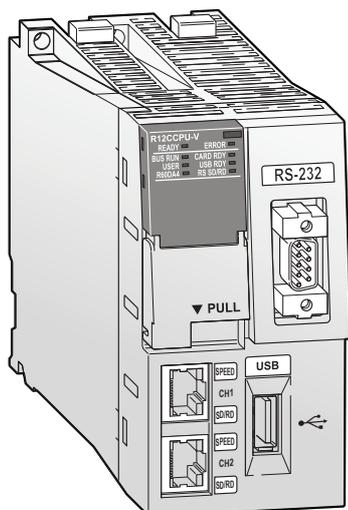# ■ C Controller CPU

C Controller CPU

The C Controller module is part of the application-specific range in the MELSEC iQ-R series. The multi-core ARM®-based controller pre-installed with VxWorks® Version 6.9, realizes the simultaneous execution of programs, thereby providing a robust and deterministic alternative to computer based systems.
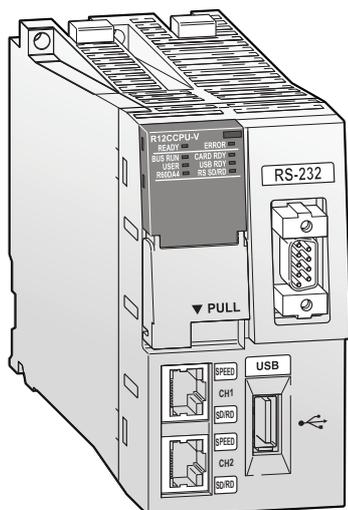
Special features:
Easy setup using three simple tools

● Easy programming
● Parameter setup/diagnosis/monitoring with CW Configurator
● Application development in simple steps

Specifications		R12CCPU-V
Number of I/Os		4096
Endian format		Little endian
MPU		ARM® Cortex-A9 Dual Core
Memory		Work RAM: 256 MB; ROM: 12 MB; Battery-backed-up RAM: 4 MB
Operating system		VxWorks Version 6.9
Programming language		C or CC++
Development tool		CW Workbench and CW-Sim
Communication interfaces		Ethernet 110BASE-T/100BASE-TX (2 ch.), RS232 (1 ch.)
SD memory card slot		1 slot
Ethernet port	No. of channels	2
	Interface	10BASE-T/100BASE-TX/1000BASE-T
	Data transmission rate	10BASE-T: 10 Mbps/100BASE-TX: 100 Mbps/1000BASE-T: 1 Gbps
	No. of cascaded connections [1]	10BASE-T: max. 4/100BASE-TX: max. 2 /1000BASE-T: —
	Maximum segment length m	100 (distance between hub and node)
	Communication method	Full-duplex/half-duplex
	Transmission method	Base band
	Applicable connector for external wiring	RJ45
	Supported function	Auto-negotiation function (automatic recognition of communication speed/communication method) Auto-MDI/MDI-X (automatic recognition of straight/crossing cable)
	IP version	IPv4 supported
RS232 connector	No. of channels	1
	Interface	RS232-compliant
	Communication method	Full-duplex/half-duplex
	Synchronization method	Asynchronous communication
	Transmission rate bps	9600, 14400, 19200, 28800, 38400, 57600, 115200
	Transmission distance m	Up to 15
	Data format	1 start bit, 7 or 8 data bits, 1 or 0 parity bits, 1 or 2 stop bits
	Parity check	Yes (Even/Odd)/None
	Sum check code	Yes/None
	Transmission control	Flow control (RS/CS control)
Integrated clock		Year, month, day, minute, second, weekday (automatic leap year adjustment)
Max. compensation time at power failure		Depends on power supply
Internal power consumption (5 V DC) A		1.26
Weight kg		0.35
Dimensions (WxHxD) mm		56x106x110

Order information	Art. no.	285498

[1] This number applies when a repeater hub is used. When using a switching hub, check the number of cascaded stages with the manufacturer of the hub used.

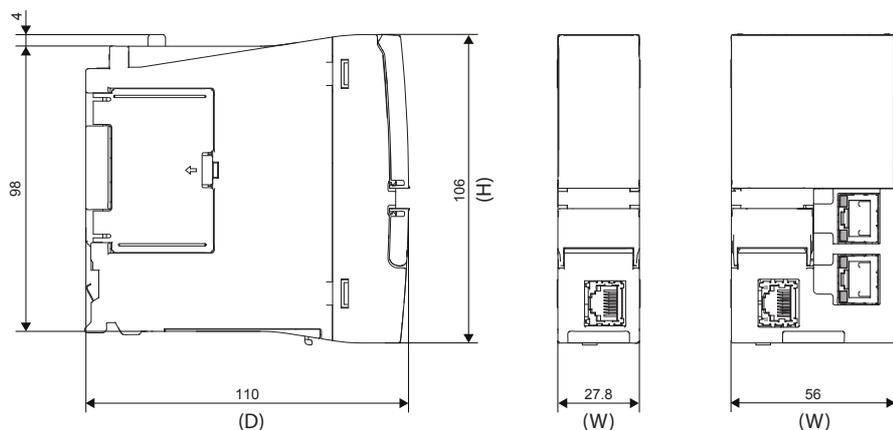**⚙ MITSUBISHI ELECTRIC**

■ iQ-R C-Application server

The C-Application server is based on the iQ-R series C-Controller platform and with its robust OS has allowed Mitsubishi Electric to make a giant leap forward into the future of cloud connectivity. The C-Application server is based on modern web services and supports all kind of IoT requests. Its strength is to collect information in real time, provide analysis and forwards the results to a variety of cloud systems.

The C-Application server supports:

● Event handler – Asynchronous bi-direction HTTP(S) protocol
● LUA server pages, including LUA virtual machine
● SSL/TLS client/server including SSL certificate
● Raima database, SQLite, MySQL and Redis connectors
● Web services – JSON-RPC, XML-RPC and SOAP
● HTTP(S) client libraries
● Client and server (secure) TCP socket API
● Mail (SMTP) client

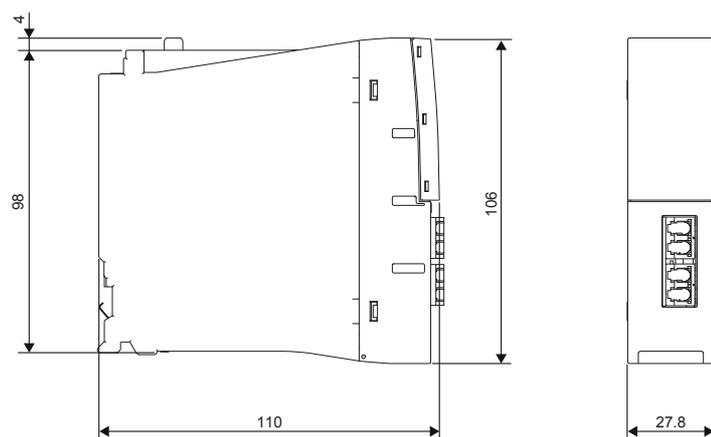| Specifications	C-Application server for R12CCPU-V
Transmission type	Ethernet, Serial
Interface	1000BASE-T, 100BASE-TX, 10BASE-T, RS232
Database	SQLite3, MySQL, Redis
Function	● CCPU and MD library function support ● CAS specific functions ● HTML5 ● Websocket ● Lua API ● Lua server pages ● XML parser ● Event handler ● REST, AJAX, SOAP, JSON, XML-RPC Web-Services ● WebDAV ● SMTP, SMTPS, STARTTLS ● SSL, Shark SSL ● SMQ ● PikeHTTP
Weight kg	0.35
Dimensions (WxHxD) mm	106x56x110

Order information	Art. no.	308736

■ CPU modules

Type	W	H	D
R04CPU R08CPU R16CPU R32CPU R120CPU	27.8	106	110
R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	56	106	110

Unit: mm
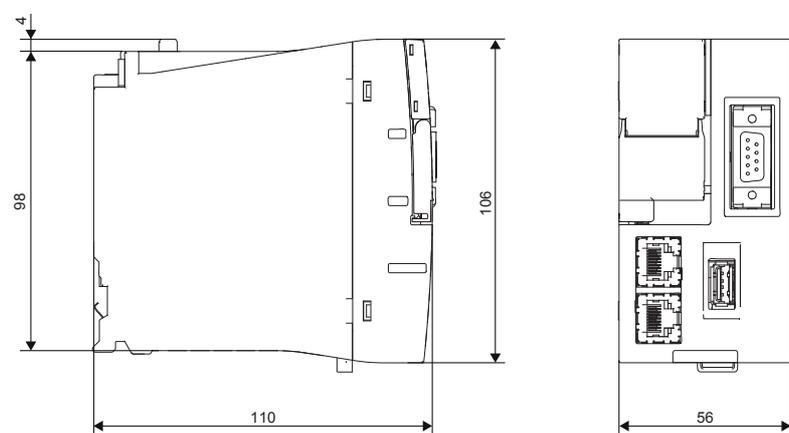
■ Process CPU modules and redundant function module

Unit: mm

■ C Controller CPU

Unit: mm

MELSEC iQ-R series