Scanner & Sensor Systems

Public Technical Overview — Version 1.0 | October 2026 | Project status: Concept / Research / Planning

Project maturity statement. This document describes proposed research directions and engineering concepts. Unless expressly identified otherwise, it does not report verified prototypes, tested performance, established feasibility, or products available for purchase.

Purpose and scope

This project explores a modular data-capture family that combines existing sensing components with consistent software interfaces. Its main proposed physical product is a handheld multi-sensor scanning wand. Related formats may include sensor pucks, wearable-linked sensors, drone or rover payloads, and temporary field nodes. It is not a claim that one handheld unit can measure every physical property.

Main handheld scanner direction

The source roadmap describes a progression from simple capture and viewing to depth-based three-dimensional scanning, mixed-sensor configurations, AR-assisted display, and eventually field-oriented workflows. Early versions should establish reliable individual sensor paths before combining signals into more complex representations.

Sensor categories and limits

Candidate input classes include cameras, depth or range sensors, temperature and infrared modules, acoustics, environmental sensors, inertial sensors, vibration measurements and specialized field instruments. Such devices differ substantially in range, precision, calibration needs and interpretation. Specialized measurements would require appropriately designed sensors and independent validation; speculative scanning capability should not be marketed as established.

Proposed information pipeline

A scan begins with device identification and permission checks, then time-stamped capture, units and calibration metadata, local processing, structured session storage, and optional viewing or export. The documentation proposes a scan-session package that keeps measurements traceable to the device, configuration and acquisition conditions.

Creator Suite, AR and devices

A future Creators Suite path could import sessions into project folders, preview images and 3D geometry, and associate readings with models or research notes. AR overlays and portable controller panels are longer-term directions. Existing device components are intended to remain useful independently of these future ecosystem applications.

Safety, accuracy and claims

A reading is only as dependable as its sensor, calibration, geometry and environment. The proposal explicitly separates visualization from certified inspection. Structural, thermal, radiation, electrical or environmental interpretations must not be presented as professional safety determinations without domain-specific qualification and validated instrumentation.

Phased research program

The planned work starts with capture formats, a Creator Suite import mockup and basic imaging/depth experiments, then a simple handheld prototype. More sensor categories, modular pucks, wearable integration and field nodes would follow only after foundational capture and data quality are established.

Current maturity

This is a research and architecture specification. No completed scanner, demonstrated multi-modal fusion, certified measurement system or validated detection accuracy is claimed. Hardware candidates, precision and packaging remain design questions.

Source acknowledgment: Adapted and paraphrased from Praecursor Labs internal project research and architecture documents. Source specifications remain internal; this published overview does not replace them.

Publication: Version 1.0 · October 2026 · Praecursor Labs · Project status remains research/planning. Future revisions may update scope as evidence becomes available.