

Top 5 Enterprise Features of Actian Zen 17 AI for ISVs and OEMs

1 Native Vector Search

1M vectors | ANN + IVF indexing | SQL-accessible



Business Challenge

Customers are asking why your app can't find the right result when they describe a problem in plain language, or surface a recommendation without an exact keyword match. Meeting that expectation means adding a standalone vector database: a new infrastructure contract, new ops overhead, and a sync pipeline your team has to maintain indefinitely.



Technology Challenge

Cloud vector databases introduce 200–400ms round-trip latency and fail entirely in air-gapped or on-prem environments. Standalone edge vector stores don't integrate with your existing Zen schema, so you end up managing two separate data models and two query paths.



Actian Solution

Zen 17 adds a native vector data type directly to the embedded engine. Store up to 1M vectors by default, with ANN indexing, all queryable via standard SQL. No separate install, no sync jobs, no new query language for your developers to learn.



Business Outcomes

AI features ship into your existing product without touching your deployment model.

- Same SQL your developers already know
- Same Zen installer, same schema, same deployment
- No sync pipeline to build, break, or maintain



Industry Applications

- **Manufacturing:** Semantic search across equipment manuals, anomaly pattern matching on sensor data, and parts recommendation at the factory edge, all without cloud connectivity or a separate infrastructure stack.
- **Healthcare:** RAG-powered clinical knowledge bases, similar-case retrieval for medical billing, and patient record semantic search running within HIPAA-compliant on-prem environments, with no data leaving the facility.
- **Financial Services:** Transaction similarity matching for fraud detection, document retrieval for compliance audits, and semantic search over regulatory filings locally, with no data crossing the perimeter.

2 Vector Querying using SQL

Hybrid search | Relational joins + semantic similarity | One query



Business Challenge

Customers want AI search that understands context (“show me invoices similar to this dispute”) and structured filters (“from Q3 only”) in a single result set. Two separate query paths mean two latency budgets, two failure points, and custom stitching logic living in application code.



Technology Challenge

Vector databases speak their own query languages. Bridging them to relational data requires fragile middleware, data copies, and custom ranking logic that breaks when either system updates. Every model provider upgrade risks breaking the integration.



Action Solution

Zen 17 runs relational joins and ANN vector similarity searches in a single SQL query. One engine, one query, one result set. No middleware, no custom stitching code, no dual-roundtrip latency.



Business Outcomes

Developers build hybrid AI features without learning a new query language or managing two separate systems.

- Faster time-to-feature for AI search capabilities
- Lower integration complexity, fewer failure points
- One response returns both semantic and structured results



Industry Applications

- **Manufacturing:** Query “find work orders from last month where fault description is similar to hydraulic pressure drop,” combining a relational date filter with a semantic vector match on free-text fields, all in standard SQL.
- **Healthcare:** Retrieve patient encounters by structured ICD-10 codes and semantic similarity to a clinical description in the same SQL statement, reducing manual chart review time for coding teams.
- **Financial Services:** Combine account metadata filters with semantic search over customer communications to surface compliance-relevant cases without building or maintaining a separate search pipeline.

3 Built-in MCP Server

Out-of-the-box | OAuth 2.0 | Claude, ChatGPT, Gemini compatible



Business Challenge

Customers expect AI assistants to understand and act on data inside your application. ChatGPT, Copilot, and Gemini have set the bar: ask a question, get an answer from your data. Customers expect that capability in every tool they pay for.



Technology Challenge

Connecting an LLM to operational data requires building a custom API layer, managing OAuth authentication, and maintaining integrations as AI model providers update their interfaces. A full integration sprint per AI provider is not a sustainable build strategy for an embedded ISV.



Action Solution

Zen 17 ships with a native Model Context Protocol (MCP) server. OAuth 2.0 authentication is included with no configuration required. Compatible out of the box with Claude, ChatGPT, Gemini, and any MCP-compatible AI agent or developer IDE.



Business Outcomes

AI agents query your application's data the day Zen 17 is installed. No integration sprint required.

- No custom API layer to build or maintain
- Works with every major AI platform immediately
- AI agent features ship as a standard product capability



Industry Applications

- **Manufacturing:** AI agents connected to Zen via MCP query real-time equipment sensor data and maintenance logs, enabling autonomous fault diagnosis and work order generation without human dispatch or cloud roundtrips.
- **Healthcare:** Clinical AI assistants query patient records and billing history stored in Zen, locally, within the facility's perimeter, for coding suggestions, prior authorization lookups, and compliance checks.
- **Financial Services:** AI agents access transaction data and account history via MCP to surface insights for advisors or power automated compliance workflows, on-prem, with no data leaving the approved security boundary.

4 Native Vector API + Unified SQL Access

SQL access | Native vector API | One engine, your choice of interface



Business Challenge

Your team already has vector application logic built. Adding relational data support means a rewrite. SQL developers building net-new AI features face a different problem: a whole new interface to learn before they can query a single vector.



Technology Challenge

Most embedded databases force a choice: go vector-native and lose relational querying, or stay relational and bolt on a separate vector store. Either way: new tooling, new skills, or two systems to maintain.



Action Solution

Zen 17 AI supports vector access through both standard SQL and a native vector API. Teams with existing vector application logic can layer in structured data support without touching their vector queries. SQL developers can work with vectors without learning a new query language. Both interfaces hit the same engine.



Business Outcomes

Your existing vector logic runs as-is. SQL developers query vectors without learning a new language. Both teams ship AI features from the same engine, no migration, no rewrite.



Industry Applications

- **Manufacturing:** Edge AI applications built on vector similarity for anomaly detection can add structured work order and asset metadata queries without architectural changes.
- **Healthcare:** Vector-based clinical search applications gain structured patient and billing data access through the same engine, without duplicating or migrating existing embedding logic.
- **Financial Services:** Existing vector-driven fraud detection or document retrieval apps can pull in relational account data and transaction records alongside vector results, all from the same engine. requirements that cloud alternatives cannot meet.

5 Air-Gapped + Edge AI

Fully offline | RAG + semantic search on-prem | No cloud dependency



Business Challenge

Manufacturing plants, military installations, healthcare facilities, and remote energy sites can't route traffic through the cloud. Every cloud-dependent AI solution stops at the perimeter. Your product is deployed in those environments; your customers need AI features there too.



Technology Challenge

Cloud vector databases require continuous connectivity by design. Running RAG pipelines, semantic search, or AI agent workflows offline simply isn't an architectural option.



Action Solution

Zen 17 runs the complete AI stack: vector storage, ANN indexing, hybrid SQL search, and the MCP server, completely offline. On-prem, at the edge, or fully air-gapped. No connectivity required, no cloud token fees, no data leaving the facility at any point.



Business Outcomes

Win deals in regulated, disconnected, and high-security environments where every cloud AI competitor is disqualified from day one.

- AI features work in manufacturing, defense, healthcare, and energy
- Zero cloud token overhead with predictable, flat infrastructure cost
- Data sovereignty compliance is architecturally native



Industry Applications

- **Manufacturing:** Industrial fatigue detection, IoT anomaly detection, and equipment RAG assistants run entirely on the factory floor: no internet connection, no cloud token cost, no waiting on cloud round trips.
- **Healthcare:** Hospitals and rural clinics with limited connectivity run AI-assisted clinical decision support, medical billing compliance, and knowledge base search entirely on local infrastructure, with no external data exposure.
- **Financial Services:** Trading floors, private banking systems, and government financial institutions with strict data residency requirements run AI workloads locally, satisfying sovereignty rules that disqualify every cloud-first alternative.

About Actian

Actian empowers enterprises to confidently manage and govern data at scale. Organizations trust Actian data management and data intelligence solutions to streamline complex data environments and accelerate the delivery of AI-ready data. Designed to be flexible, Actian solutions integrate seamlessly and perform reliably across on-premises, cloud and hybrid environments. Learn more about Actian, the data and AI division of HCLSoftware, at actian.com.

Tel +1 512 231 6000 Fax +1.512.231.6010 710 Hesters Crossing Road, Suite 250, Round Rock, TX 78681 [Actian.com](https://actian.com)

© 2026 Actian Corporation. Actian is a trademark of Actian Corporation and its subsidiaries. All other trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

All Rights Reserved. VI-2026-7

