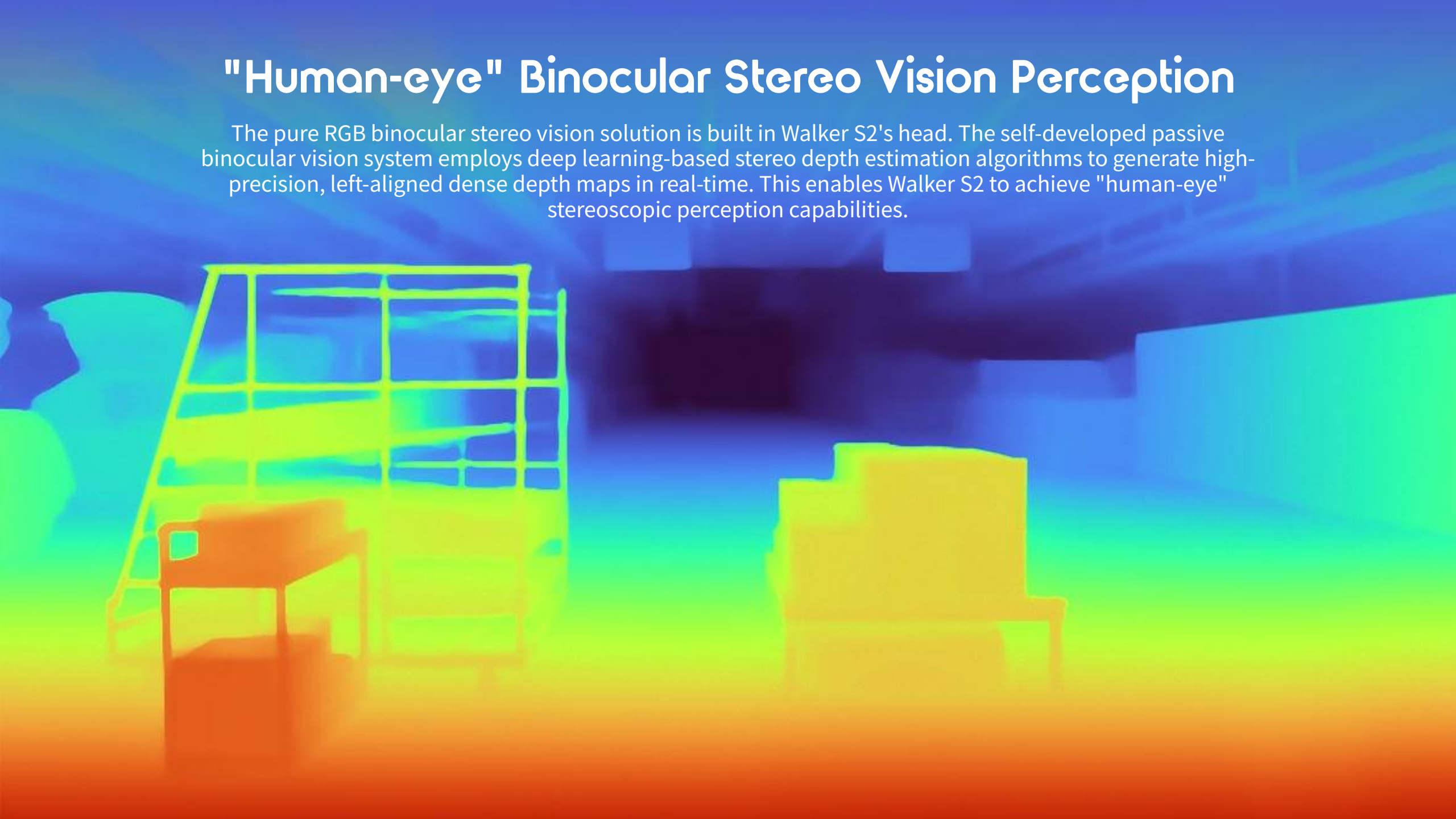


# Deep Squat and Stoop Lifting

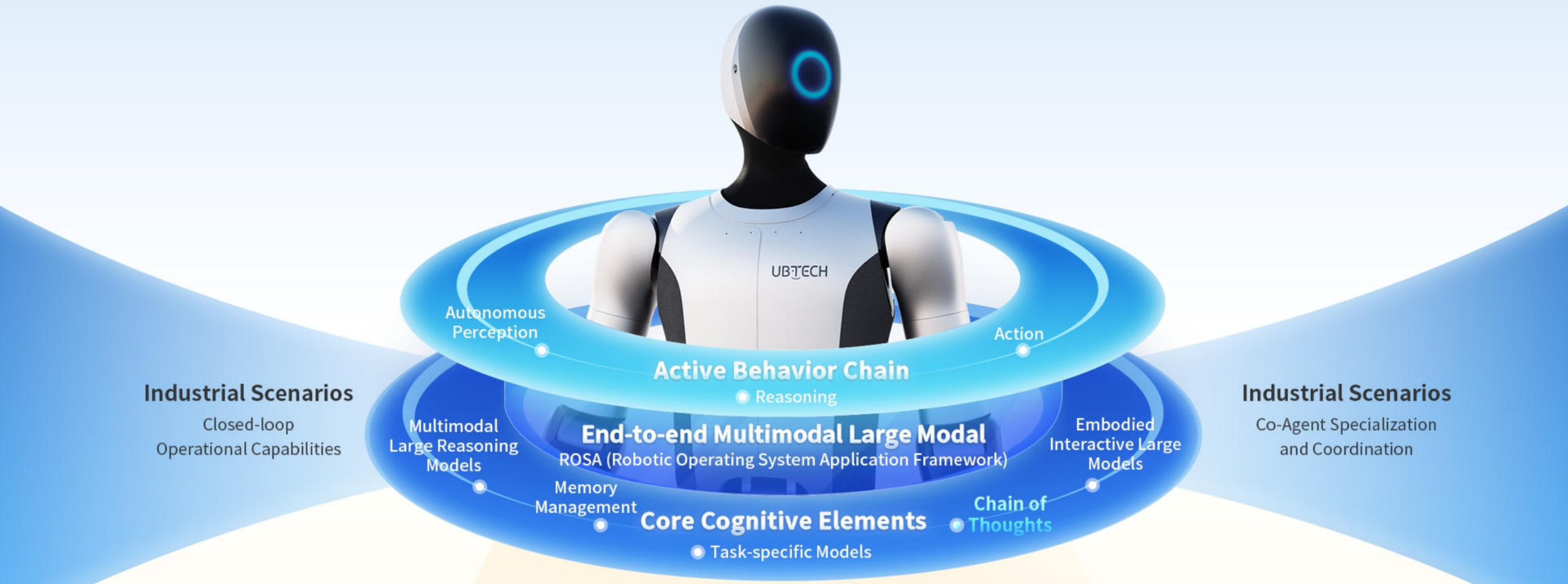
With the whole-body human-like dynamic balancing algorithm, Walker S2 can reach pitch 170° angle and handle 15kg payload within 0-1.8 meters workspace.

# "Human-eye" Binocular Stereo Vision Perception

The pure RGB binocular stereo vision solution is built in Walker S2's head. The self-developed passive binocular vision system employs deep learning-based stereo depth estimation algorithms to generate high-precision, left-aligned dense depth maps in real-time. This enables Walker S2 to achieve "human-eye" stereoscopic perception capabilities.



# UBTECH's Self-developed Co-Agent
# The World's First Industrial Agent for Humanoid Robot




**Industrial Scenarios**

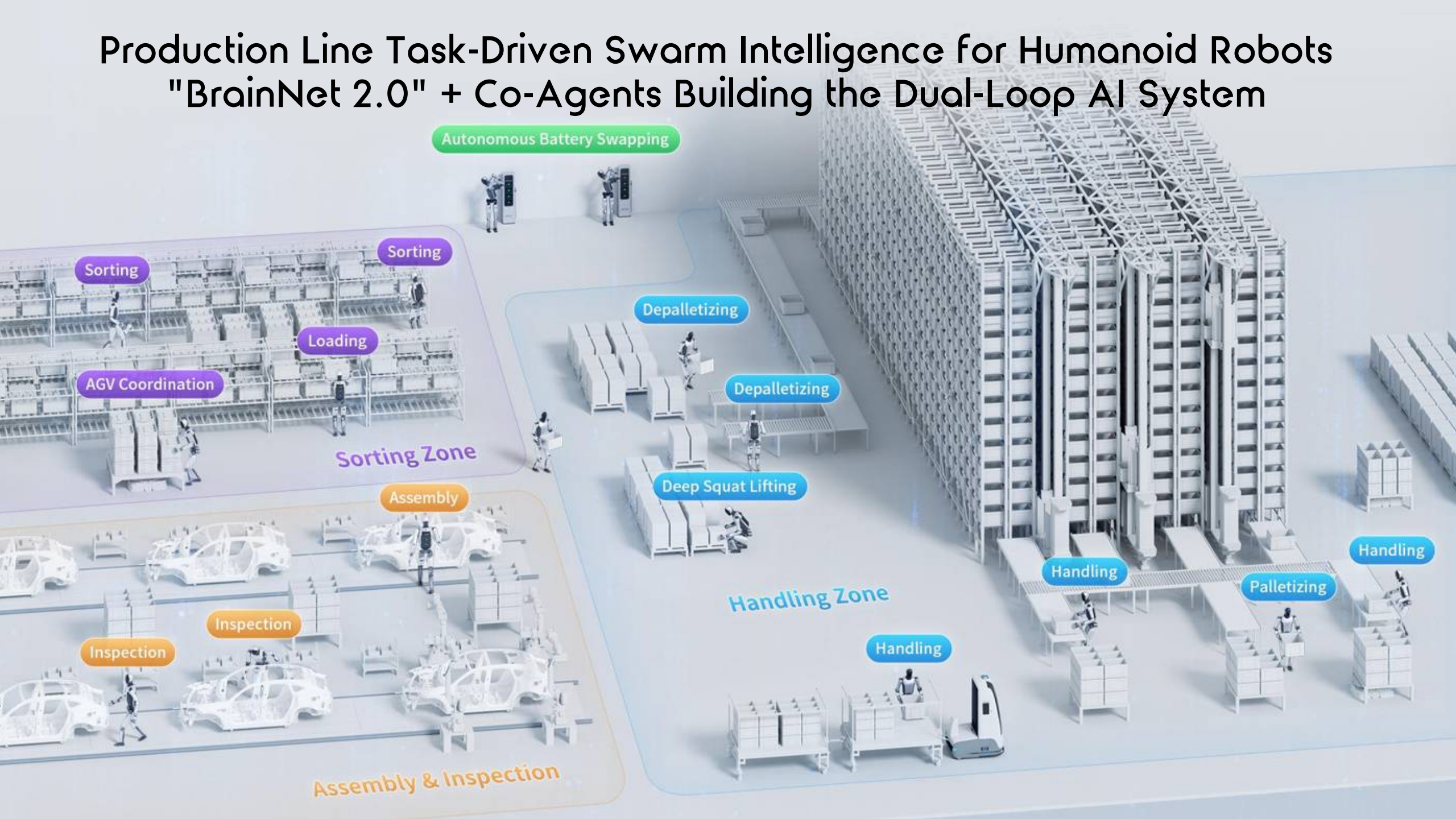
Closed-loop
Operational Capabilities

**Industrial Scenarios**

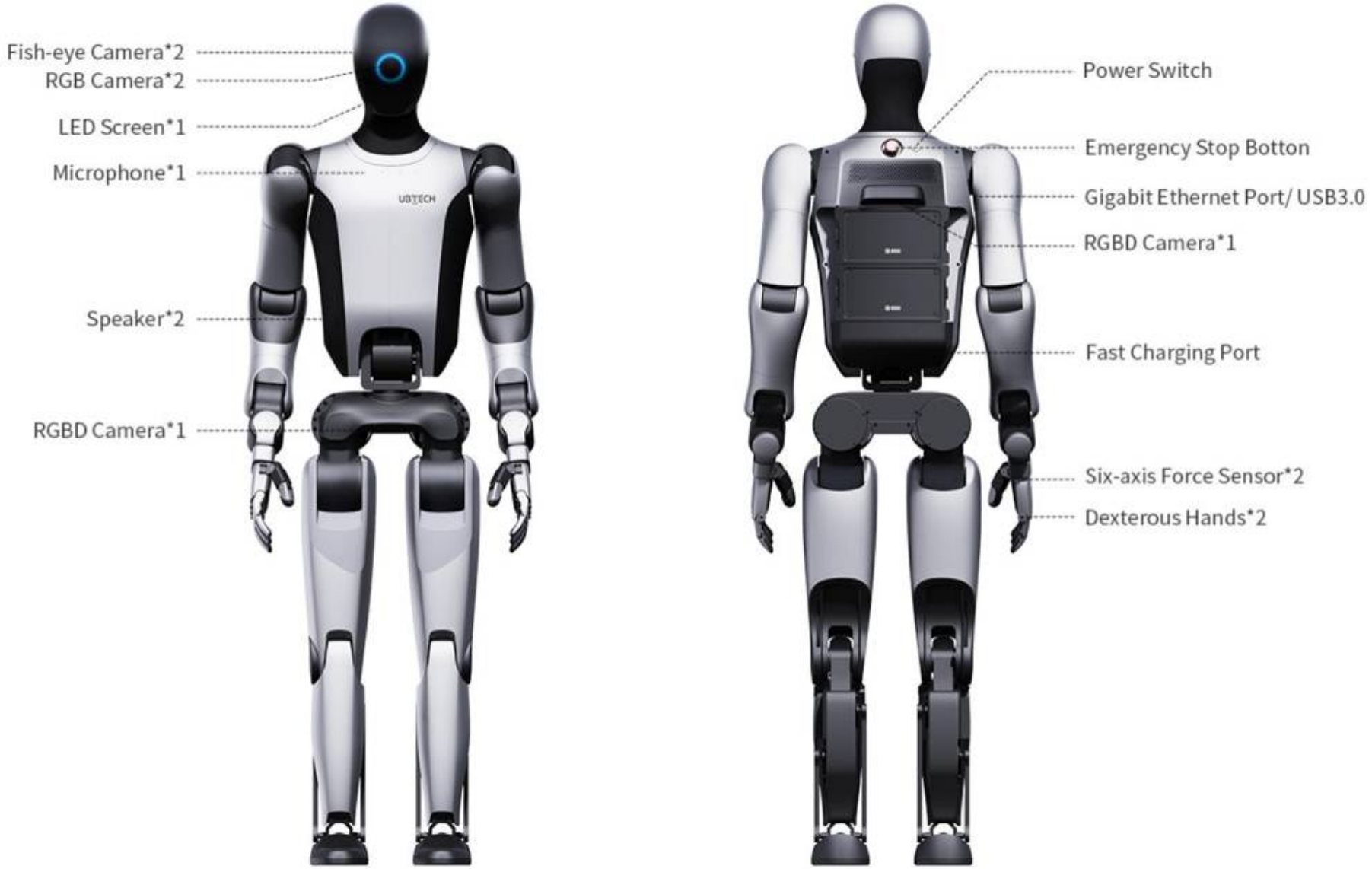
Co-Agent Specialization
and Coordination

**Intention Understanding ✓ Task Planning ✓**
**Tools Using ✓ Anomaly Detection and Handling ✓**

# Production Line Task-Driven Swarm Intelligence for Humanoid Robots "BrainNet 2.0" + Co-Agents Building the Dual-Loop AI System



# Product Specifications





# Dream with Robots