Sample Inspection Report (Pre-Shipment Inspection)

Report No.: QC-20260202-EN-01

Product Name: Flagship Tablet X1 (Pro Series)

Inspection Type: Pre-Shipment Inspection (PSI) [1]

Supplier: Example Electronics Technology Co., Ltd.

Inspection Date: February 2, 2026

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1. Inspection Summary & Sampling Plan

This inspection was conducted in accordance with the international statistical sampling standard **ISO 2859-1 (ANSI/ASQC Z1.4)**.[3]

Parameter	Details
Total Order Quantity	5,000 Units
Inspection Level	General Inspection Level II (G-II) [4]
Sample Size	200 Units [4]
AQL Thresholds	Critical: 0
Quantity Checked	100% produced, 80% packed [1]

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2. High-Resolution Evidence: 360° Defect Records

Interactive 360° imaging was utilized to capture defects from every angle, ensuring zero visual blind spots and providing undeniable evidence for stakeholders .

2.1 Aesthetic Defect: Glue Overflow (Minor)

- **Evidence ID:** IMG-360-001
- **Orientation:** 225° quadrant, adjacent to USB-C port .
- **Description:** 360° spin video reveals structural adhesive residue (approx. 2.2mm) at the seam between the display module and the aluminum chassis .
- **Link:** [View 360° Interactive Evidence Library] (Simulated Link) .

2.2 Critical Defect: Dead Pixels (Major)

- **Evidence ID:** VID-HD-002 (Macro Video)
- **Description:** High-magnification video inspection identified 3 clusters of non-functional pixels in the central display area, exceeding the quality specification (Max 1 px).[12]

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3. Functional Stress Testing: Performance Proof

Stress tests were performed to push the samples beyond normal operating limits (HALT/HASS methodology) to identify latent failures.[6]

3.1 High-Load Thermal Stability Test

- **Test Method:** Continuous 4K video rendering for 60 minutes while monitoring CPU/Battery thermals.[7]
- **Video ID:** V-STRESS-01
- **Observation:** At 40 minutes (Ambient 25°C), the internal CPU temperature reached 92°C, triggering aggressive thermal throttling and resulting in significant frame drops (>30%).[7]
- **Verdict:** Failed to meet "Pro-level Performance" benchmarks .

3.2 Electrical Safety: Hi-pot Test

- **Test Method:** Applied $2 \times V_{rated} + 1000V$ AC for 60 seconds to verify insulation integrity.[11]
- **Evidence:** Digital tester logs showed 3 samples triggered dielectric breakdown alarms at 1500V.[3]

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4. Packaging Integrity: ISTA Carton Drop Test

Testing was conducted according to the **ISTA 1A** standard to simulate extreme handling during global transit.[18]

- **Gross Weight:** 8.5 kg (18.7 lbs)
- **Drop Height:** 760 mm (30 inches) [18]
- **Sequence (10 Drops):** 1 corner, 3 edges, 6 faces.[18]

Sequence	Orientation	External Observation	Internal Verification
#1	Fragile Corner (2-3-5)	Severe corner crush (>30mm)	Gift box crushed [20]
#2-4	3 Radiating Edges	Minor scuffing	Normal
#5-10	6 Faces	Tape lifting	**FAIL**: 1 unit failed to power on [19]

Conclusion: FAIL. The EPE foam density was insufficient to protect the internal motherboard from the G-force impact during the 30-inch corner drop.[19]

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5. Final Verdict & Recommendations

5.1 Overall Verdict: FAIL (Not Acceptable)

[4]

Summary of Non-Conformities:

1. **Major Defects Exceeded:** 14 Major defects were found (including thermal instability and Hi-pot failures), exceeding the AQL 2.5 limit of 10 allowed units.[4]
2. **Safety/Reliability Failure:** Dielectric breakdown and drop test failures indicate high field-failure risks.[19]

5.2 Corrective Action Plan (CAP)

- **Halt Shipment:** We recommend an immediate hold on all shipping activities for this PO.[1]
- **100% Sorting/Rework:** The supplier must perform a 100% screen for screen defects and thermal throttling issues before requesting a re-inspection.[1]
- **Packaging Upgrade:** Increase the thickness of the internal buffers (move from 20D to 30D EPE) and perform a secondary ISTA 1A test.[22]

Inspector: Senior Quality Auditor - Team Alpha

Approved by: Technical Manager, Global QA