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# AI-01 Specification Sheet V1.0

AI Full-Featured Toy Interaction Core

Compatible with Large Models such as Doubao, Deepseek, ERNIE Bot, Tongyi Qianwen, Chartgtp etc.

## 1. Overview

The AI Full-Featured Toy Interaction Core is designed to provide users with a high-response, low-latency natural language interaction experience. It is suitable for multiple scenarios including smart toys, auxiliary education, IP customized products, lighting systems, and digital gifts.

## 2. Hardware Parameters

| Parameter | Specification |
| --- | --- |
| Processor | Dual-core 32-bit DSP, supporting single-precision floating-point arithmetic and mathematical operation acceleration engine, with I-cache, D-cache, MMU and other functions; maximum main frequency of 320MHz; integrated 8MB Flash memory and 8MB SDRAM |
| Housing Material | ABS Plastic |
| Wi-Fi | IEEE 802.11b/g/n |
| Speaker Power | 4Ω 3W |
| Bluetooth | Bluetooth v5.0 + BR + EDR + BLE |
| Operating Voltage | Type-C 5V/1A |
| Charging Specification | 3.3V ~ 4.2V |
| Function Interfaces | 2x Microphones, 1x Speaker, 1x Lithium Battery Interface, 1x LED, 2x LCD |

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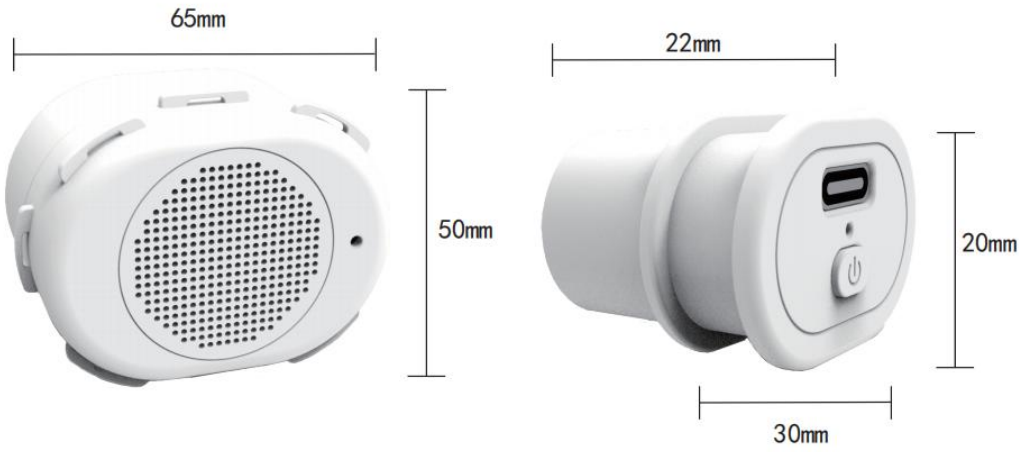
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|---|---|
| Operating Temperature Range | -40°C ~ +85°C |
| Connection Methods | Wi-Fi Connection, Bluetooth Connection |

## 3. Main Functions

- Real-time AI voice conversation, no need for button activation.
- Real-time voice interruption for high interaction efficiency.
- Support for custom agents (role setting, voice setting, AI large model), providing agent rapid development support including no-code, low-code, and high-code workflows.
- Multilingual support: seamless switching between Chinese and English.
- Access to multiple large models: Chatgtp, Deepseek, Doubao, ERNIE Bot, Tongyi Qianwen, iFlytek Spark, etc., all fully integrated.
- Support for large model text-to-speech, offering emotional interpretation and more human-like interaction experience.
- Support for large model voice cloning, achieving exclusive voice through second-level recording.
- Permanent free voice interaction experience.

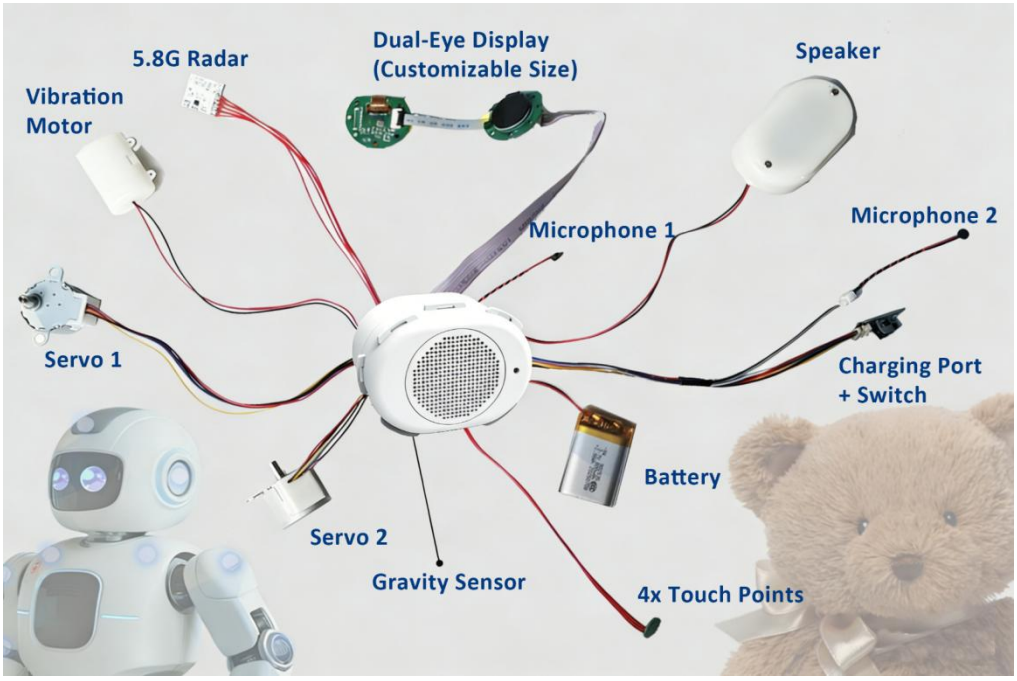
## 4. Dimensions & Interfaces

- Overall Core Dimensions: 65x50x50mm
- Button & Charging Port Dimensions: 30x20x22mm



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## 4.1 Component Schematic




## 4.2 Interface Functions

| Interface | Function |
|---|---|
| Servo/Motor | Provide action execution such as moving forward, nodding, waving, turning around, etc. |
| Centrifugal Sensing | Recognize movements for interaction (shaking, suspending, stroking, etc.) to trigger feedback. |
| Dual-Eye Display | Customizable size (single/dual-eye), supporting graphics, animations and various emotional animations. |
| 5.8G Radar Sensing | Automatically wake up and trigger welcome message when sensing human proximity; automatically enter sleep mode for energy saving when sensing distance. |
| Microphone 1/2 | External microphones with terminal spacing of 2.0mm (2P). |

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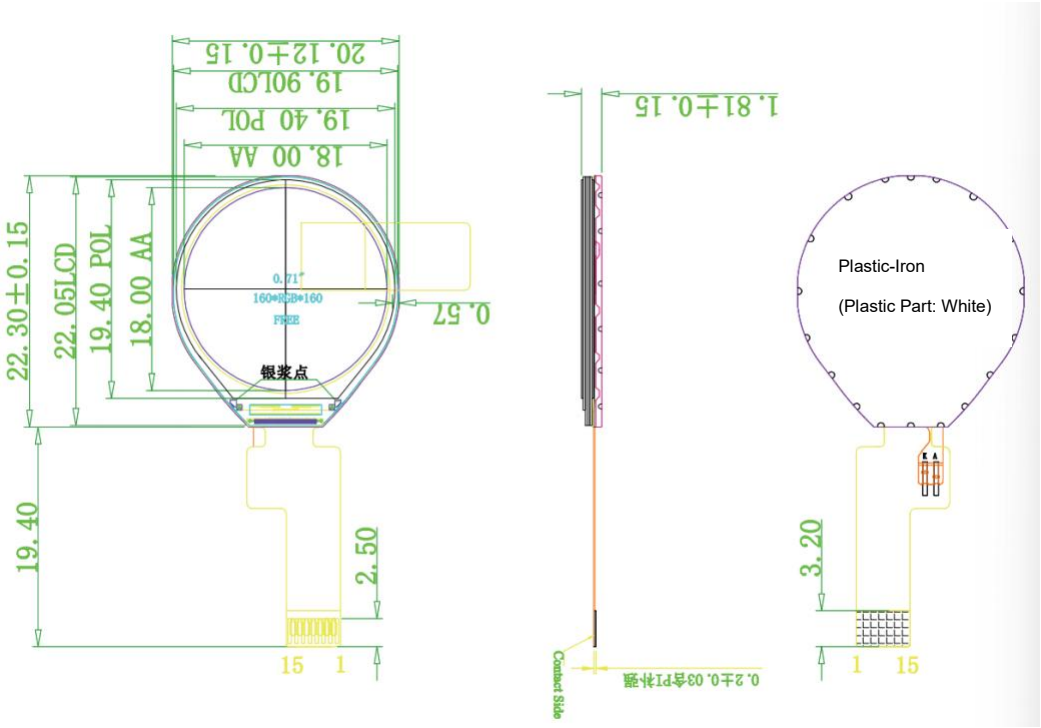
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| Touch Points | 1-6 customizable touch points, enabling feedback triggered by physical contact (patting, stroking, etc.). |

## 5. Key Operation Instructions

- Power Button: Long press to turn on/off in all modes.
- Wi-Fi Mode: Single click to wake up; double click to switch modes; triple click to disconnect Wi-Fi and re-enter network configuration.
- Bluetooth Mode: Single click to pause or play; double click to switch modes; triple click to disconnect Bluetooth and enter Bluetooth pairing.

## 6. Applicable LCD

Compatible with LCD screens with interfaces as shown in the diagram




## 7. Version History

| Version | Date | Details |
|---|---|---|
| V0.1 | 2025-10-13 | Initial Compilation |