DEVELOPER TOOLS

GISA Architecture SDK

Assembler, disassembler, 32-register 64-bit reference VM, memory/load/store/branches, JSON-IR lowering and executable developer-tool surfaces

IP-4321 · Engineering software · CLI / local API

Function and architecture

• Assembler, disassembler, 32-register 64-bit reference VM, memory/load/store/branches, JSON-IR lowering and executable developer-tool surfaces

• Separately packaged release

• No mandatory sibling-product runtime

Integration summary

GISA Architecture SDK: Separately runnable GISA developer SDK implementing assembler, disassembler, 32-register 64-bit reference VM, load/store/branch execution, JSON-IR lowering, CLI and local HTTP API. Delivered as CLI / local API. Integrate the selected version at its documented input/output boundary; retain source and configuration identity with each result. The exact callable API, dependencies and runtime environment are supplied with the controlled release; this public description is not a substitute for that release contract.

Technical record

Canonical identity	IP-4321
Responsibility	Separately runnable GISA developer SDK implementing assembler, disassembler, 32-register 64-bit reference VM, load/store/branch execution, JSON-IR lowering, CLI and local HTTP API.
Delivery boundary	CLI / local API
Evidence scope	Engineering software
Engineering boundary	Separately runnable GISA developer SDK implementing assembler, disassembler, 32-register 64-bit reference VM, load/store/branch execution, JSON-IR lowering, CLI and local HTTP API.
Deployment	CLI / local API; 0.9.0
Operational scope	Bounded executable reference toolchain; complete production LLVM/GCC/Rust backends, frozen ISA/ABI and hardware conformance remain open.

Delivery and release binding

- Versioned package and dependency lock
- Deployment environment and access controls
- Input/output schemas and integration examples
- Evaluation scope, support and update policy

Confirm for the selected release: Environment and dependencies, Version / build hash, API compatibility, License and support scope.

Evidence and qualification

10,000 randomized ALU programs; 10,000 assembly/disassembly roundtrips; core + advanced clean-room PASS

Bounded executable reference toolchain; complete production LLVM/GCC/Rust backends, frozen ISA/ABI and hardware conformance remain open.

Canonical status: P2 / EXECUTABLE REFERENCE TOOLCHAIN PRODUCT; COMPLETE PRODUCTION BACKENDS/ABI/HARDWARE CONFORMANCE OPEN

Evaluation and licensing

Evaluation: Evaluate the named software release. Production: Team or enterprise deployment. Custom work: Workflow and API integration. Rights, pricing, support and acceptance criteria are agreed for the exact scope.

Contact: patrick@garmolabs.com | Product path: /software/gisa-architecture-sdk