

Walker C1

Frequently Asked Questions (FAQ) _0820_R_EN

Table of Contents

I. Product Overview & Specifications.....	2
II. Unboxing & Deployment.....	5
III. Greeting Reception.....	7
IV. Tour Guidanc.....	7
V. Intelligent Interaction.....	8
VI. Dance Performance.....	11
VII. Teleoperation.....	12
VIII. Cloud Platform.....	13
IX. Accessories & Hardware.....	13
X. Battery & Charging.....	14
XI. Safety & Maintenance.....	16
XII. Secondary Development.....	17
XIII. Transportation.....	20

I. Product Overview & Specifications

Question	Answer
What is Walker C1?	UBTECH Walker C1 is the world’ s first new-generation full-size humanoid robot designed for “urban symbiosis” . It combines aesthetic functional design with high-dynamic motion capabilities, and is equipped with AI large models. Leveraging embodied intelligence technologies and comprehensive safety mechanisms, it brings technological warmth to enrich everyone’ s daily life.
What are the core technologies?	AI large models, VLN/VLA, 3D intelligent navigation, learning-based motion control, and other key embodied intelligence technologies.
What scenarios is it suitable for?	Commercial scenarios including intelligent tour-guidance, welcome reception, information consultation, urban crowd guidance, entertainment performances, as well as scientific research, education and secondary-development use cases.
What are the prohibited scenarios?	Strictly prohibited in medical, military, or other non-commercial scenarios; do not use in environments with flammable/explosive materials, strong electromagnetic interference, etc.
Height and arm span?	Height: 164 cm; Arm span: 1280 mm (excluding dexterous

	hands).
How much does it weigh?	Approx. 55 kg (with model hands) / approx. 56 kg (with dexterous hands).
How many degrees of freedom does it have?	Total of 53 degrees of freedom: 31 located in the trunk and 22 located in the dexterous hands (including the passive state).
How many degrees of freedom are there?	Legs: 6 each; Waist: 3; Arms: 7 each (excluding the Dexterous Hand); Head: 2. Optional Dexterous Hand: Each hand has 11 degrees of freedom (6 active degrees of freedom + 5 passive degrees of freedom).
Payload capacity?	Single arm: 3 kg; dual arms: 6 kg (excluding dexterous hands). Overloading is strictly prohibited.
What is the computing power configuration?	On-board NVIDIA® Jetson Thor™ 128 GB, with 2070 TFLOPS (FP4-sparse) compute power.
What sensors are available?	Stereo cameras, IMU, fisheye cameras.
Interaction display configuration?	2.8-inch circular interactive screen, battery status LEDs, microphone array, speakers.
Battery life?	Comprehensive battery life: 2.5–3 hours.
OTA upgrade support?	Supports intelligent OTA upgrades for continuous feature iteration.
Operating system?	Ubuntu + ROSA 2.0.

Electrical specifications?	Rated voltage: 48 V DC / 8 A; Charging: 52 V DC / 14 A Max.
Operating temperature & humidity?	Temperature: 3°C~40°C; Relative humidity: 30%~80% (non-condensing). Storage: -10°C~50°C.
Can it be used outdoors?	The working environment is indoors; outdoor use is not recommended.
Which large model is used?	Currently uses the Alibaba Bailian platform, with continuous iterative improvements.
Is the large model self-developed or third-party?	Currently uses Alibaba Bailian' s full-modal model “omni” , which supports visual recognition and memory in addition to speech. More models will be supported in the future.
Does the large model run locally or in the cloud?	Both cloud and local operation are supported. Cloud models offer better performance, while the on-board compute is sufficient for local large models.
Is the software / large model charged separately?	Currently free; future annual subscription fees may apply.

II. Unboxing & Deployment

Question	Answer
Does it require professional installation?	No, but follow the instructions in the manual. Supports self-unboxing: stand up autonomously and walk to the ground. For safety, it is recommended to watch the guidance video in advance and have two people collaborate.
How long does self-unboxing take?	From remote-controlled self-unboxing to the robot standing on the ground takes about 20 seconds.
Does it support the hanging bracket unpacking function?	Yes. See the “Walker C1 Quick Start Guide – Hoist Unboxing” for detailed procedures.
Can it pack itself back into the box?	Currently only hoist-assisted packing is supported; autonomous packing will be available in a future OTA update.
How long does boot-up take?	From pressing the power button, completing self-test, to entering remote control mode takes about 2–3 minutes.
Minimum working space requirements?	Single robot: no less than 4 m ² (2 m × 2 m); collaborative passage width ≥ 1.5 m.
Ground conditions requirements?	The floor must be level, with flatness error ≤ 5 mm/m ² , no water, oil, or sharp debris; floor load-bearing capacity ≥ 150 kg/m ² .
Lighting requirements?	Working area illumination ≥ 200 lux; avoid direct strong light

	on cameras or excessively dim conditions.
Network requirements?	For online use: Gigabit Ethernet recommended, latency $\leq$ 100 ms, packet loss $\leq$ 1%.
Does on-site deployment require re-commissioning?	Different scenarios entail different requirements – for example, guided tour scenarios often require on-site debugging.
What supporting equipment and software/hardware are needed for on-site deployment?	Unboxing and charging tools are included in the flight case; a hoist (for packing and commissioning) is also required. Scenarios vary – e.g., for exhibition hall guidance, a microphone is recommended. If Wi-Fi interference is strong or quality is poor, a 5G module is recommended. For teleoperation, network devices, teleoperation equipment, and a PC with motion-capture software are required. It is recommended to bring a laptop for all scenarios to check device status via the web interface and make necessary settings.

III. Greeting Reception

Question	Answer
How to activate the Guest Welcome feature?	Triggered via voice wake-up to initiate dialogue-based greeting.
What does the guest reception plan include?	A combination of voice, motion, facial expressions, and on-screen text: self-introduction, visual-recognition-based greetings/compliments, handshake invitations, and voice-controlled actions.
How many languages are supported?	Greeting supports Chinese and English.

IV. Tour Guidanc

Question	Answer
How does tour guidance work?	Walks along a cloud-configured route, explains at each point, and supports Q&A interaction.
Can it talk while walking?	Yes.
Does the robot exhibit anthropomorphic	Point-based narration supports custom facial expressions, diverse narration gestures, and anthropomorphic gait.

behavior when in the narration mode?	
What navigation technology is used?	Self-developed U-SLAM pure-vision navigation, spatial perception, active obstacle avoidance and detouring.
Will it collide with walls or people?	Automatic obstacle avoidance and detouring prevents human-robot / robot-object collisions; virtual walls can define restricted areas.
Is tour guidance available offline?	Both offline and online modes are available.
What if the exhibition hall is too noisy?	An external microphone is supported to ensure sound pickup quality.
Is the narration content modifiable?	Dialogue scripts can be flexibly configured via the backend.

V. Intelligent Interaction

Question	Answer
How to wake up the robot?	Wake-up word: “Walker Walker” . (Q4 supports intelligent wake-up via face recognition and common greetings like “Hello” .)
Screen display performance?	Response time from command to screen < 100 ms; peak brightness > 800 nits, visible outdoors.

Can it converse offline?	Supports Chinese/English offline conversation: wake-up, noise suppression, continuous dialogue, interruption, and voice-action commands. (Timeline: Q4)
What is the latency for online conversation?	End-to-end latency < 2 seconds under good network conditions.
What body-interaction skills are supported?	Greeting, handshake, heart gesture, etc. (combining voice, movement, and facial expressions).
Precautions during interaction?	Maintain at least 1.5 m distance during conversation; do not push or pull the robot forcibly; speak at normal volume within 3 seconds. With a wireless microphone, the conversation distance can reach 5 m.
Can the robot's persona be customised?	The "Creation Center" allows you to create an agent: personality description, voice, knowledge base, voice commands, and bind it to the robot. (Q4)
How to build a knowledge base?	The cloud-based Creation Center supports knowledge base configuration. (Q4)
Can custom skills be defined?	Yes – custom combinations of voice, motion, and facial expressions can be generated as skills and deployed for

	testing. (Q4)
Is interaction limited to fixed commands?	No – motion commands are understood and invoked by the large model.
Does it support mixed Chinese/English recognition/speech? Dialects?	Supports mixed Chinese and English; dialects are not supported at present.
Can it recognise objects?	Yes – it has visual understanding capabilities. You can say “recognise the scene in front” to invoke the function.
Can it identify who is speaking to it? Does it support VIP recognition and conversation memory for returning visitors? Accuracy?	Yes, it supports VIP recognition and dialogue memory. (Q4)
Which online LLM is used by default? Is offline LLM supported?	Default online model: Alibaba; offline LLM support is planned for Q4.

VI. Dance Performance

Question	Answer
What dances are built in?	Human-robot waltz, Chinese-style dance, etc., spanning elegant, dynamic, and youthful styles.
How capable is the robot of dance movements?	Self-developed whole-body motion control algorithms – agile waist and legs; high-difficulty jumps and quick turns are smooth and controlled.
How long is each dance?	Two dances, each over 30 seconds; performable on thin carpets, marble, and epoxy floors.
How long can it dance continuously?	Recommended continuous operation ≤ 10 minutes.
How is the music played?	Music can be played locally or via external speakers; no network dependency.
Can multiple robots dance in a group?	Yes – supports group control with centimetre-level synchronisation and low-latency command distribution, suitable for commercial shows, cultural tourism, and large stages.
Can I choreograph my own dance?	The motion-creation platform will be available at a later stage, supporting choreography via motion-capture suit and video-based choreography from demonstration learning.

VII. Teleoperation

Question	Answer
What can teleoperation do?	Operators can map human posture and hand movements to the robot, enabling full-body motion replication, dexterous-hand manipulation, performance choreography; supports motion recording for imitation-learning datasets, etc.
What teleoperation devices are supported?	Motion-capture suit (Xsens + Manus gloves) and VR (Pico) – both full-body and half-body teleoperation are supported.
Can motions be recorded?	Yes – full-body motion recording via motion-capture suit.
Can the dexterous hand be teleoperated?	Gloves (motion-capture) support fine hand operations and gestures; VR gloves support basic functions.
Can the teleoperator view the on-site scene during teleoperation?	Video feed from five-camera viewpoints provides full situational awareness of the surrounding environment to ensure teleoperation safety.
Can voice interaction be used during teleoperation?	Currently, microphone audio from the robot can be sent back to the VR headset; audio from the VR headset to the robot speaker is under development.
Are there limitations on what can be manipulated?	The dexterous hand cannot yet grasp hard/smooth objects or perform fine grasping of small items; lower-limb accuracy during full-body teleoperation is still being optimised.

VIII. Cloud Platform

Question	Answer
What can the cloud platform do?	It supports viewing robot hardware/software status, managing maps and navigation data, controlling motion states, managing expressions/voices/dialogue, configuring tour tasks, managing logs and fault data, and setting network language and volume.
Can business workflows be customised?	For tour-guidance tasks on the cloud platform, configuration is supported for routes, narration scripts, motion expressions and other contents within the tour workflow.
How to build and publish a map?	Cloud platform: create a new map (import map) → edit location points and virtual walls → save map → use map and localisation.
What if localisation is lost?	Re-use the map on the cloud platform.
Can the voice be switched?	Yes – three voices are available: male, female, child.

IX. Accessories & Hardware

Question	Answer
What hand	Standard: model hands (detachable, compatible with third-

configurations are available?	party dexterous hands/grippers). Optional: UBT third-generation dexterous hand Lite version.
Does it support grippers?	Yes – supports third-party two-finger grippers and wrist-mounted cameras, controllable via teleoperation.
What remote controllers are available?	Standard-included remote controller (six-direction movement, gait/task/mode switching, emergency stop); optional handheld console (joystick + touch-screen APP for advanced control).
Is Pad control supported?	Yes – via a dedicated APP for advanced control.
Does it support 4G/5G?	Provides global 4G/5G connectivity; a 5G module (optional) can be plugged directly into the body.
Is there a display stand?	Yes – a static display stand for powered-off exhibition, aesthetically pleasing.
Are industry-specific robotic uniforms available?	Customizable for 2-3 sets (receptionist, narrator, server, dancer). Currently, one set each for dancer and narrator are available as options.

X. Battery & Charging

Question	Answer
Charging precautions?	Standard battery included. Two charging methods: 1) Directly charge the robot using

	the power adapter; 2) Remove the battery and charge it separately using the battery direct-charging adapter cable. Use only the supplied charger with the supplied battery (C0445D5). Use a grounded 100-240 V / 50-60 Hz socket; ambient temperature 0~40°C; well-ventilated, away from fire sources; charging with the robot powered off is recommended.
How to tell when fully charged?	All battery level LEDs are lit – remove the charger promptly.
Is the battery replaceable?	Yes – press the release buttons on both sides of the battery compartment, pull out horizontally, and replace.
How to store for long periods?	If unused for >1 month: power off, remove battery, store in a dry, ventilated place at 0~30°C. Store the battery separately at 0~25°C, 30%~60% humidity, check monthly and keep at 50%~80% charge.
How long to fully charge?	From 0% to 100% takes about 90 minutes.
Actual battery life in different scenarios (guidance/performance/st andby, etc.)?	Extreme endurance: ≥ 3 h (stepping-in-place condition, 100%→0%); Typical endurance: ≥ 2 h (dancing condition, 100%→0%).

XI. Safety & Maintenance

Question	Answer
How does the emergency stop work?	In an emergency, immediately press the Emergency Stop button on the robot' s back to lock all motors. Note: after pressing, the robot cannot maintain balance – use the hoist to lift it and then power cycle. In addition to the back E-stop, there is a Servo Emergency Stop Cable for professional use (see manual).
Personnel safety requirements?	No people or objects within the robot' s movement range during operation; maintain ≥ 1.5 m distance; use only in enclosed areas with physical barriers; non-professionals must not disassemble core components.
What if it falls?	Immediately power off after a fall, then use the hoist to lift it. Contact delivery personnel for repairs. The dexterous hand can be replaced by the user; wrist repairs require on-site or factory service (replacement within 24 hours).
Routine maintenance?	Power off, wipe the body with a soft dry cloth (focus on cameras); check joint screws, ventilation slots, fans, battery compartment connectors, and remote-control joysticks.
How to handle common	Cannot start: check the power button, charge for 10 minutes

faults?	and try again. Won' t charge: check socket connection (green = full / not connected, red = charging). Six-axis force anomaly: lift the robot, press E-stop for 10 s, then restart.
Can faults be logged and traced?	Yes – supports exception logging with error codes, exportable for review.

XII. Secondary Development

Question	Answer
Is dance editing provided?	The SDK provides “dance motion incremental interfaces” .
Can the customer-provided large-language model be swapped in?	Yes – but only if the model is deployed in the cloud or on the edge.
Which development languages are supported?	C++ and Python.
Is there a specific robot version required for SDK development?	It is recommended to use main version 0.0.6 or above.
Is a Software Development Kit (SDK) provided?	Yes.

Is an Application Programming Interface (API) provided?	Yes.
What functions do the SDK/API support?	Robot motion control, arm control, sensor access, navigation, telemetry, system configuration, diagnostics.
Can customers develop and deploy custom applications on the robot platform?	Yes.
Can customers use the SDK/API to develop custom workflows and integration functions?	Yes.
Does the system support ROS2 with URDF or equivalent robot description models?	Yes.
Which operating systems are supported for SDK development?	Currently, it is recommended to run custom programs inside the robot's ROS 2 container – system environment: Ubuntu 22.04 + ROS 2 Humble. Development on Mac and Windows is not supported at this time.
What examples are	Includes: audio_player (audio playback),

included in the SDK demo programs?	powerboardstate_subscriber (power board status), batterystate_subscriber (battery status), pub_arm_command (arm control), pub_hand_command (dexterous-hand control), pub_head_command (head control), sub_hands_state (hand status), sub_robot_state (robot status), camera_subscriber (camera subscription), etc.
What are the prerequisites for SDK secondary development?	Need to flash the corresponding custom development package and configure the development environment. Before development, ensure the robot is suspended on the protection frame, with feet at least 20 cm off the ground. Ensure the controller has been homed/started and the robot is in developer mode.
What are the risk warnings for secondary development?	① Ensure no obstacles in the motion range; ② Do not touch the robot during motion; ③ In the standing state, do not press the power button in non-emergency situations (otherwise servos de-energise and the robot falls); ④ The supplier assumes no responsibility for secondary-development results – customers must assess technical risks themselves.

XIII. Transportation

Question	Answer
How is the robot transported?	Packaged in a C1 flight case.
How long does delivery take after ordering?	Delivery times vary by region – please confirm with your sales manager.