DETERMINISTIC ROUTE-AWARE SOLVER/ACCELERATOR VALIDATION SUPERPROCESSOR

NPJ-S130

A route-aware solver and accelerator architecture with decomposable processing, Boolean co-execution and deterministic transport.



Architectural concept. Not a die photograph, physical layout or measured device.

IP-079 · Architecture IP · Architecture

Function and architecture

- Decomposable FPE and Boolean co-execution
- NPJ-STF deterministic transport
- Descriptor/work-graph ISA and execution engine
- Solver/EDA datapaths and sparse zero-skip

Integration summary

Preserve the descriptor/work-graph contract when attaching decomposable FPE, Boolean and sparse datapaths to NPJ-STF. Confirm the target clocking, memory, transport and verification configuration for the exact release; do not substitute a generic timing result for physical closure.

Technical record

Canonical identity	IP-079
Responsibility	Deterministic route-aware solver/accelerator validation superprocessor
Documented building blocks	Decomposable FPE; Boolean co-execution; NPJ-STF; descriptor/work-graph ISA and engine; solver/EDA datapaths; sparse zero-skip; architecture generator/search; verification/evidence framework.
Delivery boundary	Architecture
Evidence scope	Architecture IP

Delivery and release binding

- Exact SoC/top and configuration
- Clock, reset, power and pad contract
- Memory, PHY and package dependencies
- Release-specific PVT and signoff views

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

Evidence and qualification

Architecture and reusable technology are recorded in the controlled catalog. Request the exact release evidence for your intended integration.

Node-specific physical implementation and system qualification are scoped separately.

Canonical status: Engineering build-spec family

Evaluation and licensing

Evaluation: Architecture and release evaluation. Production: Chip / SoC licensing program. Custom work: Custom silicon integration. Rights, pricing, support and acceptance criteria are agreed for the exact scope.

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