

Programmable Controllers
Real Time Operating System C Controller

High-end model C Controller
Q24DHCCPU-V **NEW**

- 2x MPU
- Stable operation, high reliability
- Real-time OS VxWorks® pre-installed
- iQ Platform compatible
- Easy to read display (Dot matrix LED)
- Ethernet(3ch.), USBx2,
- PCI Express®(Note 1), RS-232



iQ Q24DHCCPU-V
Platform

USB2 (connector type mini-B)
Programming port for C Controller, MELSOFT, and monitoring tools.



System Ethernet port (10BASE-T/100BASE-TX)
System Ethernet port for connection to C Controller, MELSOFT, monitoring tools, and other devices supporting Ethernet.

Development environment

- Engineering tool for C Controller CW Workbench.
- Integrated development environment Wind River Workbench.
- Setting/monitoring tools for C Controller.



LED display (Dot matrix type)
For debugging and diagnostics.

SD memory card
For saving user programs and recipe data, etc.

USB1 (connector type A)
For connecting USB devices (USB HDD).

Battery backup RAM
For saving user data (operation history, diagnostics data, etc).

2x Standard Ethernet ports (10BASE-T/100BASE-TX/1000BASE-T)
For TCP/IP communication with computers, etc.

PCI Express®(Note 1) extension connector (on the bottom)
PCI Express®, For connecting to devices supporting PCI Express® or PCI bus connection.

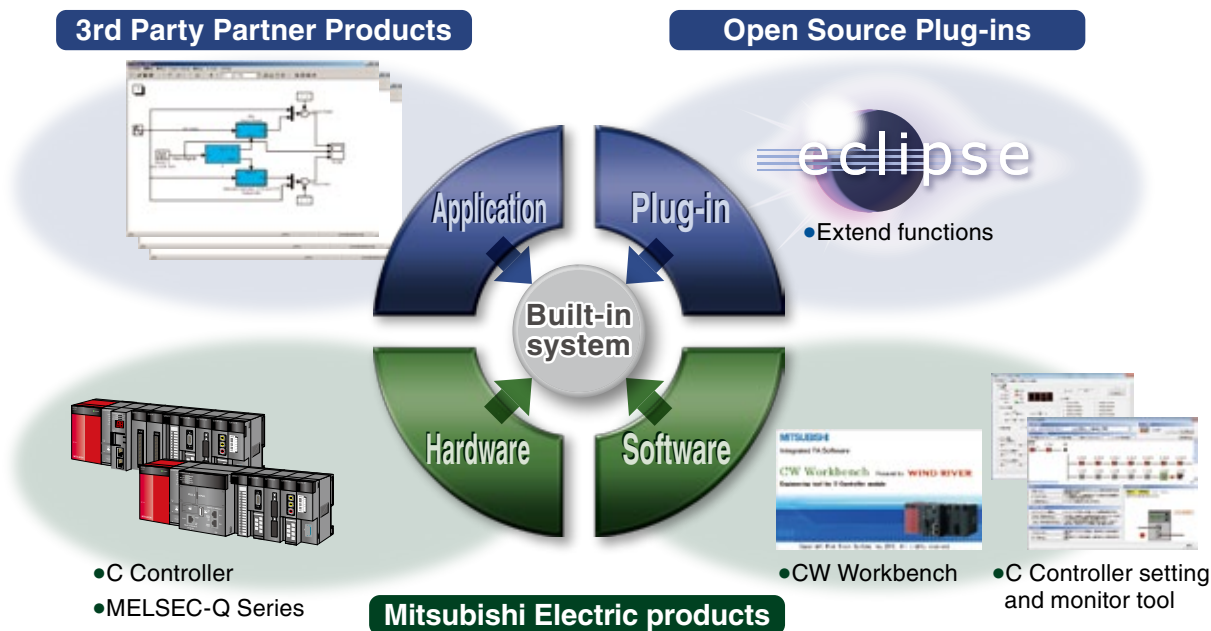
RS-232 (on the bottom)
For connection to serial communication devices.

Ethernet

(Note 1) Supporting PCI Express base specification Rev. 1.0a x1.

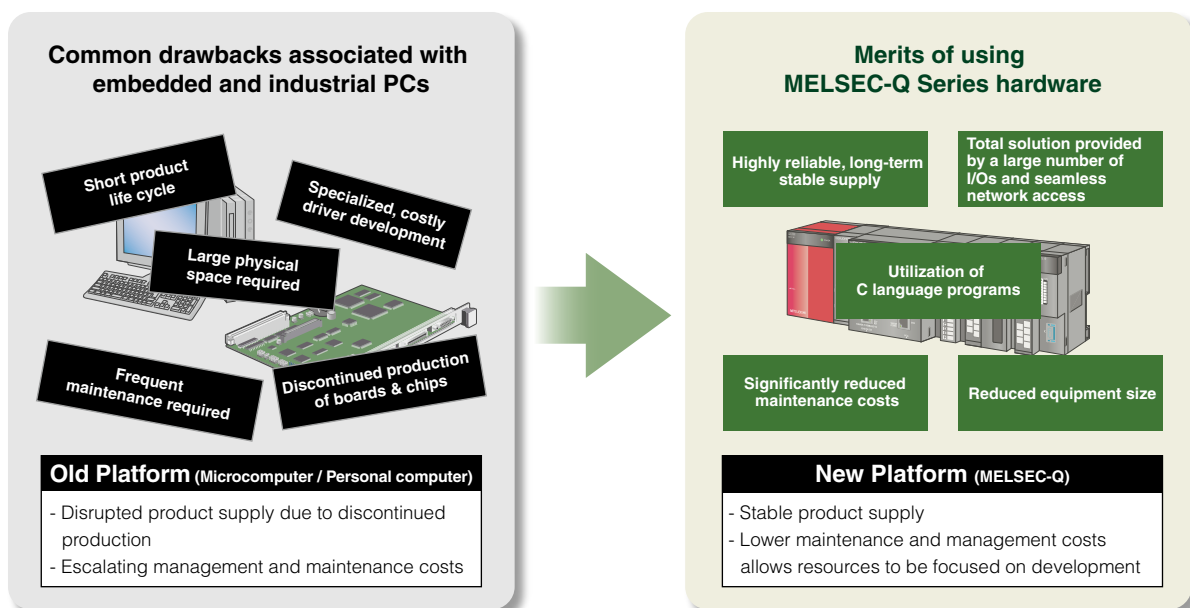
C Controller is an ideal solution for multiple system requirements

The C Controller (embedded with real-time OS VxWorks®) is a platform based on CW Workbench that realizes an attractive cost performance development environment. In addition to supporting 3rd party products and various plug-ins for a multiple structured system.



The C Controller overcomes the overheads associated with maintaining embedded PCs (micro boards., etc) and industrial PCs realizing a cost effective solution.

The C Controller platform is a solution that realizes PC level functionality without the burden of high maintenance costs usually associated with PCs. In addition, it includes a robust design that is ideal for industrial environments by being based on the high quality MELSEC control system.

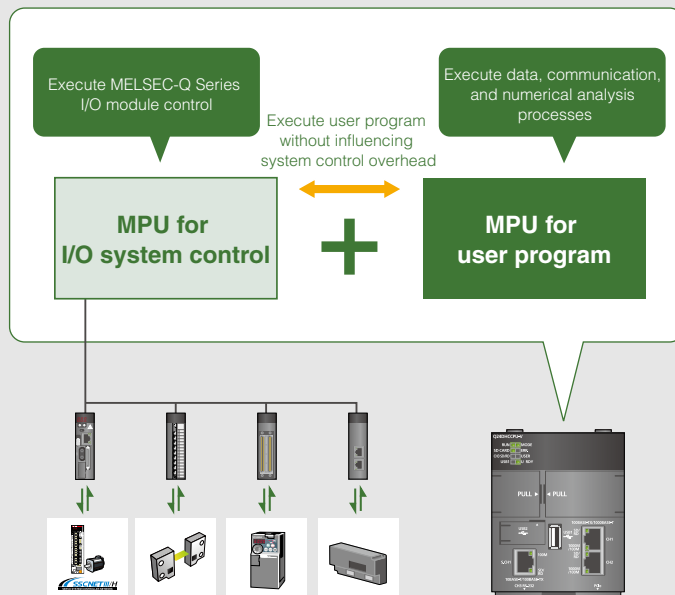


By having two dedicated MPUs, realize deterministic like performance without being influenced by user program processes.

Incorporates two dedicated MPUs:

- For user program
- For controlling MELSEC system I/Os

By having both the system and user program on separate MPUs, if there are any variations in the user program overhead, this will not influence the system control side. This is due to the user program utilizing the Intel ATOM characteristics. Hence, realizing an advanced system that is ideal for high speed processing applications without fluctuating performance.



Specifications

Performance specifications^(Note 1)

Item	Q24DHCCPU-V	
Microprocessor	Intel® ATOM™ Processor (For user program)	SH-4A (For system execution)
Standard ROM	382MB	
Working RAM	512MB	
Standard RAM	Maximum 4 MB	Maximum 5 MB
Battery backed-up RAM	Maximum 5 MB	
Communication interface	Ethernet 10BASE-T/100BASE-TX/1000BASE-T: 2ch , 10BASE-T/100BASE-TX: 1ch, RS-232: 1ch, USB(device): 1ch	
SD Card interface	One slot (Maximum 16 GB)	
External interface	PCI Express ^{®(Note 2)} : 1ch	
Operating system	VxWorks® 6.8.1 (Pre-installed)	
Programming development environment	CW Workbench, dedicated setting and monitoring tool, Wind River Workbench3.2(Wind River Systems, Inc.) ^(Note2)	
Programming language	C language (C/C++)	
External dimensions(W×H×D)	83mm×98mm×115mm	

(Note 1) The performance specifications may be modified without notice.

(Note 2) Supporting PCI Express base specification Rev. 1.0a x1.

Programmable Controllers

Real Time Operating System C Controller

Product List

*Always refer to user's manuals for information on usable modules, restrictions, etc. before using.

*Contact your local Mitsubishi sales office or representative for details on prices.

CPU

[Legend] **NEW** ... Recently released product

Product	Model	Outline
C Controller CPU	Q24DHCCPU-V NEW	No. of I/O points: 4096 points, endian format: little endian, removable storage: SD card, OS:VxWorks® Version 6.8.1

Engineering tool for C Controller module

CW Workbench	SW1DND-CWWLQ24-E	C Controller engineering tool software package, product with license for Q24DHCCPU-V
	SW1DND-CWWLQ24-EZ ^(Note1)	Additional license product for Q24DHCCPU-V
	SW1DND-CWWLQ24-EVZ ^(Note2)	Updated license product for Q24DHCCPU-V
	SW1DND-CWWLQ12-EVZ ^(Note3)	Updated license product for Q12DCCPU-V

(Note1) The DVD-ROM is not included with the CW Workbench additional license product (SW1DND-CWWLQ24-EZ). To install CW Workbench, the DVD-ROM included with the CW Workbench product with license (SW1DND-CWWLQ24-E) is required.

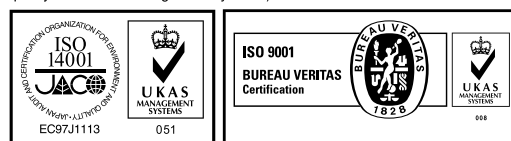
(Note2) The DVD-ROM is not included with the CW Workbench updated license product (SW1DND-CWWLQ24-EVZ). To install CW Workbench, the DVD-ROM included with the CW Workbench product with license (SW1DND-CWWLQ12-E) is required.

(Note3) The DVD-ROM is not included with the CW Workbench updated license product (SW1DND-CWWLQ12-EVZ). To install CW Workbench, the DVD-ROM included with the CW Workbench product with license (SW1DND-CWWLQ24-E) is required.

Setting/monitoring tools for C Controller module

C Controller setting and monitoring tool	SW4PVC-CCPU-E	Parameter setting and monitoring tool for C Controller, CC-Link, MELSECNET/H, CC-Link IE controller network, and CC-Link IE field network
------------------------------------------	---------------	-------------------------------------------------------------------------------------------------------------------------------------------

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)



*Intel® Atom™ is a trademark of Intel Corporation in the U.S. and other countries.

*VxWorks® is a registered trademark of Wind River Systems, inc.

Country/Region	Sales office	Tel/Fax	Country/Region	Sales office	Tel/Fax
USA	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, USA	Tel : +1-847-478-2100 Fax: +1-847-478-2253	South Africa	CBI-Electric. Private Bag 2016, ZA-1600 Isando, South Africa	Tel : +27-11-977-0770 Fax: +27-11-977-0761
Brazil	Mitsubishi Electric Do Brasil Comercio E Servicos Ltda. Rua Jussara, 1750 - Bloco B- Sala 01 Jardim Santa Cecilia- CEP 06465-070, Barueri, São Paulo, Brazil	Tel : +55-11-4689-3000 Fax: +55-11-4689-3016	China	Mitsubishi Electric Automaiton (China) Ltd. 10F, Mitsubishi Electric Automation Center, No.1386 Hongqiao Road, Changning District, Shanghai, China	Tel : +86-21-2322-3030 Fax: +86-21-2322-3000
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8, D-40880 Ratingen, Germany	Tel : +49-2102-486-0 Fax: +49-2102-486-1120	Taiwan	Setsuyo Enterprise Co., Ltd. 6F., No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan, R.O.C.	Tel : +886-2-2299-2499 Fax: +886-2-2299-2509
UK	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, UK.	Tel : +44-1707-28-8780 Fax: +44-1707-27-8695	Korea	Mitsubishi Electric Automation Korea Co., Ltd. 3F, 1480-6, Gayang-Dong, Gangseo-Gu, Seoul, 157-200, Korea	Tel : +82-2-3660-9530 Fax: +82-2-3664-8372
Italy	Mitsubishi Electric Europe B.V. Italian Branch Viale Colleoni 7-20864 Agrate Brianza (Milano), Italy	Tel : +39-039-60531 Fax: +39-039-6053-312	Singapore	Mitsubishi Electric Asia Pte., Ltd. Industrial Division 307, Alexandra Road, Mitsubishi Electric Building, Singapore, 159943	Tel : +65-6470-2308 Fax: +65-6476-7439
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubi 76-80.AC.420, E-08190 Sant Cugat del Valles (Barcelona), Spain	Tel : +34-93-565-3131 Fax: +34-93-589-1579	Thailand	Mitsubishi Electric Automation (Thailand) Co., Ltd. Bang-Chan Industrial Estate No.111 Soi Serithai 54, T.Kannayao, A.Kannayao, Bangkok 10230 Thailand	Tel : +66-2906-3238 Fax: +66-2906-3239
France	Mitsubishi Electric Europe B.V. French Branch 25, Boulevard des Bouvets, F-92741 Nanterre Cedex, France	Tel : +33-1-5568-5568 Fax: +33-1-5568-5757	Indonesia	P.T. Autoteknindo Sumber Makmur Muara Karang Selatan, Block A/Ulata No.1 Kav. No.11, Kawasan Industri Pergudangan, Jakarta-Utara 14440, P.O. Box 5045, Indonesia	Tel : +62-21-663-0833 Fax: +62-21-663-0832
Czech Republic	Mitsubishi Electric Europe B.V. Czech Branch Avenir Business Park, Radicka 751/113e, 158 00 Praha5, Czech Republic	Tel : +420-251-551-470 Fax: +420-251-551-471	India	Mitsubishi Electric India Pvt. Ltd. Emerald House, EL-3, J Block, M.I.D.C., Bhosari, Pune, 411026, Maharashtra State, India	Tel : +91-20-2710-2000 Fax: +91-20-2710-2100
Poland	Mitsubishi Electric Europe B.V. Polish Branch 32-083 Balice ul. Krakowska 50, Poland	Tel : +48-12-630-47-00 Fax: +48-12-630-47-01	Australia	Mitsubishi Electric Australia Pty.Ltd. 348 Victoria Road PO BOX11, Rydalmere, N.S.W 2116, Australia	Tel : +61-2-9684-7777 Fax: +61-2-9684-7245
Russia	Mitsubishi Electric Europe B.V. Russian Branch St.Petersburg office Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benua", office 720; 195027, St. Petersburg, Russia	Tel : +7-812-633-3497 Fax: +7-812-633-3499			

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 5, HIGASHI-KU, NAGOYA, JAPAN