

PRODUCT DEVELOPMENT PROCESS

Krisent Technologies – Technical Development Framework

At Krisent Technologies, we follow a systematic five-stage technical development model that ensures innovation, accuracy, and reliability in every product we engineer. Each stage is designed to maintain precision — from idea to deployment.

1. Concept & Requirement Definition

Duration: 1–2 Weeks

Objective: Establish a clear understanding of the technical goals and operational requirements.

- Analyze client requirements and intended application.
- Identify functional specifications and environmental conditions.
- Define preliminary hardware and firmware architecture.
- Prepare feasibility and risk assessment reports.

Output: Approved Requirement Document & Initial System Architecture

2. Design & Engineering Development

Duration: 3–4 Weeks

Objective: Transform requirements into a detailed technical design.

- Create complete circuit schematics and PCB layouts.
- Design firmware architecture and control logic.
- Integrate communication protocols (GSM, Wi-Fi, LoRa, RS485).
- Simulate and validate circuit and firmware behavior.

Output: Finalized Electronic Design & Firmware Draft

3. Prototype Fabrication & Integration

Duration: 2–3 Weeks

Objective: Convert the design into a physical working prototype.

- Fabricate PCB and assemble hardware components.
- Upload and integrate firmware for full device functionality.
- Conduct unit-level testing and parameter calibration.
- Verify system integration between hardware and firmware.

Output: Functional Prototype & Integration Report

4. Testing & Validation

Duration: 3–4 Weeks

Objective: Verify performance, stability, and compliance under various conditions.

- Conduct load, voltage, and current performance testing.
- Perform thermal, vibration, and environmental stress tests.
- Validate firmware reliability and communication consistency.
- Execute quality assurance and safety compliance checks.

Output: Validated Design & Test Certification Reports

5. Deployment & Technical Support

Duration: 1–2 Weeks (plus ongoing support)

Objective: Prepare the finalized product for client delivery and field operation.

- Finalize firmware and hardware documentation.
- Assist with integration, installation, and field calibration.
- Provide post-deployment monitoring and technical assistance.
- Gather feedback for future version improvement.

Output: Production-Ready Product & Technical Handover Package

Conclusion

The five-stage development cycle at Krisent Technologies ensures every product is engineered with precision, validated through rigorous testing, and supported by a dedicated technical team — delivering innovation and reliability across all our security solutions.