WhizBot -Technical Specification

Product Name: WhizBot™
Product Category: Compact AI Service Robot

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1. Introduction

WhizBot™ is a compact AI-enabled service robot designed for indoor learning, interaction, and guided assistance. It combines autonomous mobility, voice interaction, and a touch-based interface to support educational, reception, and engagement use cases in supervised environments.

This document provides a technical overview of WhizBot's capabilities, requirements, and operational boundaries. It is intended for procurement teams, IT administrators, and technical evaluators.

2. Product Classification

- **Product Type:** Compact AI Service Robot
- **Primary Functions:**
    - Learning assistance
    - Smart reception and guided interaction
    - Multimedia engagement
- **Intended Environment:** Indoor, controlled spaces
- **Target Deployments:**
    - Schools and educational institutions
    - Learning labs and innovation centers
    - Offices and public-facing indoor areas

3. Physical Characteristics

Parameter	Specification
Form Factor	Compact mobile robot
Height	Approximately 75-85 cm
Weight	Approximately 10-12 kg

Chassis	Enclosed, impact-resistant housing
Mobility	Wheeled autonomous movement

All dimensions are approximate and may vary slightly based on configuration.

4. Human Interaction Interface

- **Display:** Integrated touch-enabled display
- **Screen Size:** Approximately 10-12 inches
- **Interaction Modes:**
  - Touch input
  - Voice interaction
  - Visual feedback via screen indicators

The display acts as the primary interface for content delivery, system interaction, and user guidance.

5. Audio & Visual Capabilities

- **Audio Input:** Multi-directional microphones for voice interaction
- **Audio Output:** Integrated speakers for speech and media playback
- **Camera System:** Front-facing camera system supporting interaction and recognition features

These capabilities enable conversational interaction, multimedia usage, and smart greeting functions.

6. Mobility & Navigation

- **Movement Type:** Autonomous wheeled navigation
- **Turning Capability:** Zero-radius rotation supported
- **Navigation Behavior:** Obstacle-aware indoor movement

- **Recommended Surfaces:** Smooth, flat indoor flooring.

WhizBot operates at controlled speeds to ensure safety in shared human environments.

7. Power & Charging

- **Battery Type:** Rechargeable lithium-based battery
- **Typical Operating Time:** Up to 6-8 hours (usage dependent)
- **Charging Methods:**
    - Automatic dock-based charging
    - Wired charging (when required)

Battery life and charging duration may vary based on usage patterns and environmental conditions.

8. Connectivity & Interfaces

- **Wireless Networking:**
    - Wi-Fi (2.4 GHz / 5 GHz)
- **Short-Range Communication:**
    - Bluetooth
- **Peripheral Support:**
    - USB-based external storage (supported formats only)

Connectivity enables content updates, cloud-assisted features, and remote interaction.

9. Software Platform Overview

WhizBot operates on an embedded software platform optimized for interactive robotics and assisted learning use cases.

The software stack includes:

- An embedded operating system designed for stability and secure operation
- A robotics control layer responsible for motion, navigation, and interaction coordination
- An application layer supporting learning, interaction, and reception-oriented functionalities

The platform supports:

- Voice-based interaction
- Touch-based user interfaces
- Multimedia content delivery
- Configurable personalization and interaction behaviors

Detailed software features and user-facing functionality are documented separately in the Software Guide.

10. Performance Characteristics

Parameter	**Typical Value**
System Startup Time	< 2 minutes
Continuous Operation	6-8 hours (usage dependent)
-\Charging Time	3-4 hours
Voice Interaction Range	~1-2 meters
Operating Speed	Safe indoor speed

11. Environmental Requirements

- **Usage Location:** Indoor use only

- **Operating Temperature:** Standard room temperature
- **Lighting Conditions:** Adequate ambient lighting recommended
- **Ambient Noise:** Moderate or lower for optimal voice interaction

12. Safety & Operational Limitations

- Designed for assisted interaction and learning
- Not intended for security enforcement, surveillance, or physical intervention
- Not suitable for outdoor, industrial, or hazardous environments
- Users should not apply force to moving parts during operation
- Adult supervision recommended when used by children

13. Data & Privacy Considerations

- Personalization and recognition features are configurable
- WhizBot is not designed for covert monitoring or enforcement
- Data handling and storage depend on deployment configuration and institutional policies

14. Maintenance & Lifecycle Expectations

- Daily charging recommended for consistent availability
- External surfaces should be cleaned using a dry microfiber cloth
- Software updates should be installed when prompted
- For extended storage, fully charge the device and power it off

Proper maintenance ensures reliable performance and extended service life.

15. Disclaimer

The specifications provided in this document describe general capabilities of WhizBot™ and may vary

slightly based on configuration, software updates, or future hardware revisions. WHIZROBO Private Ltd. reserves the right to update specifications without prior notice.