

Key New Features:

- Multi-Core Support
- Enhanced Transaction Support
- Client/Server Execution Mode
- Mixed Execution Mode
- Multi-Versioning Concurrency Control
- Hot-Online Backup
- 2 Phase Commit

Key Benefits:

- Reliability
- Performance
- Efficiency
- Innovation
- Flexibility
- Excellent Support

Try it:

Download the RDM Embedded free software development kit at:
<http://www.raima.com/products/rdm-embedded/sdk-download>

Raima Database Manager (RDM) Embedded Core Engine is a high-performance, reliable, real-time, small footprint embedded database solution successfully deployed in millions of business critical applications and devices for over 25 years.

Overview:

RDM Embedded is based on the very efficient and comprehensive Network data model. Pre-dating the relational model, the network model is proven to have the best performance when relating data. RDM Embedded also supports the relational data model for more traditional data representation. These two models can be combined in RDM Embedded providing the best of both worlds—Raima's databases are the only databases that offer this capability. With support for high level interfaces like SQL and XML the flexibility of RDM is unbeatable.

Key Features:

Multi-Core Support—An ACID database is a shared resource. Any database engine needs to take great care to efficiently allocate transaction processing to truly take advantage of multi-core systems. RDM Embedded has gone through an extensive re-architecting effort carefully splitting up the engine and its transaction system to take full advantage of today's and future multi-core hardware architectures.

Multi-Versioning Concurrency Control (MVCC)—Never block the writer again! With the newly introduced MVCC technology both readers and writers can share the database without racing for database locks. The reader will at any time gain access to a consistent view of the database while the writer simultaneously changes its state.

Hot-Online Backup—Make sure your application has 24/7 access to the database! Hot-Online Backup enables full and incremental backups without interfering with connected applications. Take asynchronous backups of your in-memory, your hybrid, or your disk database without imposing on the application.

2 Phase Commit—lets a RDM Embedded transaction successfully take part of a global or distributed application transaction. Whenever multiple database systems or application data need to commit together a distributed transaction controller makes use of 2 phase commit capability to manage the global transaction. Now RDM Embedded can play a part in such systems!

MicroHTTP Server—adds the capability to insert, update, and delete data within the RDM Embedded database using a Web browser over the standard HTTP protocol. This enables developers to create Web based applications that can remotely access the database engine.

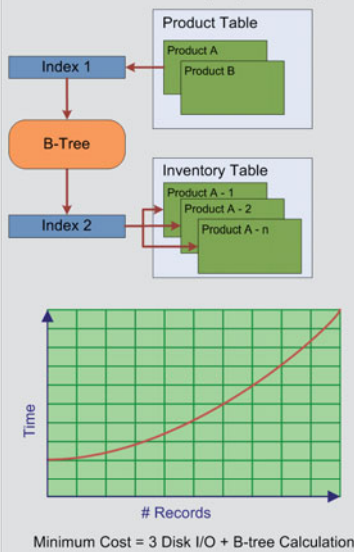
Dual Database Model Support—RDM Embedded is based on the high performance and expressive network data model. It also supports the traditional, relational data model. Unique to RDM Embedded is its capability to combine the network and relational data models giving developers the advantages of both models.

Comprehensive Data Modeling—Embedded databases are used in application specific systems where it is important to accurately express the data relationships. RDM Embedded uses a C-based Database Definition Language (DDL) that is used to define all of the data relationships to the degree of detail needed by the developer.

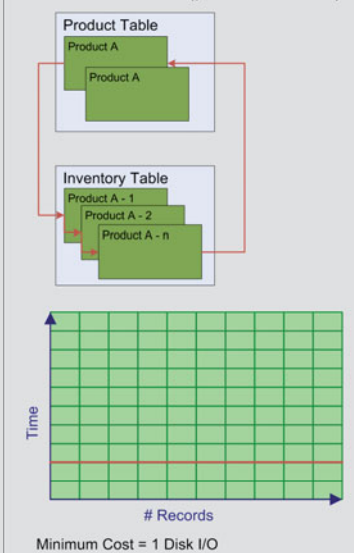
Pure and Hybrid In-Memory Operation—In-memory database capabilities add a huge amount of flexibility to an embedded db system. RDM Embedded can now be configured to run completely diskless or in hybrid mode where the application designer puts part of their implementation in-memory and other parts on-disk in a single system.

Database Models:

Relational Model (key based)



Network Model (pointer-based)



Partners:



True VARCHAR Support—Fast embedded database engines implement fixed sized records, sacrificing database image size for speed. But with this addition functionality RDM Embedded combines the fixed sized records, proven over the last 20+ years of deployment, with a high-performance variable sized string implementation.

Circular Tables—allow developers to define the maximum number of rows allowed in a table and, when the limit is reached, additional rows can be added to the table overwriting previous rows. It uses the First in First out (FIFO) concept meaning the oldest record is replaced by the new record.

Sparse Indexing—for on-disk efficiency a data index is a duplicate but ordered instance of your data. Duplication of data steals both CPU and I/O cycles, so to avoid this overhead RDM Embedded adds a user configurable sparse indexing system for strings, where you decide the amount of duplication you'd like. The implementation supports no duplication, partial duplication, or full duplication giving you the flexibility to tune the size of your database vs. performance.

Modes of Operation:

- Standalone
- Client/Server
- Application Linked
- Mixed Execution Mode.

Database Specifications:

- **Maximum Databases Open Simultaneously:** No Limit
- **Maximum Files Per Database:** 4096(2¹²)
- **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 Record Size:** 32 kilo bytes (not including BLOB or VARCHAR)
- **Maximum Fields Per Table:** No Limit
- **Maximum Keys Per Database:** No Limit
- **Maximum Size of Keys:** 242 bytes
- **RAM requirements:** User configurable, minimum 50 kilo bytes
- **Code Footprint:** Starting at ~270 kilo bytes, depending on operating system and database features

Operating Systems Supported:

- AIX
- Embedded Linux
- FreeBSD
- Integrity
- HP-UX
- Linux
- MacOS
- QNX Neutrino
- Solaris
- VxWorks
- Windows
- Windows CE
- Windows Embedded
- Others Upon Request

For more information and free downloads of the RDM Embedded SDKs please visit us on the Web at: www.raima.com/products/rdm-embedded

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