

Stepr AI Glasses – Product Specification Document

Version: 1.0 (Market-Ready Draft)

Category: AI Wearable / Smart Glasses

Release Target: Q2 2025

Powered by: Stepr OS (based on SDK + GlassesApp)

1. Product Overview

Stepr AI Glasses are designed to redefine spatial computing and personal AI interaction through a fusion of advanced technology and timeless design. Powered by the Qualcomm AR1 Gen1 platform, these glasses deliver intelligent multimodal experiences — combining voice, vision, and contextual awareness — for hands-free productivity and creation. Paired with the Stepr GlassesApp, users can capture photos and videos, issue voice commands, and receive real-time AI assistance without ever reaching for their phones. Created for modern creators, professionals, and tech-forward consumers, Stepr blends comfort, privacy, and performance into an everyday wearable built for the future.

2. Design Overview & Technical Specifications

The Stepr AI Glasses integrate advanced imaging, sound, and processing systems within a lightweight 39.7g frame. Built around the Qualcomm AR1 Gen1 chipset, they feature a 12MP Sony IMX681 camera with HDR, EIS, and ultra-low distortion optics for stable, cinematic visuals. A five-microphone beamforming array ensures clear speech capture even in noisy environments, while open-ear directional speakers provide private, spatial audio without isolation. Connectivity through Wi-Fi 7 and Bluetooth 5.3 enables ultra-fast pairing and streaming, and a 173mAh lithium battery supports up to 4 hours of continuous operation — extended via a 3000mAh magnetic charging case.

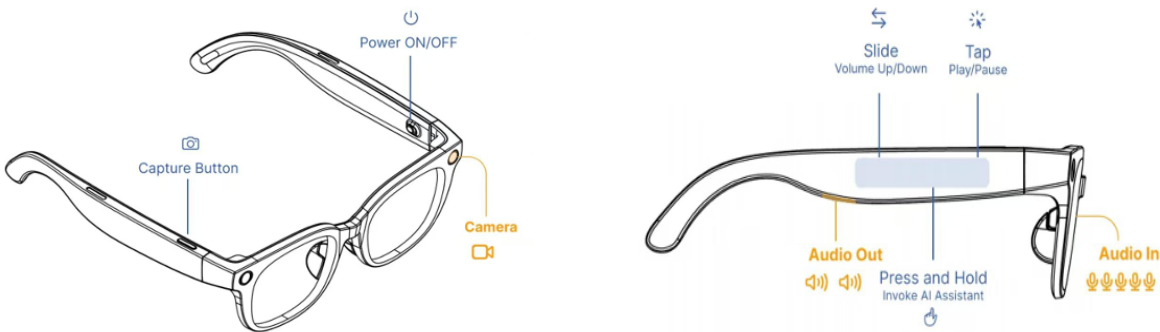


Figure 1 & 2: Stepr AI Glasses – Control, Camera & Audio Interface Layouts

Component	Specification
Processor	Qualcomm AR1 Gen1, Hexagon Tensor Processor
Camera	12MP Sony IMX681 with EIS, HDR, low-distortion optics
Video	1080p recording with real-time stabilization
Audio	5-mic beamforming, DNN noise reduction (up to 40dB)
Sensors	6-axis IMU, proximity, Hall sensor, wearing detection
Connectivity	Wi-Fi 7, Bluetooth 5.3
Charging	Type-C + Pogo-pin interface
Battery	173mAh (Glasses), 3000mAh (Charging Case)
Weight	39.7g (excluding lenses)
Material	TR90 polymer frame with metallic hinge

3. Software Architecture

Stepr OS combines on-device AI inference with cloud-based contextual intelligence for seamless performance and privacy. Its hybrid software stack includes the Stepr OS SDK, AI-Hub inference engine, and the companion GlassesApp for Android and iOS. Users can access natural language dialogue, visual understanding, real-time translation, and personalized assistance. All media syncs securely to Stepr Cloud, with OTA firmware updates ensuring continuous feature evolution.

4. Target Users & Scenarios

Stepr AI Glasses cater to three key audiences — creators, enterprises, and consumers. Creators enjoy hands-free capture and AI-guided storytelling; enterprise users gain remote assistance and translation; and consumers benefit from productivity, navigation, and everyday AI companionship.

5. Industrial Design & Ergonomics

Crafted from TR90 composite polymer, the frame is 30% lighter than standard PC materials. Flexible temples house electronics discreetly, while adjustable silicone nose pads ensure comfort. Matte and metallic finishes highlight Stepr’s premium identity, optimized for sub-40g all-day wear.

6. Audio & Voice System

A 5-microphone array with neural beamforming and 40dB DNN noise suppression enables crisp voice pickup. Directional open-ear speakers create immersive sound with minimal leakage. Adaptive EQ automatically tunes audio for calls, music, or navigation — delivering consistent clarity across contexts.

7. Battery & Charging

A 173mAh lithium battery powers up to 4 hours of AI operation. The 3000mAh charging case offers eight recharges via Type-C or pogo-pin connectors. A Hall sensor triggers automatic wake and sleep when opened or closed, with LED indicators for charge and power status.

8. Competitive Positioning

Brand	Camera	Chipset	AI / Voice
Meta Ray-Ban 2024	12MP	Qualcomm AR1	Basic AI (Meta)
RealWear Navigator 520	48MP	Snapdragon 662	Voice Only
Stepr AI Glasses	12MP Sony IMX681	Qualcomm AR1 Gen1	Multimodal AI (local + cloud)

Stepr combines creator-grade imaging, multimodal AI, and enterprise-ready reliability in a compact, fashionable form — setting a new benchmark for the AI wearable market.