SecureVision X100 — Product & Procurement Design Specification

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1. Document Overview

Document Title: SecureVision X100 — Procurement & Design Spec
Version: 1.0
Date: April 16, 2025

Author(s):

- Priya Malhotra (Procurement Manager)

- Ryan Matthews (Systems Design Lead)

Purpose:
This document outlines technical and procurement requirements for the SecureVision X100—an advanced modular security camera system for industrial and commercial use. It includes the BOM, procurement stages (RFI/RFQ/RFP), vendor profiles, pricing details, and milestone timelines.

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2. Project Details

Project Name/Code: SecureVision X100

Brief Description:
The SecureVision X100 is a next-gen modular camera system offering 4K resolution, night vision, AI-powered motion detection, and wireless cloud connectivity. It supports PoE (Power over Ethernet) and edge computing for real-time analytics.

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3. Stakeholders & Roles

3.1 Engineering Team

Name	Role/Title	Responsibilities	Contact Info
Ryan Matthews	Systems Design Lead	Oversees system architecture & firmware specs	r.matthews@securevision.ai

| Lila Wong | Optics Engineer | Lens calibration, low-light optimization | l.wong@securevision.ai |
| Amit Shah | Edge AI Specialist | Develops onboard analytics & motion detection AI | a.shah@securevision.ai |

3.2 Procurement Team

Name	Role/Title	Responsibilities	Contact Info
Priya Malhotra	Procurement Manager	Manages RFI/RFQ/RFP and vendor negotiation	p.malhotra@securevision.ai
Jacob Fisher	Sourcing Specialist	Identifies suppliers and initiates outreach	j.fisher@securevision.ai
Alan Rivera	Contracts Analyst	Legal compliance and contract finalization	a.rivera@securevision.ai

3.3 Executive Sponsors

Name	Title	Scope of Approval	Contact Info
Melissa Grant	COO	Product milestones & rollout	m.grant@securevision.ai
Daniel Yu	CFO	Budget & financial approvals	d.yu@securevision.ai

4. Bill of Materials (BOM) & Key Specifications

Item	Technical Spec	Qty	Vendors	Notes
4K CMOS Image Sensor	3840x2160, HDR, global shutter	8,000	2 Vendors	Must support wide dynamic range
Edge Compute Module (ARM)	6-core ARM + 2 TOPS NPU, 4GB LPDDR4	8,000	1 Vendor	Needed for onboard analytics
Housing (IP66 Aluminum)	Weatherproof, anti-tamper, IK10	8,000	3 Vendors	Supports wall & ceiling mounting
IR Night Vision LEDs	850nm, 30m visibility	8,000	2 Vendors	Needs UL compliance

PoE Connectivity Chipset	IEEE 802.3af/at compliant	8,00 0	1 Vendor	Must support 15.4W and 30W modes

5. Procurement Activities

5.1 RFI (Request for Information)

Title/ID: RFI-501 — PoE Chipsets for Security Modules
Objective: Identify chipsets compliant with PoE+ (IEEE 802.3at) for camera units
Date Issued: April 16, 2025
Due Date: April 29, 2025

Scope:

- Energy efficiency benchmarks

- Support for power surge protection

- Thermal design recommendations

Vendors Responded:

- TechEdge Systems (pending clarification)

- NanoSwitch Co. (response due Apr 24)

- VoltPro Inc. (preliminary data sent)

5.2 RFQ (Request for Quote)

Title/ID: RFQ-602 — IR LED Modules
Date Issued: April 14, 2025
Deadline: April 21, 2025

Specs:

- 850nm wavelength

- ≥30m night visibility

- 10,000-hour lifespan

Vendor Quotes:

- **IllumiTech Co.:** $3.20/unit, 5-week lead, Net 30

- **OptoView Ltd.:** $3.10/unit, 6-week lead, 30% upfront

5.3 RFP (Request for Proposal)

Title/ID: RFP-703 — Edge Module + AI Software
Issued: April 13, 2025
Due: May 1, 2025

Scope:

- Edge AI module with SDK for motion detection, facial blur

- Integration with SecureVision firmware

- 1-year support + optional OTA updates

Vendors:

- AIForge Technologies — $22/module

- EdgeNova Inc. — $24/module

- Cortexon AI — $21/module

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6. Vendor Information & Discovery

Vendor ID	Name	Component	MOQ	Lead Time	Price	Status
VND-201	TechEdge Systems	PoE Chipsets	2,000	5 weeks	$4.50	RFI in progress

| VND-202 | IllumiTech Co. | IR LED Module | 3,000 | 5 weeks | $3.20 | RFQ under review |
| VND-203 | AIForge Tech | Edge AI Module | 2,000 | 6 weeks | $22.00 | RFP submitted |

7. Pricing & Budget

7.1 Component-Level Cost Estimates

Component	Est. Unit Cost	Qty	Est. Total	Buffer
4K CMOS Sensor	$10.00	8,000	$80,000	5%
Edge AI Module	$22.00	8,000	$176,000	10%
IP66 Housing	$12.00	8,000	$96,000	5%
IR LED	$3.10	8,000	$24,800	5%
PoE Chipset	$4.50	8,000	$36,000	5%

7.2 Total Budget & Contingency

- **Target Budget:** ~$500,000
- **Contingency Reserve:** ~$35,000 (7%)
- **Budget Owner:** Daniel Yu (CFO)

8. Key Dates & Milestones

Milestone	Target Date	Owner
Finalize BOM & Specs	April 12, 2025	Engineering Team
Issue RFIs	April 16, 2025	Priya Malhotra
RFQ & RFP Launch	April 13–14, 2025	Jacob Fisher
Proposal Deadlines	April 21–May 1	Vendors

Vendor Selection & Contracts	May 8, 2025	Procurement + Execs
Manufacturing Kickoff	June 1, 2025	Engineering