Ring buffer — traceability (GoogleTest)

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PASSED — no rule violation

Summary

MEASURE	VALUE
Requirements	**4**
Test coverage (testable requirements with a linked test)	**100.0%**
Verified (all linked tests passed)	**100.0%**
With a linked test / verified / uncovered / failing / not testable	**3 / 3 / 0 / 0 / 1**
Unknown ids referenced / tests without requirement	**0 / 0**

Coverage by level

LEVEL	REQUIREMENTS	WITH TEST	VERIFIED	UNCOVERED	WITH SOURCE TRACE	WITH PARENT	TEST COVERAGE
SWR	4	3	3	0	4	0	**100%**

Sign-off

ROLE	NAME	DATE	SIGNATURE
Prepared by			
Reviewed by			
Approved by			

Traceability matrix

uncovered: no linked test · covered: linked test, no result · verified: all linked tests passed · failing: a linked test failed · n/a: not verified by test

SWR — 4 requirement(s)

REQUIREMENT	TITLE	TRACES UP	VERIF.	TESTS AND RESULTS	IMPLEMENTED IN	STATUS
SWR-1 docs/requirements/SWR.md:3	The ring buffer shall store up to `capacity` elements	—	test	RingBuffer.StoresCapacityElements test/ring_buffer_test.cpp:4 PASS RingBuffer::StoresCapacityElements	src/ring_buffer.hpp:5 RingBuffer	verified
SWR-2 docs/requirements/SWR.md:4	Pushing into a full buffer shall fail and leave the buffer unchanged	—	test	RingBuffer.PushOnFullFails test/ring_buffer_test.cpp:10 PASS RingBuffer::PushOnFullFails	src/ring_buffer.hpp:5 RingBuffer	verified
SWR-3 docs/requirements/SWR.md:5	Popping from an empty buffer shall fail	—	test	RingBuffer.PopOnEmptyFails test/ring_buffer_test.cpp:18 PASS RingBuffer::PopOnEmptyFails	src/ring_buffer.hpp:5 RingBuffer	verified
SWR-4 docs/requirements/SWR.md:6	The buffer shall be lock-free for a single producer / single consumer	—	analysis	—	src/ring_buffer.hpp:5 RingBuffer	n/a