Raima® Database Manager EMBEDDED 9.1

Product Data Sheet

Key New Features:

- Native BLOB (Binary Large Object) Support
- VLDB (Very Large Database)—file limits have been removed.
- RDM Embedded database to RDM Server database replication.

Key Benefits:

- Reliability
- Performance
- Efficiency
- Innovative
- Flexibility
- 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 is a high-performance, real-time, small footprint embedded database solution successfully deployed in millions of business critical applications and devices over the past 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—Birdstep's databases are the only databases that offer this capability. With support for high level interface like SQL and XML the flexibility is unbeaten.

Key Features:

Active-Passive Replication—Data redundancy, fault tolerance, and high availability are all keywords tied into data replication. With RDM Embedded advanced replication engine, application databases can be replicated for fault tolerance and high availability. The ability to replicate from RDM Embedded databases into RDM Server databases extends high-availability between the RDM Product Family.

VLDB (Very Large Database) Support—file limitations of previous versions have been removed allowing RDM Embedded to be configured as a VLDB (Very Large Database) which is typically restricted by hardware limitations.

Native BLOB (Binary Large Object) Support—allows application developers to store data like mp3s, videos, pictures and other binary data, natively within the RDM database. The benefit of this feature is that this type of data can now be handled just like any other data by the transaction system.

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.

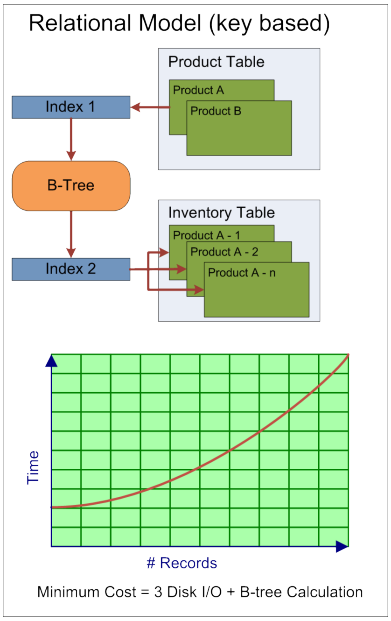
Dual Database Model Support—RDM Embedded is based on the high performance and expressive network data model. It also supports the traditional, relational data model. Unique to RDM Embedded is its capability to combine the network and relational data models giving developers the advantages of both models.

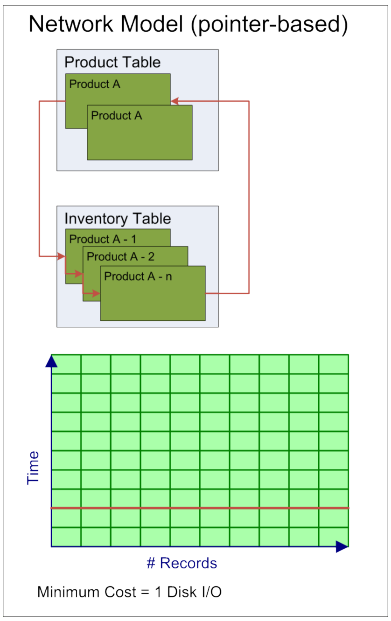
Comprehensive Data Modeling—Embedded databases are used in application specific systems where it is important to accurately express the data relationships. RDM Embedded uses a C-based Database Definition Language (DDL) that is used to define all of the data relationships to the degree of detail needed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

Multi-User Support—In many cases, developers need to have multiple applications, or instances of an application, access a database while maintaining data integrity. RDM Embedded supports multiple users whether they are multi-tasking, multi-threading, or accessing over the LAN. With locking and transaction processing features, RDM Embedded ensures data integrity through managed control and record keeping.

Data Integrity—Transaction Processing, File Locking, and Database Mirroring are key features within RDM Embedded to ensure the data integrity essential for multi-users and database recovery.

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.





Partners:

True VARCHAR Support—Fast embedded database engines implement fixed sized records, sacrificing database image size for speed. But with this function addition 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.

Native API—RDM Embedded includes over 150 C-based functions available to the application for complete database control.

SQL API—RDM Embedded has implemented a SQL API set to support applications that manage the database through SQL commands.

JAVA API—The Java API is based on Java Native Interface (JNI) technology. By an extended C API to the Java programmer via the JNI, RDM Embedded lets you organize and access information efficiently, regardless of the complexity of your data.

XML API—XML is an emerging standard used by web appliances and systems to facilitate easy data transfer between disparate systems. RDM Embedded's XML import /export layer. allows for import and export of well-formed documents with or without DTDs or XML Schema.

Database Specifications:

- **Maximum Databases Open Simultaneously:** limited only by computer memory
- **Maximum Fields Per Record:** limited only by maximum record size and available memory
- **Maximum Files Per Database:** 32,000 +
- **Maximum Key Size:** 242 Bytes
- **Maximum Objects Per Database:** 4,294,967,040
- **Maximum objects Per File:** Over 281 Trillion
- **Maximum Record Size:** 32 KB

Memory Requirements start at: ~270K (depending on operating system and features)

Operating Systems Supported:

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

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