TECHNICAL DATASHEET

NORA

Modular Physical Assistant with Embedded Intelligence



Model: NORA-V1

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1. General Overview

NORA is a modular physical assistant designed to operate autonomously with embedded voice, vision, and behavioral intelligence. It serves as a platform for interactive applications in personal, educational, and experimental environments.

The system combines multiple subsystems in a unified architecture:

- **Multimodal Interaction:** Speech recognition, synthesis, and computer vision for human-centered communication.
- Modular Control: Finite State Machine (FSM)-based control logic, agent-based decision modules, and customizable behaviors.
- Physical Mobility: Support for autonomous movement, obstacle detection, and environmental interaction.
- Data Awareness: Integration of a local NAS system for file storage and memory logging.
- **Expansion Ready:** Compatible with EdgeLink protocol for automatic discovery and management of external IoT sensors.

Its design philosophy prioritizes:

- Modularity: Each component (voice, vision, mobility, storage, agents) can be independently developed, tested, or replaced.
- **Privacy:** All processing is performed locally, without cloud dependency.
- **Transparency:** Fully documented and licensed under MIT for educational and research reuse.

NORA can serve as a testbed for embedded AI, robotics, and system integration, offering both real-time interaction and system-level autonomy.