

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 the Bible 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.

Source basis: Bible v7.42 VERIFIED V29, IP-2019; 68.1 Standalone synthesized IP (table 723, row 9).

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.

Contact: patrick@garmolabs.com | Product path: /ip/physical-actuation-transaction-engine-ip-2019