RDM Embedded Edition 11

RDM Embedded is a high-performance, database management system optimized for the operating systems commonly used within the embedded market. It is ideal for standalone applications such as those found in industrial automation controllers or automobile infotainment systems. Multiple APIs provide developers a multitude of programming options and functionality. However, developers only compile in what they need keeping the application footprint minimal for these traditionally resource-constrained devices.

Overview

RDM Embedded SQL has been designed for embedded systems applications. As such, it provides a subset of the ANSI/ISO standard SQL that is suitable for running on a wide variety of computers and embedded operating systems, many of which have limited computing resources.

The ACID compliant database engine supports B-tree and hash indexes; the B-tree indices can support simple and/or compound keys. Additionally the database engine has been developed to fully utilize multi-core processors, run within minimal memory, and support both in-memory and on-disk storage. Implemented as a linkable library the database is allowed to become an embedded part of your applications.

With nearly 30 years of development history, it is estimated that this embedded database management system has been used by more than 20,000 developers and deployed in over 20 million installations in all the major industries; including Aerospace & Defense, Automotive, Business Automation, Financial, Government, Industrial Automation, Medical, and Telecommunication.

Key Benefits:

- Multi-Core Scalability
- Distributed Architecture
- Extraordinary Performance
- Proven Reliability
- Excellent Support

Performance Driven Features

- **Multi-Core Support** - Efficiently allocate transaction processing to take advantage of multi-core systems for optimal speed.

- **Multi-Versioning Concurrency Control (MVCC)** - Implement read-onlytransactions where a virtual snapshot of your embedded database is readable until the read-only-transaction is terminated by the task, even if it is being concurrently updated. Avoid read locks to improve multi-user performance.

- **Pure and Hybrid In-Memory Database Operation -** Configure your database to run completely on-disk, completely in-memory, or a hybrid of both; combining the speed of an in-memory database and the stability of on-disk in a single system.

- **Multiple Indexing Methods** Use B-Trees or Hash Indexes on tables. Hashing on large volumes often provides faster access to data than b-tree indexing methods. Hashing enhances speed by using buckets to store the index information.

- **True Global Queries** Connect any application to one or more databases and query them as if it is a single instance. Perform global, locally or across a network, to multiple database instances with no regard for where the data is located.

Multiple APIs for Enhanced Usability

- **Navigational C API** - For well over 25 years developers have been using RDM's low-level C API of over 200 intuitive easy to use functions provides application developers with ultimate control of the database.

- **Comprehensive SQL API** - RDM's SQL is accessed internally through an easy-to-use API designed by Raima. This non-standard API is simpler than ODBC. In fact, our ODBC API is based on this one.

- **Standards Based ODBC API** - Following the ODBC standards Raima developed the ODBC API to provide developers with a familiar way to utilize the power of the RDM database engine.

- **Object Oriented C++ API** - The Objective C++ API was designed with ease of use as its primary requirement while still providing developers with full access and control to both RDM's network and relational functionality.

Try it!

Download a trial version:

raima.com/downloads

Database Specifications

- **Max. Databases Open Simultaneously:** No Limit

- **Maximum Records Per Database:** No Limit

- **Maximum Size of Database File:** Limited only by file system

- **Maximum Tables Per Database:** No Limit

- **Maximum Records Per Table:** No Limit

- **Maximum Keys Per Database:** No Limit

- **Max. Record Size:** 32K (excluding BLOB or VARCHAR)

- **Maximum Fields Per Table:** No Limit

- **Maximum Size of Keys:** 242Bits

- **RAM Requirements:** Minimum 50K, User configurable

- **Code Footprint:** Starting at ~270K depending on OS and database features.

Industry Partners:

WIND RIVER

Green Hills SOFTWARE

montavista

LYNUXWORKS™

QNX SOFTWARE SYSTEMS

Windows® Embedded Partner

MITSUBISHI ELECTRIC

Supported Platforms:

- **Green Hills Integrity**
- **Microsoft Windows Embedded Compact 7 (formerly CE)**
- **QNX Neutrino**
- **Wind River VxWorks**
- **Embedded Linux (ARM)**

Modes of Operation

- **Standalone**
- **Application Linked**

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