Actian Zen Core Database for Android and iOS
Zero DBA, embeddable DB for edge apps and smart devices

Key Benefits

Zero DBA, developer-configurable

NoSQL and SQL data access

Single API across most popular programming languages

Optimally handle JSON, BLOB, and time-series data with a single DB

Embed dedicated DB engine in local apps with data tables up to 64TB

Data portability across platforms and versions

Supports peer-to-peer and client-server

Supported Platforms

Android 5 or higher

iOS 10.3 or higher

Android Things 1.0 or higher

Android SDK 25 or higher

Xcode 9.3 with iOS SDK 11.3

Actian Zen Core SDK

5 MB installed footprint

Licensing

Royalty-free licensing for developers to embed and distribute Zen Core with their applications

Support & Maintenance options for commercial deployment

Teach yourself Zen. Quickly and easily get up to speed on installing, configuring, and embedding next-generation Edge data management functionality.

Actian Zen Core database engine for Android and iOS focuses squarely on the needs of Edge and IoT application developers, providing persistent local and distributed data across intelligent applications embedded in smart devices. Develop using the Android SDK, iOS SDK, and other 3rd party tools and deploy on any standard or embedded platform running Android or iOS. Actian Zen Core database includes AES 256-bit encryption for data at rest and supports zero ETL data sharing to any Actian Zen family server or client database.

Zen Core database is a NoSQL and SQL, zero DBA, embeddable, nano-footprint (5 MB minimum) edge database for SIs, ISVs, and OEMs that need to embed a data management platform in their Mobile apps, from smart phones to PoS terminals to industrial IoT devices. With direct data access via APIs, self-tuning, reporting, data portability, exceptional reliability, and compatibility, IoT and Edge developers can deliver apps at scale across a wide range of platforms and development languages and environments.

Zero Database Administration

Set it and forget it. Edge computing in the world of consumer device and industrial IoT apps means no DBA. Zen Core database is built for non-IT environments, removing need for consultants or DBA supervision. Whether you elect to never touch your app or continually patch and redeploy it, Zen Core database for Android and iOS won't break your app under any circumstances.

NoSQL and SQL

Zen Core database offers SQL/NoSQL access for performance and local data processing and analytics support, providing the perfect combination of speed and flexibility. This enables fast read and quick insert, update and delete performance alongside full ACID response on writes. Zen Core database provides a single API for NoSQL access via the Btrieve 2 APIs across both mobile platforms and SDKs for most popular programming languages including C/C++/C#, Java, and Python.

Data Portability

Zen Core database supports the same data types including JSON and BLOB and file formats as the rest of the Actian Zen product line, so accessing and moving data between Android- or iOS-based devices and an ARM device like Raspberry Pi running Windows IoT server or Windows or Linux servers requires none of the typical ETL overhead. Plus, data portability extends across all supported platforms and multiple versions of Actian Zen database products. Seamless portability greatly simplifies development, deployment and maintenance. No unsecured ETL work or other overhead, just copy data and go.

Backward Compatibility

Backward compatibility has long been a top priority for Actian Zen and earlier PSQL versions. Upgrading to the latest release is designed to be easy, with no need to migrate data or rewrite code or modify existing data files and tables. Just keep moving smoothly from release to release with the same low-stress maintenance and possibilities for innovation.

New Btrieve API

Java and C/C++ application developers can take advantage of the new version of the Btrieve 2 API, with the same access calls as the original, but now including integrated auto timestamping for time-series data. Access the performance and flexibility of the Btrieve engine without the complexity. The Btrieve 2 API SDK also includes Simplified Wrapper and Interface Generator (SWIG) files for C#, Perl, PHP, and Python, giving developers in those languages Btrieve data access with a quicker learning curve.

A World of Use Cases

Zen Core database for Android and iOS is ready to handle real-world solutions currently being fielded on millions of Intel and ARM processors in smart phones, taking the application knowledge of this community into mission-critical embedded applications across a range of devices for time-series, JSON, and BLOB data. Rather than collect and centralize all data in the cloud to determine actions back at the remote data source or gateway, increasingly data is locally stored for low-latency processing and analysis to meet end-user performance, security, and decision requirements. Meanwhile, only relevant data moves to the cloud for additional data management and analytics.

Zero Field Support, Multiplatform Embedded Database for Edge Applications

Developers, product designers, and OEMs need to be able to support multiple platforms with a single data management platform. Android and iOS applications are becoming increasingly intelligent, relying more and more on data within local file systems to support their operations. Alternatively, the traditional databases or NoSQL platforms are incapable of limited configuration for a full range of embedded systems, do not embed into apps, require on-site support, and do not support OEM models. Most developers and designers create products across platforms and data management and file systems, which can slow design and coding through multiple APIs, adding ETL overhead for data conversion and maintenance and support nightmares.

Smart Devices for Consumer and Industrial IoT

Whether it's smart phones or smart tractors, or a network of sensors at a chemical processing plant, local apps are no longer operating as a "silo of things." Bespoke Historians and SQLite, for example, are designed for siloed applications, handling a single write stream with a few gigabytes. Actian Zen Core database for Android and iOS is designed to embed in a stand-alone application and with zero ETL data sharing across server environments, collectively supporting terabytes of data.

Intelligent Gateways, Complex Machines and Instrumentation

The Android ecosystem unifies two separate communities, mobile apps and IoT apps, under one umbrella, leveraging the Android SDK, ADT, Eclipse, and other 3rd party tools for a new class and range of devices from very small with an MCU and 64MB of memory. Android Things 1.0 also provides integration with Google Cloud and Google's Machine Learning platform, distributing embedded intelligence across the Edge. Actian Zen Core provides the backbone for embedded intelligence with local persistent memory. By combining it with Actian Zen Edge as an aggregation and collection point in gateways and other complex instrumentation and Avalanche Cloud Data Warehouse as a cloud-based Big Data Analytics platform on Microsoft Azure and Amazon AWS, Actian provides full data management support across the entire range of Edge devices and multi-cloud environments.