

# C NetDB

## RDM embedded database

Store, manage and access data directly  
within plant floor controllers



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".



Web based interface

## 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.

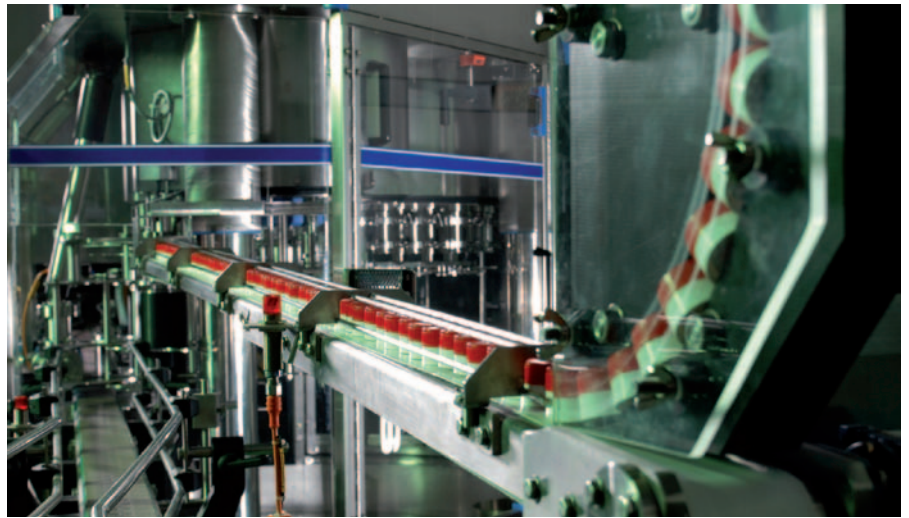
## Embedded and secure

The C Controller is a great basis for Mitsubishi's e-Factory 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 30 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

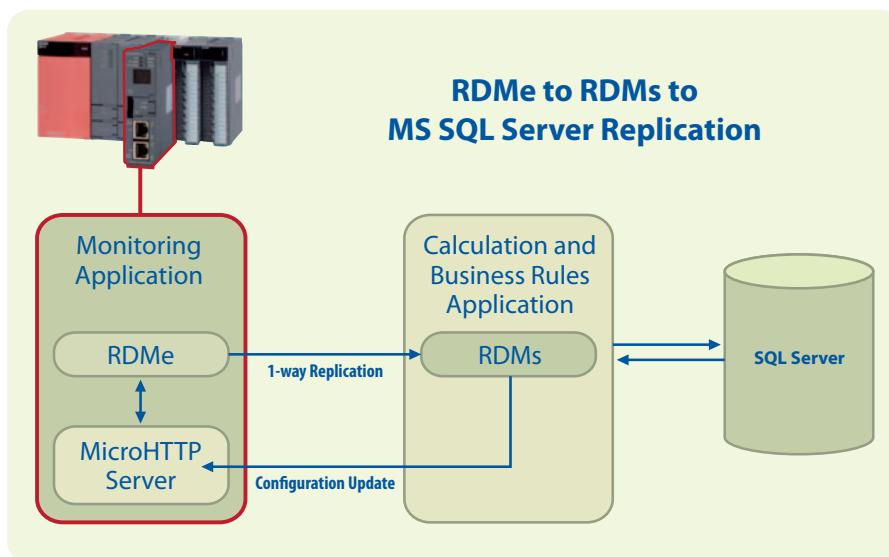
## Easy to Setup

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

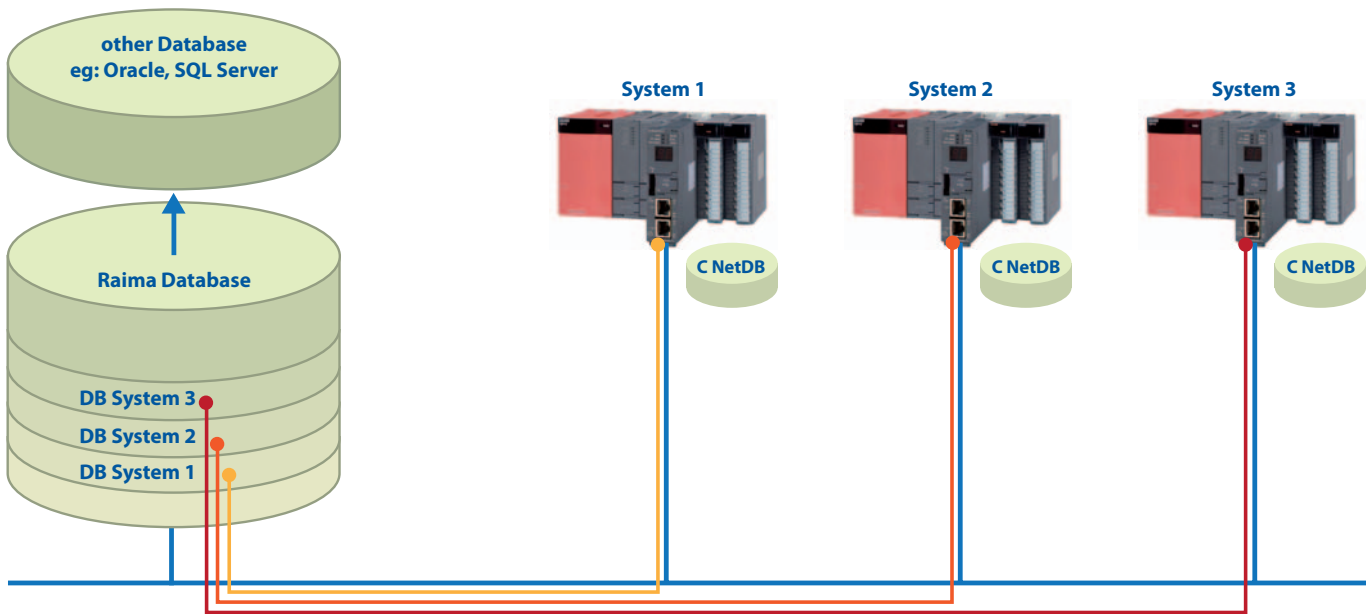
Compared to a traditional PC solution, maintenance time and costs are reduced significantly, for example: the stable operating environment does not need constant patching and upgrades you see with a traditional PC OS. In addition, this reduces the troublesome compatibility issues sometimes encountered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

### European Offices

Mitsubishi Electric Europe B.V. Gothaer Straße 8 D-40880 Ratingen Phone: +49 (0)2102 / 486-0	Germany	Mitsubishi Electric Europe B.V. ul. Krakowska 50 PL-32-083 Balice Phone: +48 (0) 12 630 47 00	Poland
Mitsubishi Electric Europe B.V.-org.sl. Radulská 751/113e Avenir Business Park CZ-158 00 Praha 5 Phone: +420 (0) 251 / 551 470	Czech Rep.	Mitsubishi Electric Europe B.V. 52, bld. 3 Kosmodamianskaya nab 8 floor RU-115054 Moscow Phone: +7 495 / 721 2070	Russia
Mitsubishi Electric Europe B.V. 25, Boulevard des Bouvets F-92741 Nanterre Cedex Phone: +33 (0) 1 / 55 68 55 68	France	Mitsubishi Electric Europe B.V. Carretera de Rubí 76-80 Apdo. 420 E-08190 Sant Cugat del Vallés (Barcelona) Phone: +34 (0) 93 / 5653131	Spain
Mitsubishi Electric Europe B.V. Viale Colleoni 7 Palazzo Sirio I-20864 Agrate Brianza (MB) Phone: +39 039 / 60 53 1	Italy	Mitsubishi Electric Türkiye Şerifali Mahallesi Nutuk Sokak No:5 TR-34775 Ümraniye-İSTANBUL Phone: +90 (0)216 / 526 39 90	Turkey
Mitsubishi Electric Europe B.V. Westgate Business Park, Ballymount IRL-Dublin 24 Phone: +353 (0) 1 4198800	Ireland	Mitsubishi Electric Europe B.V. Travellers Lane UK-Hatfield, Herts. AL10 8XB Phone: +44 (0)1707 / 28 87 80	UK

### Representatives

GEVA Wiener Straße 89 A-2500 Baden Phone: +43 (0)2252 / 85 55 20	Austria	Beijer Electronics A/S Lykkedagsvej 17 DK-4000 Roskilde Phone: +45 (0)46 / 75 76 66	Denmark	Beijer Electronics UAB Goštautu g. 3 LT-48324 Kaunas Phone: +370 37 262707	Lithuania	INEA SR Izletnicka 10 SER-113000 Smederevo Phone: +381 (0)26 / 615 401	Serbia	I.C. SYSTEMS Ltd. 23 Al-Saad-Al-Alee St. EG-Sarayut, Maadi, Cairo Phone: +20 (0) 2 / 235 98 548	Egypt
OOO "TECHNIKON" Prospekt Nezavisimosti 177-9 BY-220125 Minsk Phone: +375 (0)17 / 393 1177	Belarus	Beijer Electronics Eesti OÜ Pärnu mnt. 160b EE-11317 Tallinn Phone: +372 (0)6 / 51 81 40	Estonia	ALFATRADE Ltd. 99, Paola Hill MD-2060 Kishinev Phone: +373 (0)22 / 66 4242	Malta	SIMAP s.r.o. Jána Dierka 1671 SK-911 01 Trenčín Phone: +421 (0)32 743 04 72	Slovakia	ILAN & GAVISH Ltd. 24 Shenkar St., Kiryat Arze IL-49001 Petah-Tikva Phone: +972 (0)3 / 922 18 24	Israel
ESCO DRIVES Culliganlaan 3 BE-1831 Diegem Phone: +32 (0)2 / 717 64 60	Belgium	Beijer Electronics OY Vanha Nurmiyarventie 62 FIN-01670 Vantaa Phone: +358 (0)207 / 463 500	Finland	INTEHSIS SRL bld. Traian 23/1 NL-2060 Kishinev Phone: +373 (0)22 / 66 4242	Moldova	INEA RBT d.o.o. Stegne 11 SI-1000 Ljubljana Phone: +386 (0)11 / 513 8116	Slovenia	GIRIT CELADON Ltd. 12 Hfaomanut Street IL-42505 Netanya Phone: +972 (0)9 / 863 39 80	Israel
KONING & HARTMAN B.V. Woluweelaan 31 BE-1800 Vilvoorde Phone: +32 (0)2 / 257 02 40	Belgium	PROVENDOR OY Teljänkatu 8 A3 FIN-28130 Pori Phone: +358 (0) 2 / 522 3300	Finland	HIFLEX AUTOM. B.V. Wolvewerstraat 22 NL-2984 CD Ridderkerk Phone: +31 (0)180 / 46 60 04	Netherlands	Beijer Electronics Automation AB Box 426 SE-20124 Malmö Phone: +46 (0)40 / 35 86 00	Sweden	CEGLIBAN Cebaco Center/Block A Autostrade DORA Lebanon-Beirut Phone: +961 (0)1 / 240 445	Lebanon
INEA RBT d.o.o. Stegne 11 SI-1000 Ljubljana Phone: +386 (0)11 / 513 8116	Bosnia and Herzeg.	UTECO A.B.E.E. 5, Mavrogenous Str. GR-18542 Piraeus Phone: +30-(0)21-1206-900	Greece	KONING & HARTMAN B.V. Haarlerbergweg 21-23 NL-1101 CH Amsterdam Phone: +31 (0)20 / 587 76 00	Netherlands	OMNI RAY AG Im Schörl 5 CH-8600 Dübendorf Phone: +41 (0)44 / 802 28 80	Switzerland	ADROIT TECHNOLOGIES 20 Waterford Office Park 189 Witkoppen Road ZA-Fourways Phone: +27 (0)11 / 658 8100	South Africa
AKHNATON 4, Andrei Lipachev Blvd., PO Box 21 BG-1756 Sofia Phone: +359 (0)2 / 817 6000	Bulgaria	MELTRADE Ltd. Fertő utca 14. HU-1107 Budapest Phone: +36 1 / 431-9726	Hungary	Beijer Electronics AS Pöstboks 407 NO-3002 Drammen Phone: +47 (0)32 / 24 30 00	Norway	OOO "CSC-AUTOMATION" 4-B, M. Raszkovoyi St. UA-02660 Kiev Phone: +380 (0)44 / 494 33 44	Ukraine		
INEA CR Losańska 4 a HR-10000 Zagreb Phone: +385 (0)1 / 36 940 -01/-02/-03	Croatia	TOO Kazpromavtomatika Ul. Zhanabyla 28 KAZ-100017 Karaganda Phone: +7 7212 / 50 10 00	Kazakhstan	Fonseca S.A. R. João Francisco do Casal 87/89 PT-3801-997 Aveiro, Esigueira Phone: +351 (0)234 / 303 900	Portugal				
AutoCont C.S. S.R.O. Kafkova 1853/3 CZ-702 00 Ostrava 2 Phone: +420 595 691 150	Czech Republic	Beijer Electronics SIA Ritausmas iela 23 LV-1058 Riga Phone: +371 (0)6 / 784 2280	Latvia	Sirius Trading & Services Aleea Lacul Morii Nr. 3 RO-060841 Bucuresti, Sector 6 Phone: +40 (0)21 / 430 40 06	Romania				



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Mitsubishi Electric Europe B.V. / FA - European Business Group / Gothaer Straße 8 / D-40880 Ratingen / Germany / Tel.: +49(0)2102-4860 / Fax: +49(0)2102-4861120 / info@mitsubishi-automation.com / www.mitsubishi-automation.com

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