

# DigiEmu Core 2.0

Draft 1 — Specification

## Deterministic Decision-State Verification and Replay Integrity Framework

Status	Public Draft Review Document
Release Line	Core 2.0
Repository	<a href="https://github.com/DigiEmu/core">https://github.com/DigiEmu/core</a>
Public Standard	<a href="https://digiemu.com">https://digiemu.com</a>

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This document defines the normative Draft 1 baseline for DigiEmu Core 2.0. The specification establishes deterministic replay verification, canonical decision-state reconstruction, and reproducible SHA-256 snapshot integrity for interoperable audit environments.

# 1. Scope

DigiEmu Core defines deterministic replay verification and canonical decision-state reconstruction. The specification focuses on reproducible verification artifacts and audit-traceable replay procedures.

# 2. Out of Scope

DigiEmu Core does NOT certify identity, trustworthiness, intent, ethics, legal liability, or regulatory approval. External systems MAY provide these functions, but DigiEmu Core remains limited to deterministic replay integrity.

# 3. Core Principles

Implementations SHALL preserve deterministic replay consistency, canonical serialization, SHA-256 reproducibility, interoperability boundaries, and evidence-oriented verification outputs.

# 4. Snapshot Integrity

Snapshots MUST resolve to canonical representations whose SHA-256 values remain reproducible across compliant implementations operating under the same canonicalization profile.

# 5. Verification Model

Verification SHALL reconstruct decision-state deterministically from immutable admissible inputs. The recomputed snapshot hash MUST match the stored reference hash to produce PASS status.

# 6. Replay Flow





Verification Report

## 7. Definitions & Glossary

Snapshot	Canonical SHA-256 state reference.
Replay	Deterministic reconstruction procedure.
Decision-State	Canonicalized replayable state representation.
Verification Artifact	Structured evidence object produced by replay validation.
PASS/FAIL	Binary replay integrity outcome.

## 8. Interoperability Boundary

Layer	Responsibility
TBN	Identity / trust
DigiEmu	Deterministic replay verification
CLARIXO	Attribution / continuity

## 9. Normative Keywords

**MUST** — absolute requirement.

**SHALL** — normative mandatory behavior.

**SHOULD** — recommended behavior.

**MAY** — optional behavior.

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This document is part of the DigiEmu Core 2.0 Draft 1 review bundle. GitHub remains the normative technical source of truth.