AI Reception Autonomous Mobile Robot
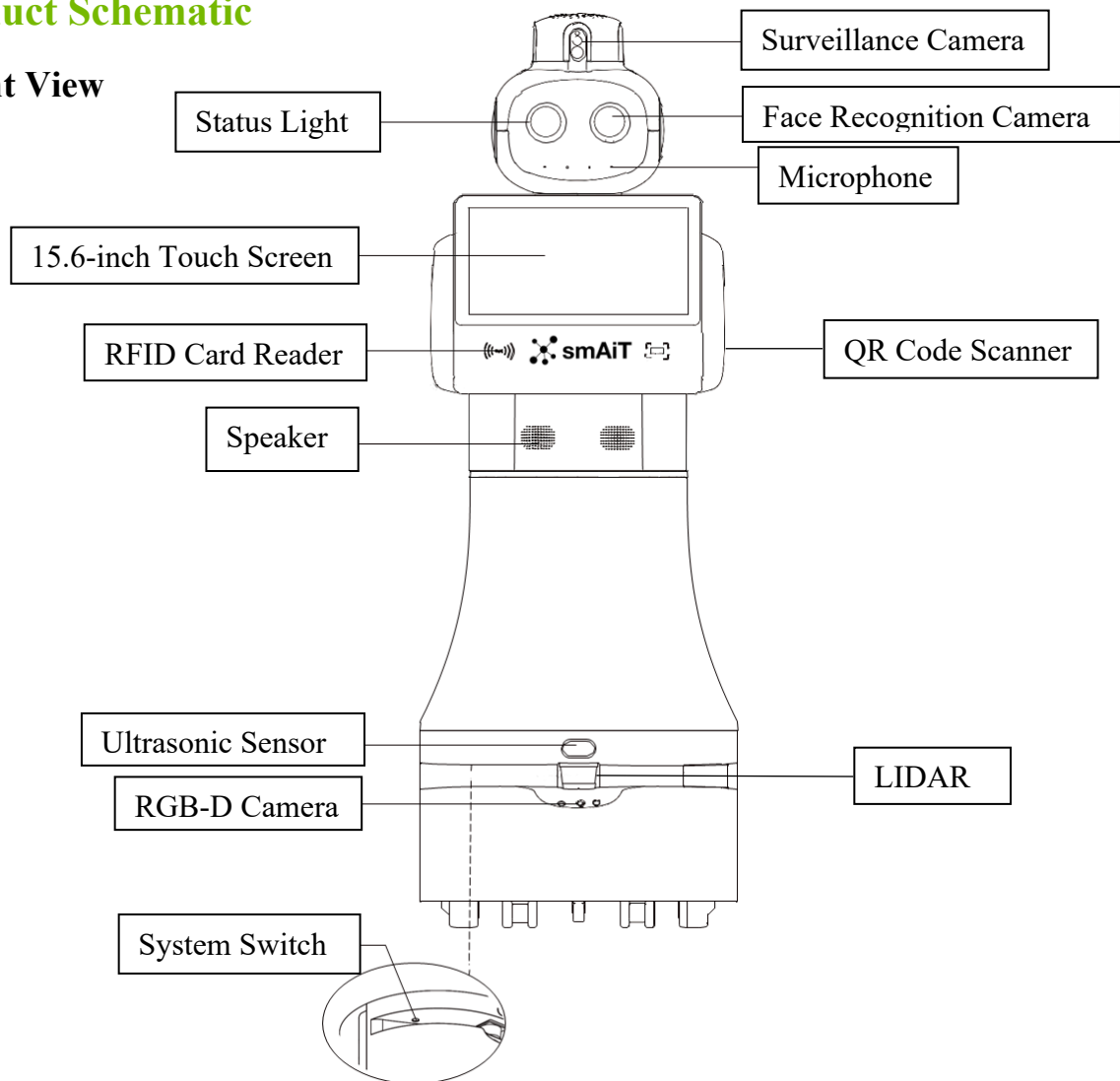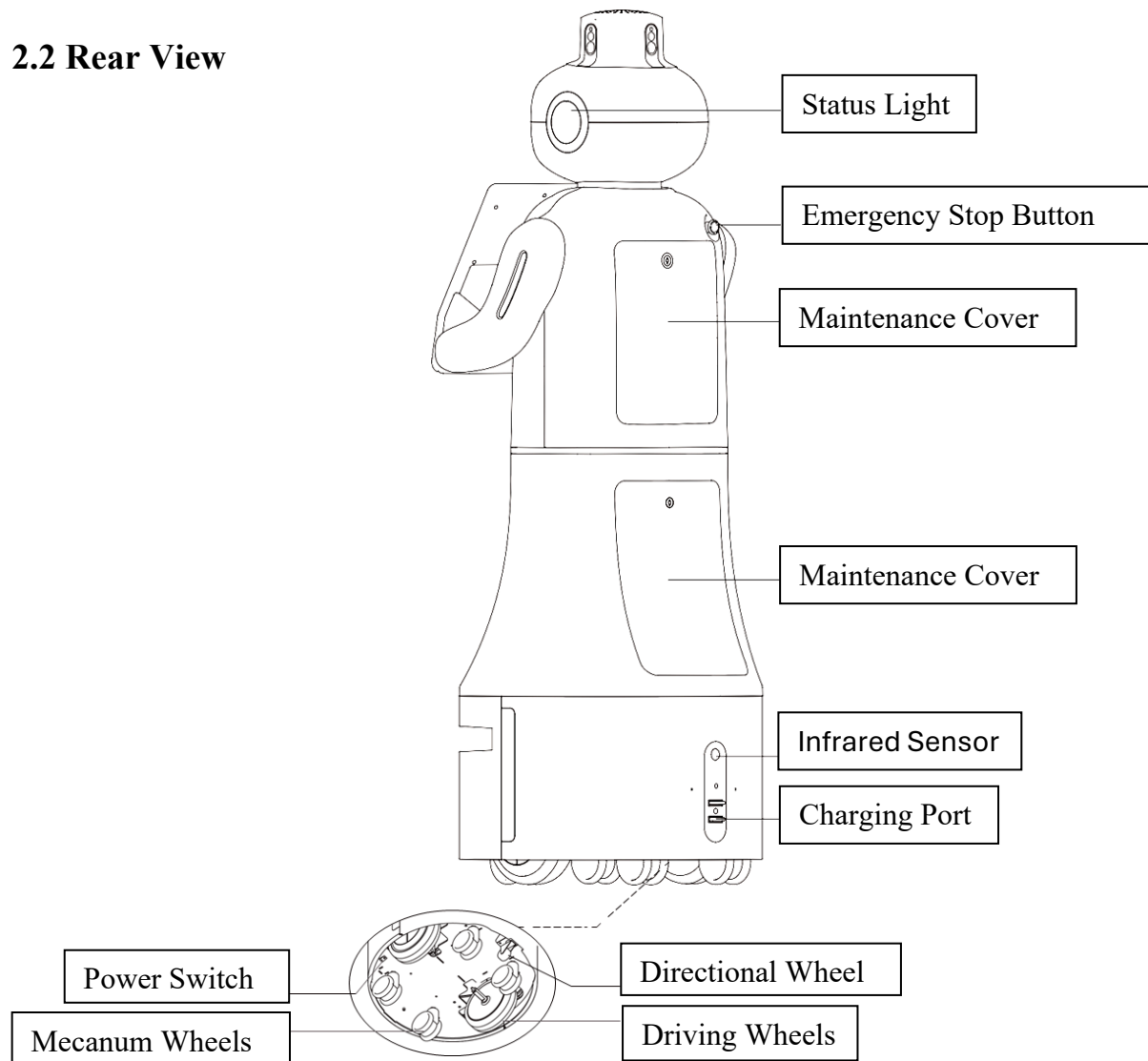
Jackie

1. Product Overview

Jackie is an AI-powered Reception Autonomous Mobile Robot designed to provide versatile service solutions, including welcoming guests and ensuring security. Engineered for deployment in environments such as business centers, office buildings, hotels, supermarkets, restaurants, hospitals, and exhibition halls. Jackie features advanced functionalities including proactive greetings, security patrols, video surveillance, guided tours, product demonstrations, and consultation services. Jackie support for application customization ensures seamless integration into diverse operational scenarios, meeting the unique requirements of various industries with efficiency and reliability.

2. Product Schematic

2.1 Front View

Surveillance Camera

Status Light

Face Recognition Camera

Microphone

15.6-inch Touch Screen

RFID Card Reader

QR Code Scanner

Speaker

Ultrasonic Sensor

LIDAR

RGB-D Camera

System Switch

2.2 Rear View

Status Light

Emergency Stop Button

Maintenance Cover

Maintenance Cover

Infrared Sensor

Charging Port

Power Switch

Directional Wheel

Mecanum Wheels

Driving Wheels

3. Product Parameter

	Overall dimension	500mm×500mm×1440mm
	Package dimension	620mm×620mm×1645mm
	Net weight	54kg
	Gross weight	65kg
	Operating system	Android 12
Basic Parameters	Touchscreen	15.6-inch; resolution:1920×1080
	CPU	RK3588
	RAM	2GB
	ROM	16GB
	Network	4G/WIFI

	Battery capacity	24V，20Ah
	Working hours	8h
	Charging time	4.5h
	Standby time	9.5h
Environment	Operating environment	Temperature: 5℃~45℃; humidity: 5%～85%
	Storage environment	Temperature: -10℃~60℃; humidity: 5%～85%
Chassis Parameters	Mapped area	≤10000m²
	Movement speed	0~0.8m/s(user-defined)
	Width of driving passage	≥800mm
	Sensor	Single-line laser, RGBD TOF camera (optional), ultra-sonic, 6-axis gyroscope
	Width of surmountable trench	≤40mm
	Climbability	≤5°
	Height of surmountable obstacle	≤10mm
	Minimum turning radius	0
	Maximum rotational speed	60°/s
	Positioning accuracy	±5cm
	Wheels	2 differential wheels + 4 mecanum wheels
Charging Piles	Charging mode	Automatic recharging by contact
	Input	AC110-240V
	Output	29.4V，6A
Other	Microphone	Linear four-microphone array pickup. The effective pick-up distance is within 3 meters
	Loudspeaker	2
	Face recognition camera	2M pixels, effective recognition distance 0.5~ 3m, recognition rate >99%, recognition time < 1s.
	Surveillance cameras	4, 2 million pixels, HD ICR infrared night vision
	RFID card reader	The response speed of identification card reading <1s, and the reading distance is 0~30mm
	QR code scanner	Support one-dimensional, two-dimensional code, the best reading distance is 100mm~150mm

4. Product Functions

4.1 Robot Functions

4.1.1 Voice Interaction

- Activates when the user says wake words like "hello."
- Enables voice-based communication and questions with the robot.

4.1.2 Temperature Measurement

- Measures visitors' body temperature.
- Announces "normal temperature" if within range.
- Issues a prompt for abnormal temperatures and records the visitor's face for reference.

4.1.3 Attendance

- Tracks employee attendance according to platform rules.
- Attendance details are accessible via the integrated service platform.

4.1.4 Broadcast Advertising

- Advertisements can be displayed on the robot's touch screen and main display screen.

4.1.5 Visit Appointment

- Facilitates appointments through:
    - Facial recognition.
    - ID authentication.
    - QR code verification.
    - Mobile invitation codes.
    - Manual on-site registration.

4.1.6 Company Introduction

- Provides an overview of companies in the building.
- Displays company locations to guide visitors.

4.1.7 Advisory Services

- Answers user questions and provides advisory services.
- Integrated with the service platform for smart responses and Q&A functionality.

4.1.8 Utilities

- Shows locations of utilities and facilities within the building.
- Helps users navigate and locate resources easily.

4.1.9 Meeting Sign-in

- Authenticates attendees for meetings.

- Links with access gates for automatic entry after authentication.
- Allows users to:
  - View sign-in details.
  - Export attendee lists.
  - Manage attendee information on the integrated service platform.

4.1.10 Information Display

- Displays:
  - Consultation information.
  - Announcements.
  - Overviews of CPC construction sites, hotels, and office buildings.
- Configurable via the integrated service platform.

4.1.11 Interactive Stories

- Delivers immersive, interactive storytelling experiences.
- Designed for CPC construction sites, schools, and hotels.
- Enhances user understanding of topics in an engaging way.

4.2 Application setting

4.2.1 Frontend Gateway

- Displays the robot's gateway.

- Allows altering of the gateway settings.

4.2.2 Equipment Number

- Displays the robot's unique number.

- Inspects and checks users' equipment.

4.2.3 Software Version Number

- Displays the current software version for tracking and troubleshooting.

4.2.4 Semantic Server

- Enables chat semantics with access to iFLYTEK's open skills like:

  - FAQs, knowledge graphs, poems, riddles, calculator, and epidemic queries.

4.2.5 Virtual Navigation Bar Lock

- Locks virtual navigation bars to avoid accidental operations in crowded areas like malls.

- Prevents the display of virtual navigation bars when disabled.

4.2.6 Dialog Setting Lock

- Locks the robot's dialog interface to prevent access to the settings interface.

- Requires a password reset if the robot attempts to access settings.

4.2.7 Welcome Setting

- Configures welcome speeches, including broadcast content and intervals.

4.2.8 Temperature Measurement Settings

- Enables/disables temperature measurement mode.

- Configures the temperature measurement interface.

4.2.9 Face Mask Reminder

- Controls the broadcast for reminding users to wear face masks.

4.2.10 Face Greeting

- Enables the robot to greet users based on recognized faces.

4.2.11 Network Module

- Diagnoses initialization issues of the network module.

- Assists in troubleshooting network problems.

4.2.12 Semantic Module

- Diagnoses registration and return issues with the semantic platform.

- Locates problems with semantic services and server responses.

4.2.13 Voice Recognition Module

- Checks if the recording module is functioning properly.

- Diagnoses issues with audio monitoring, voice authorization, and voice recognition.

4.2.14 Face Recognition Module

- Detects if the face recognition module is functioning normally.

- Locates face recognition issues.

4.2.15 Infrared Temperature Measurement Module

- Check if the infrared temperature module is working.

- Diagnoses activation issues with the module.

4.2.16 Light Module

- Inspect light module connectivity.

- Verifies robot number synchronization.

4.2.17 Scanner Module

- Checks scanner connectivity.

- Diagnoses data reading issues and locates scanner problems.

4.2.18 Meeting Sign-in

- Controls when to enable the meeting sign-in feature.

- Displays the meeting sign-in page directly on the application interface after enabling.

4.2.19 Advertisement Setting

- Controls whether to enable or disable sound for video advertisements.

4.2.20 Visitor Authentication

- Requires enabling either visitor authentication or on-site registration.

- If disabled:

  o Directs users to the on-site registration page.

- If enabled:

  o Displays the invitation code verification interface first.

4.2.21 Invitation Code Verification

- Controls whether visitors can authenticate using an invitation code.

4.2.22 Face Recognition Verification

- Controls whether visitors can authenticate using face recognition.

4.2.23 On-site Registration

- Requires enabling either visitor authentication or on-site registration.

- Controls access to the on-site registration feature.

4.2.24 2D-Code Scanner

- Controls the enabling or disabling of the 2D-code scanning module.