

TECHNICAL SPECIFICATION SHEET

Theia SDK Real-time, on-device eye-movement intelligence.

The Theia SDK turns standard eye-tracking hardware into a source of human-state insight. It runs entirely on the CPU at a fixed per-frame compute cost — no GPU, no cloud round-trip, and no calibration required. The specifications below reflect validated production targets.

COMPUTE & PERFORMANCE Per-frame inference budget COMPUTE REQUIREMENT (GFLOPS) ~ 0.14 COMPUTE REQUIREMENT (TOPS) 1.37×10^{-5} INFERENCE LATENCY 100–200 ms OUTPUT FREQUENCY 1 Hz (tunable) DETERMINISTIC / REAL-TIME Yes — fixed compute cost per frame, no cloud round-trip	PROCESSOR & HARDWARE SUPPORT Runs on devices people already use CPU / NPU / GPU Fully supported (x86 and arm64) — primary, validated target. Runs entirely on CPU; no accelerator required. RECOMMENDED CPU CLASS Arm64 — Apple M1 or newer · x86-64 — Intel 9th-gen / AMD Ryzen 3000 or newer SUPPORTED ARCHITECTURES x86-64, ARM64 SUPPORTED OS Windows, Linux, macOS (Arm), Android, Unity
MEMORY & FOOTPRINT Lightweight by design SDK MEMORY SIZE 25 MB SDK PACKAGE SIZE 20 MB	EYE-TRACKER INPUT RECOMMENDATIONS Hardware-agnostic SPATIAL (GAZE) ACCURACY Not required. HarmonEyes does not depend on absolute gaze-point accuracy, so low-cost or uncalibrated trackers are acceptable. PRECISION < 2° of visual angle (recommended). Sample-to-sample precision matters; spatial accuracy does not. SAMPLING RATE 30 Hz minimum TRACKER TYPE Webcam, Remote, Smart Glasses, XR, VR, RGB Camera CALIBRATION Not required. Supported to improve accuracy. INPUT DATA FORMAT Required — gaze coordinates, timestamp. Optional — pupil diameter, event streams.
INTEGRATION, PRIVACY & LICENSING Private at the edge DEPLOYMENT On-device / edge — no internet connection required at inference time DATA PRIVACY All processing is local; no raw gaze or video data leaves the device by default API / LANGUAGE BINDINGS Python, C++, Unity, Android	