


Partner Product

EBG 221-EN

**Raima**<sup>®</sup>  
Database Manager  
SERVER

 **MITSUBISHI  
ELECTRIC**  
FACTORY AUTOMATION

# C NetDB

RDM embedded database

**Store, manage and access data directly**  
within plant floor controllers



**e-Factory**  
Partner Product

IMPROVED  
QUALITY 

Flexible embedded database in your high reliability PLC environment

MORE  
FLEXIBILITY 

Setup and configuration in C language enables IP protection

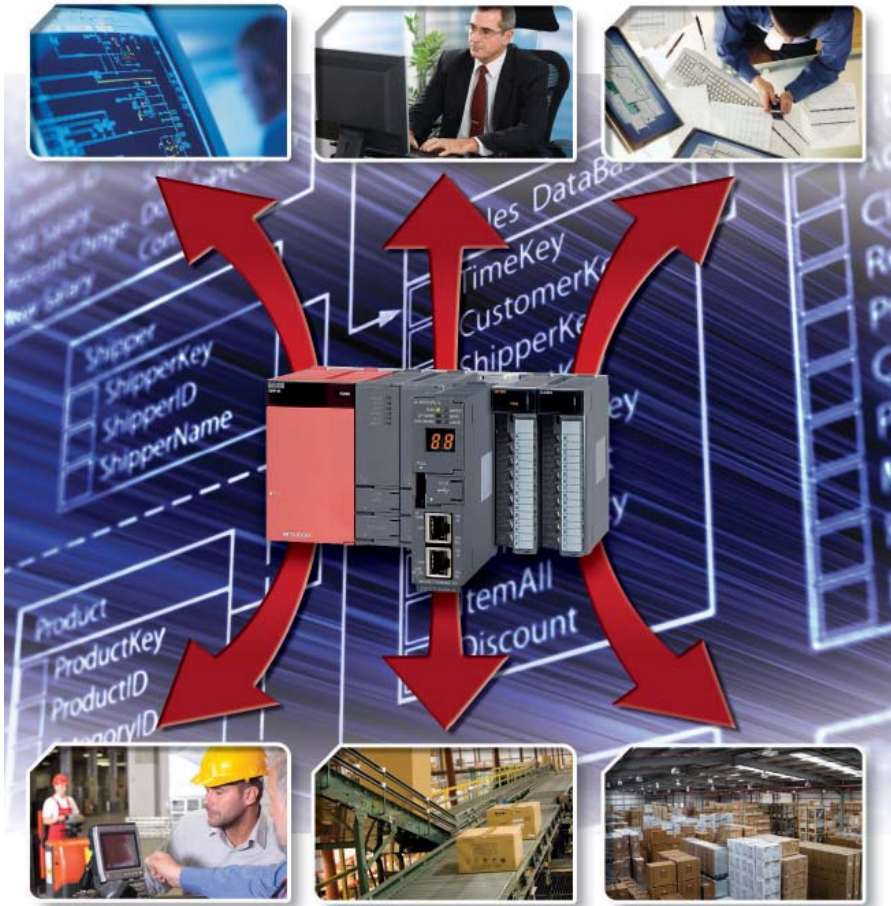
IMPROVED  
COMMUNICATION 

Optional automatic replication of data to main database

INTELLIGENT  
DESIGN 

Distributed intelligence on the shop floor

# Revolutionise your shop floor data



## Data storage and access

Traditional PC database solutions can be difficult, costly and time-consuming to integrate with plant floor controllers. Due to understandable compromises this can lead to a limitation on the speed at which manufacturing control systems can access application data, impacting on overall performance of critical production operations.

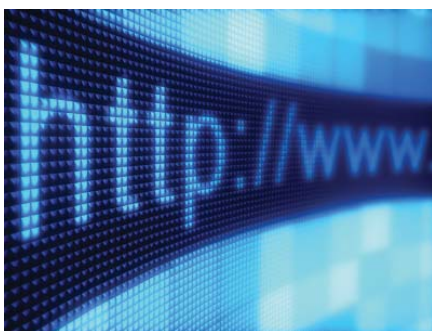
Mitsubishi Electric and Raima are able to offer a radical alternative: embed the database in the plant floor controller. This gives the benefit of not only having direct local processing but also helps to get the production integrated with the IT communication layer. Information from the enterprise level can be stored where it is needed and production data is stored where it was generated, the system becomes completely transparent.

## A perfect platform

With the C Controller CPU, Mitsubishi Electric has a module in the iQ platform that provides high-speed performance and large-volume data communication in a compact size, combined with high resistance to harsh environments. Running in the closed system of a real time OS, you have the integrated protection against viruses but the flexibility to configure and control using familiar tools such as "C".

## A new dawn

For modern manufacturing processes a vast amount of data is increasingly used and stored. The challenge comes in how to process this data efficiently and effectively. Traditionally, data has been pulled into SCADA or PC nodes for local processing before distribution back to the shop floor controller. Why? Because often large data volumes need careful control and management within a database ... but now Mitsubishi Electric and Raima can bring the database directly to the shopfloor without the need for additional PC's.



Web based interface

## Embedded and secure

The C Controller is a great basis for Mitsubishi's e-F@ctory Partner, Raima, to put their database functionality for advanced data systems, RDM Embedded, inside a PLC platform.

RDM Embedded is a high performance, real-time embedded database solution. It has a small footprint and has been successfully deployed in millions of business-critical applications over the last 25 years.

## C NetDB

The combined Mitsubishi-Raima C NetDB solution delivers a database that can collect controller data in a fast, predictable and reliable manner. It is ACID compliant, meaning that the information collected is guaranteed to be accurate. Automatic recovery features ensure that data will never be lost due to a system failure.



Boost shop floor performance

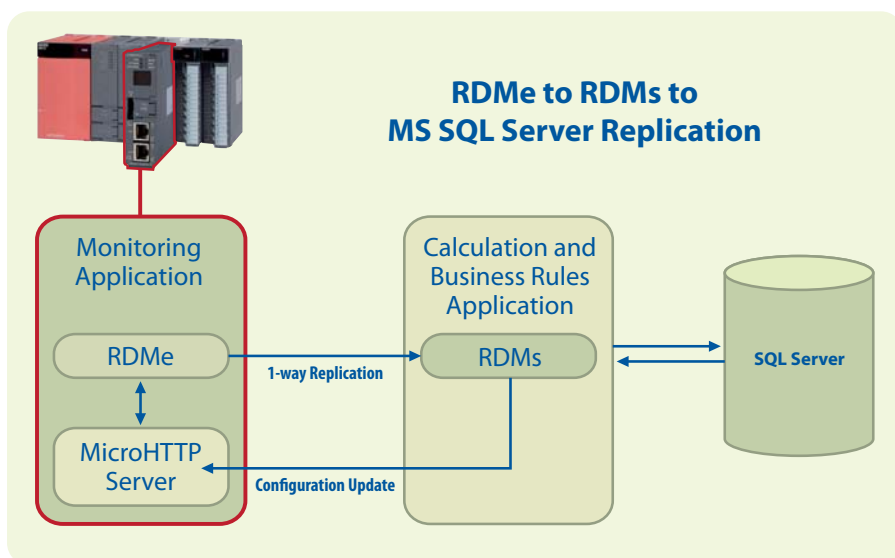
## Easy to Setup

The C NetDB is delivered with the operating system pre-installed, it just has to be inserted into the iQ platform base rack. The C NetDB can then be easily configured and customised to your needs using standard 'C' programming. To protect your intellectual property rights the application is locked to the MAC address of the C Controller CPU.

## Easy to maintain

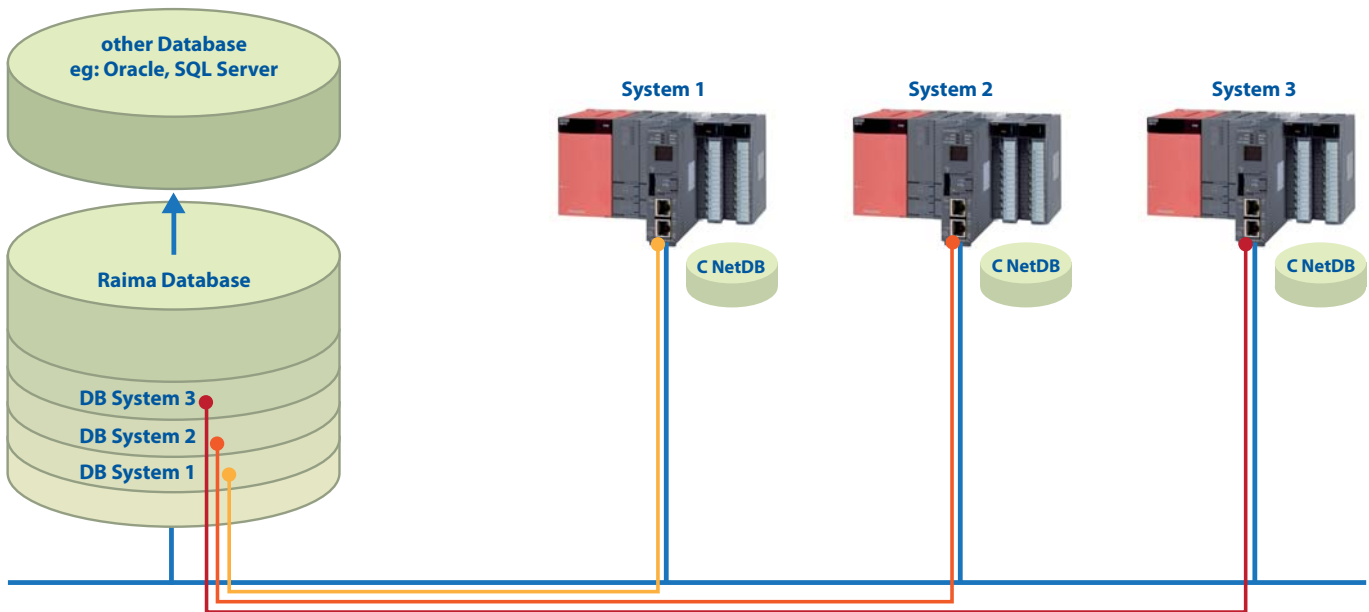
Compared to a traditional PC solution, maintenance time and costs are reduced significantly, for example: the stable operating environment does not need constant patching and upgrades you see with a traditional PC OS. In addition, this reduces the troublesome compatibility issues sometimes encountered when PC OS's change.

The optional web-based interface, through its micro HTTP server as well as a powerful replication server, gives enhanced flexibility. For example, the replication feature allows data to be moved to and from Raima's RDM Server database or any other third party data store (such as SCADA systems, ERP systems and enterprise databases). These two key features make remote access to the database simple yet extremely powerful, allowing for more complex deployment of monitoring and control industrial applications.



RDM configuration

# Database Specifications ///



## Systems benefits:

- High availability, there is no PC in your plant, no turning parts like hard disks or fans that can wear and fail
- High reliability, no loss of data, all production data is stored inside the PLC and can be safely replicated to the server
- Edit your recipes in the office and don't care about data replication, it is done automatically
- Stand alone production without IT connection possible
- High flexibility, several PLCs can replicate into one database server
- High security, proprietary OS, highest possible protection against virus attacks
- Predictable and fast benchmark times, no matter the size of the database, because of network model RDME

## Options include

- Automatic replication to server based database
- Web access

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