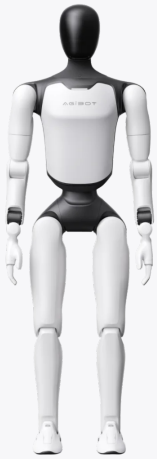
AGIBOT A3 ULTRA

AGIBOT A3 Ultra & AGIBOT A3 Ultra Developer

Humanoid platform for autonomous mobility, perception and manipulation

173 cm height | 56 kg | 51 active DoF



Product overview

The AGIBOT A3 Ultra is an advanced humanoid robot for autonomous applications, high-end demonstrations and interactive services. The platform combines autonomous mobility, localization and navigation with visual servo manipulation, perception-based walking and autonomous charging. The AGIBOT A3 Ultra provides the main functions approved by AGIBOT. The AGIBOT A3 Ultra Developer adds an open platform for secondary development, proprietary software, sensor integration and individual applications.

Performance data

Active degrees of freedom	51 DoF
Peak joint torque	320 Nm
Walking / running	up to 1.8 / 5 m/s
Payload per arm	5 kg
Dexterous hands	Omnihand 10, 10 DoF each

Energy & operation

Battery capacity	1,152 Wh
Overall endurance	up to 8 hours
Charging methods	direct, swap, autonomous
Charging time	up to 2 hours
Input voltage	110 - 220 V

Typical applications

AUTONOMY
Localization, navigation and autonomous charging

MANIPULATION
Visually guided tasks with dexterous hands

INTERACTION
Interactive services, presentations and high-end demos

DEVELOPMENT
AI research and integrations with the Developer version

Technical data & versions

AGIBOT A3 Ultra and AGIBOT A3 Ultra Developer

AGIBOT A3 ULTRA

Use of the main functions approved by AGIBOT. No secondary development at platform level.

With Omnihand 10 dexterous hands

AGIBOT A3 ULTRA DEVELOPER

Open platform for secondary development, proprietary software, sensor integration and individual applications.

With Omnihand 10 dexterous hands

Mechanics, sensors and communication

Dimensions	173 x 52 x 30 cm
Weight	56 kg
Degrees of freedom	51 active
Neck / arms	2 / 2 x 7 DoF
Waist / legs	3 / 2 x 6 DoF
Hands	2 x Omnihand 10
Peak knee joint torque	320 Nm

LiDAR	Mid360
RGB-D cameras	D457 chest, D415 pelvis
Additional perception	binocular + surround view
Positioning	GPS, GPS RTK, UWB
Audio	8-channel microphone array
Interaction	screen, touch, lights
Wireless	WiFi, Bluetooth, 4G/5G

Computing platform, autonomy and software

- **COMPUTING PLATFORM** — Two RK3588 basic compute boards and NVIDIA Thor for high-level computing.
- **AUTONOMOUS MOBILITY** — Localization, navigation, all-terrain perceptual walking and autonomous charging.
- **MANIPULATION** — Visually guided manipulation using RGB-D sensors and dexterous hands.
- **DEVELOPMENT** — Secondary development is supported by the Developer version.
- **SYSTEM MAINTENANCE** — Handheld wireless terminal and smart OTA upgrades.

Interaction and operation

A curved large-format screen, shoulder touch sensors, an 8-channel microphone array, speakers and omnidirectional indicator lights support multimodal interaction. Direct charging, battery swapping and autonomous charging enable different operating concepts. Actual endurance depends on operating conditions, movement speed and payload.

Note

Technical data according to the provided manufacturer and product information. Subject to change.