MEMORY & COHERENCY

# Physical Actuation Transaction Engine

Atomic multi-actuator prepare/validate/commit/fallback engine

IP-2019 · Executed digital evidence · RTL / reference evaluation

## Function and architecture

• RTL exists

• 74/0 simulation

• BMC + induction proved

• generic synthesis top reported at 98,557 cells. Related to Garmo Safety Envelope Engine but distinct transactional semantics

## Integration summary

Physical Actuation Transaction Engine provides the documented atomic multi-actuator prepare/validate/commit/fallback engine responsibility: Atomic multi-actuator prepare/validate/commit/fallback engine Evaluate the exact IP-2019 implementation and confirm its integration contract before using it inside the target design.

## Technical record

| | |
|---|---|
| **Canonical identity** | IP-2019 |
| **Native implementation identity** | IP-2019 |
| **Documented responsibility** | Atomic multi-actuator prepare/validate/commit/fallback engine |
| **Recorded evidence class** | Executed digital evidence |
| **Interface and physical parameters** | Bound to the selected source/configuration; not inferred from name or family. |

## Delivery and release binding

• Exact implementation and configuration manifest

• Documented interfaces and clock/reset contract

• Available reference or verification collateral

• Recorded physical views where authorized and applicable

• Integration acceptance criteria and unresolved gate list

Confirm for the selected release: Source/configuration identity, Interface and dependencies, Verification evidence, Process/library where applicable, Authorized package and acceptance criteria.

## Evidence and qualification

RTL exists; 74/0 simulation; BMC + induction proved; generic synthesis top reported at 98,557 cells. Related to Garmo Safety Envelope Engine but distinct transactional semantics.

Evidence shown is our record for this canonical implementation, not a fresh tool rerun. External foundry acceptance, silicon measurements, standards certification and unlisted interface/physical parameters are not inferred. Exact delivery and rights are agreed before licensing.

Canonical status: RTL + SIMULATION + FORMAL INDUCTION + GENERIC SYNTHESIS EVIDENCED — no physical implementation or silicon evidence.

## Evaluation and licensing

Evaluation: Review the exact recorded implementation and agreed test scope. Production: Named-design rights for the agreed qualified release. Custom work: Target integration, verification or physical qualification. Rights, pricing, support and acceptance criteria are agreed for the exact scope.

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