SECURITY & TRUST

Garmo-TRNG-HW

Security — high-rate multi-entropy TRNG subsystem

IP-2082 · Evaluation package · Evaluation / IP scope

Function and architecture

- 32 independent physical entropy source inputs
- Repetition Count and Adaptive Proportion online health tests
- SHA-3/Keccak conditioner interface and DRBG seeding mode

Integration summary

Garmo-TRNG-HW integration role: Security — high-rate multi-entropy TRNG subsystem. Documented composition: 32 independent physical entropy source inputs; Repetition Count and Adaptive Proportion online health tests; SHA-3/Keccak conditioner interface and DRBG seeding mode.

Technical record

Canonical identity	IP-2082
Responsibility	Security — high-rate multi-entropy TRNG subsystem
Documented interface architecture	entropy hard-macro inputs, AXI-stream random output, CSR/health IRQ
Documented building blocks	32 independent physical entropy source inputs; Repetition Count and Adaptive Proportion online health tests; SHA-3/Keccak conditioner interface and DRBG seeding mode
Delivery boundary	Evaluation / IP scope
Evidence scope	Evaluation package
Architecture targets · not measurements	>1 Gb/s aggregate raw entropy, 512 Mb/s conditioned output target, continuous online health tests.

Delivery and release binding

- Interface version and parameter set
- Clock/reset domains and integration constraints
- Companion memory, PHY and software requirements
- Verification collateral and acceptance criteria

Confirm for the selected release: Node/library binding, Clock/reset limits, Physical and protocol dependencies, Artifact hashes, Acceptance criteria.

Evidence and qualification

Canonical technology and its architecture/integration role are recorded. The offered delivery is confirmed against the exact release before licensing.

Physical entropy, uniqueness and stability require measured silicon characterization.

Canonical status: P3 / REPRESENTATIVE ARCHITECTURE RTL — concrete integration specification and synthesizable RTL shell/representative datapath only; all frequency, throughput, power, area, jitter and standards-superiority figures remain architecture targets until the required evidence hierarchy closes. Analog/custom production claims require transistor-level/custom-layout, extracted PVT/Monte-Carlo and silicon characterization.

Evaluation and licensing

Evaluation: Evaluate an individual IP configuration. Production: Named-design production license. Custom work: Node binding or derivative integration. Rights, pricing, support and acceptance criteria are agreed for the exact scope.

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