VERIFICATION & VALIDATION TEST REPORT

Accelerometer Verification Test

1. Document Information

Document Number	VV-ACC-001
Document Revision	A
Report Version	1.0
Prepared By	Jack Phan
Reviewed By	_____
Report Status	DRAFT

2. Project Information

Session ID	ACC-2026-08-27_14-17-42
Project Name	V&V Automation Test Practice Demo
Test Suite	Accelerometer Verification Test

Device Under Test	STM32 Accelerometer Demo
DUT Serial Number	DEMO-DUT-001
Firmware Version	1.0.0
Operator	Jack Phan
Session Start	2026-08-27 14:17:42
Session End	2026-08-27 14:17:52
Duration	00:00:10

3. Test Summary

9	6	3	66.7%
Total Tests	Passed	Failed	Pass Rate

Overall Session Result FAIL

4. Detailed Test Results

4.1 Orientation Tests

Time	Test Case	Test Name	Expected X	Expected Y	Expected Z	Actual X	Actual Y	Actual Z	Result
08/27/2026 2:17:43 PM	ACC_001	X +1G	1.00	0.00	0.00	0.00	-0.00	0.96	FAIL
08/27/2026 2:17:44 PM	ACC_002	Y +1G	0.00	1.00	0.00	0.00	-0.00	0.96	FAIL
08/27/2026 2:17:45 PM	ACC_003	Z +1G	0.00	0.00	1.00	0.00	-0.00	0.96	PASS

4.2 Verification Tests

Time	Test Case	Test Name	Expected	Actual	Result
08/27/2026 2:17:46 PM	ACC_004	1G Magnitude	1.00 g	0.96 g	PASS
08/27/2026 2:17:47 PM	ACC_005	BMA400 WHO_AM_I Test	0x90	0x90	PASS
08/27/2026 2:17:48 PM	ACC_006	Configuration Readback	2	2	PASS
08/27/2026 2:17:51 PM	ACC_008	BMA400 I2C Address	0x15	0x15	PASS
08/27/2026 2:17:52 PM	ACC_009	I2C No-Hang	NO HANG	INVALID_SETUP	FAIL

4.3 Repeatability Tests

Time	Test Case	Test Name	X Variation	Y Variation	Z Variation	Tolerance	Result
08/27/2026 2:17:50 PM	ACC_007	Accelerometer Repeatability Test	0.004	0.003	0.007	0.100	PASS

5. Failure Details

ACC_001 - FAIL

Expected[X=1.000g, Y=0.000g, Z=0.000g], Measured[X=0.000g, Y=-0.002g, Z=0.957g]

ACC_002 - FAIL

Expected[X=0.000g, Y=1.000g, Z=0.000g], Measured[X=0.000g, Y=-0.002g, Z=0.957g]

ACC_009 - FAIL

Expected Status = ACCELEROMETER_TEST_STATUS_PASS, Actual Status = ACCELEROMETER_TEST_STATUS_INVALID_SETUP.