FRAMEWORK DOCUMENT

ODDC Overview

ODD Conformance Determination Framework

Version v3.0 · February 2026 · PUBLIC DOCUMENT

ODDC Overview · v3.0

SENTINEL AUTHORITY — ODD Conformance Determination

ODDC Overview

ODD Conformance Determination Framework

Version 3.0 — February 2026 — Public Document

ODDC (ODD Conformance Determination\

autonomous systems operate within defined operational boundaries with three-tier enforcement. Boundaries may be specified by the operator or auto-discovered through the ENVELO Interlock's adaptive learning mode. This document describes the framework components, attestation scope, and conformance process.

1. Introduction

1.1 Purpose

ODD Conformance Determination (ODDC\

autonomous systems. ODDC provides standardized, verifiable evidence of bounded operation that serves as a first-order risk control input for underwriting review of autonomous infrastructure.

1.2 Framework Components

The ODDC framework consists of three integrated components:

Component

Description

ODD

Operational Design Domain — The operational boundaries within which the system operates. May

be formally specified by the operator or auto-discovered through adaptive learning.

ENVELO

Enforced Non-Violable Execution-Limit Override — Three-tier runtime enforcement: self-correction on ODD approach, Minimum Risk Condition on ODD breach, and hard halt at the ENVELO wall.

CAT-72

Conformance Assessment Test — 72+ hour evidentiary procedure demonstrating bounded operation and verification of all three enforcement tiers.

1.3 What ODDC Is Not

ODDC explicitly does not constitute:

· Regulatory approval or certification

· Safety certification (e.g., IEC 61508, ISO 26262\

· Product certification or quality mark

· Guarantee of system performance or reliability

2. Attestation Scope

2.1 What ODDC Attests

Upon successful conformance determination, ODDC attests that at the time of determination:

Category

Attestation

ODD Boundaries

or auto-discovered through adaptive learning and approved by the operator.

Operational Evidence

System demonstrated stable operation within its ODD through 72+ hours of

ENVELO Enforcement

Three-tier enforcement architecture is present and functional: Tier 1 self-correction, Tier 2 Minimum Risk Condition, Tier 3 hard halt at the ENVELO wall.

Audit Trail

Tamper-evident audit records generated for all enforcement events and tier transitions with cryptographic integrity.

IP Protection

accessed. The Interlock transmits only operational telemetry.

2.2 What ODDC Does Not Attest

3. Conformance Process

The conformance process supports two paths. Adaptive (default\

operation, auto-discovers operational boundaries, the operator reviews and approves, and enforcement begins. Prescriptive: the operator defines boundaries upfront for regulatory or contractual requirements. Both paths follow five phases:

Phase 1: Application

can be auto-discovered during Phase 3.

Phase 2: Scope Assessment

Phase 3: CAT-72 Testing

. Adaptive path: begins with learning mode to auto-discover

boundaries, then transitions to enforcement. Prescriptive path: enforcement from start against specified boundaries. All three enforcement tiers verified.

Phase 4: Determination

Conformance determination issued with certificate hash and registry publication.

Phase 5: Maintenance

Ongoing ENVELO Interlock operation with renewal testing prior to expiration.

4. Related Documents

ENVELO Requirements v3.0

CAT-72 Procedure v3.0

and format

ODDC Scenarios v3.0

Conformance Agreement

72+ cumulative hours of monitored operation