Bench Handling Test Report

Date of Testing: Dec 7, 2024
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Equipment Under Test: VxMark / VSAP with VotingWorks Modifications

Overview

This report documents the results of bench handling tests performed to validate the product's robustness against typical handling scenarios. Tests included tilting and dropping the unit from a 45° incline, as well as other standard bench-related stresses. All tests passed, providing high confidence that the product will pass more rigorous testing.

Test Objectives

- Verify that the EUT withstands drops and impacts from a bench at a 45° incline without functional damage.
- Confirm that no mechanical or cosmetic damage occurs during standard bench handling procedures.

Test Setup

- **Environment:** Ambient lab conditions (approximately 23°C, 45% RH).
- **Test Equipment:** Measuring tools, protective gloves.
- **Sample Size:** 1 unit.

Test Procedures

1. **45° Incline Drop Test:**
    - EUT was placed at a 45° incline on a stable bench surface.
    - EUT was allowed to drop from the inclined position onto a benchtop surface.
    - Multiple drops were performed, each time rotating the orientation to ensure all sides were tested.
2. **Edge and Corner Contact Test:**
    - EUT was incrementally tilted on its edges to simulate partial drops and impacts against bench corners.
    - Each edge and corner was tested to ensure no single point of contact caused damage.

Acceptance Criteria

- No visible cracks, dents, or permanent deformation.
- All functional tests (e.g., power-on, display activation, button responsiveness) remain fully operational.
- No loose internal components or changes in assembly integrity.

Results

- **45° Incline Drops:** No cosmetic or functional damage observed. EUT remained fully operational.
- **Edge and Corner Contacts:** No structural deformation or compromised integrity. EUT remained fully operational.

Conclusions

EUT passed the bench handling and drop tests. EUT demonstrated robust mechanical integrity and retained full functionality, meeting or exceeding the required acceptance criteria.

This provides high confidence that the EUT will pass more rigorous testing.