

Rugged Handheld Scanner — Program Kickoff

Ballast is the whole program, treated as real — a ruggedized handheld inventory scanner for warehouse crews, engineered in millimeters, newtons, and grams, not adjectives.

Open the ID Concept Book first: it carries the entire program as one designed object — the design story (a shock structure first, a computer second), the render family as a real product shoot holding one device across every frame, the human-factors argument in real units, the designed spec sheet, and the cost case built from named suppliers up to a per-unit COGS anchored to the real enterprise-handheld market. Beside it, open the live COGS working model — move the volume, the optics mix, the durometer call, the build region, and every number recomputes in front of you; what you type stays on your machine and reaches no one. The book and the model agree to the dollar.

The honest language is deliberate throughout: drop is tested to MIL-STD-810H Method 516.8, never "certified," because that standard issues no certificate; IP65 and IP68 are two distinct claims, not collapsed; the 12-hour battery is a designed-to target; and the scan-engine names are representative of the class, holding the seat for the one call you left open. That discipline is the work, not a limitation of it.

The device can be built and shipped. Read it, then tell me what lands and what you'd steer — a caption, a number, a frame.

1. **Ballast — ID Concept Book** (<book/ballast-concept-book.pdf>): The whole program as one designed object — open this first. The design story, the render family, the human-factors argument in real units, the designed spec sheet, and the cost case, bound at the art-book bar.
2. **COGS Working Model (live)** (<cost/cogs-simulator.html>): Open in a browser and push the numbers around — volume, optics mix, durometer, battery, display, build region all recompute live. What you type stays on your machine and reaches no one.

Everything here also arrives as one zip: the Download kit.